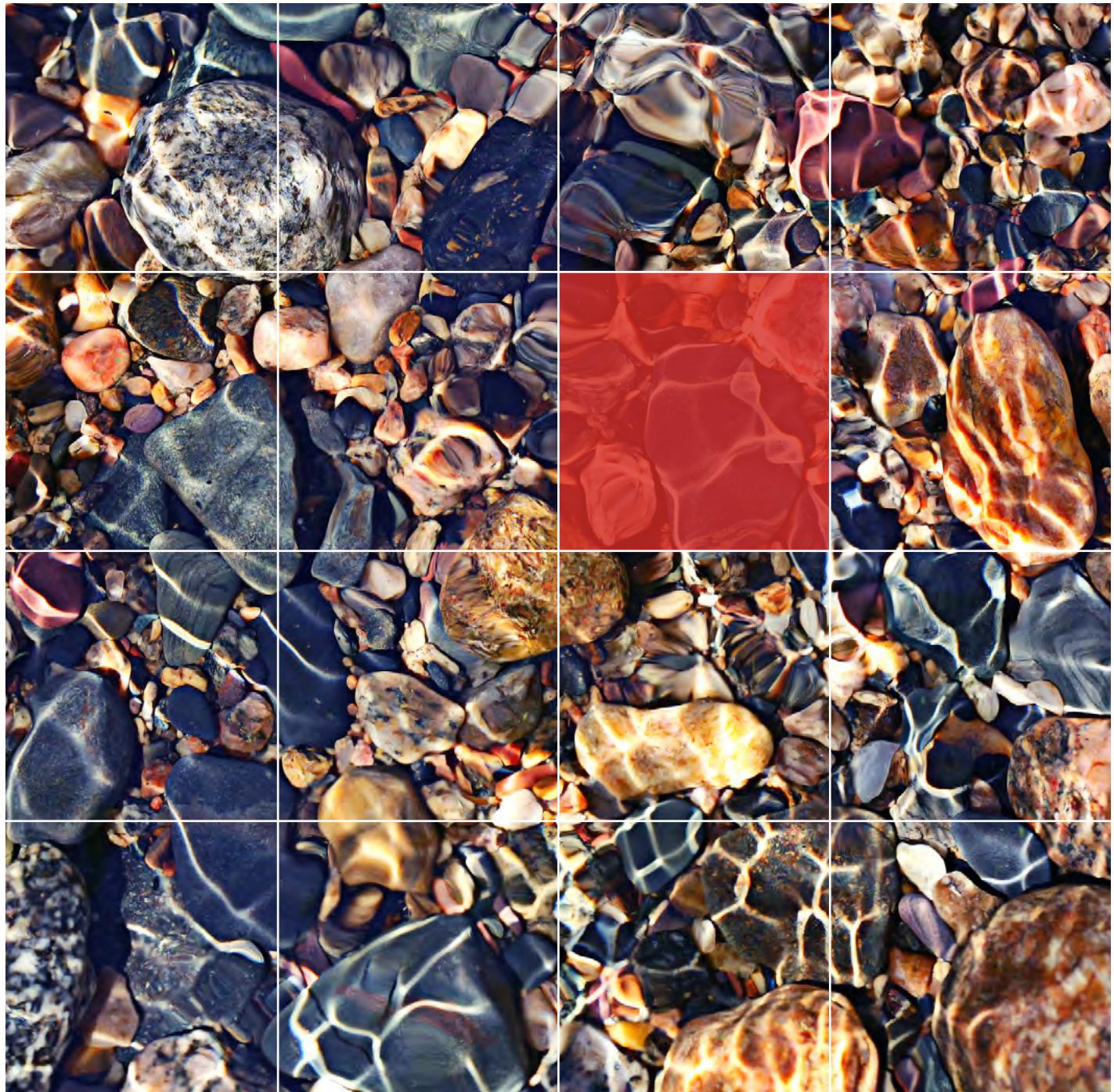


Global Real Estate Transparency Index, 2016

*Taking Real Estate Transparency
to the Next Level*



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Taking Real Estate Transparency to the Next Level

Executive Summary

FRAMING the Transparency Agenda

The launch of GRETI 2016 comes at a time when the transparency of real estate is under intense scrutiny:

- There is widening recognition of the crucial role that a transparent real estate sector plays, not only as a facilitator of new investment and business activity but also, significantly, in community well-being and inclusiveness.
- As capital allocations to real estate grow, investors are demanding further improvements in transparency, even among the world's most transparent real estate markets.
- Technology is allowing a more granular assessment of real estate market patterns. Databases tracking buildings, investment transactions, tenants, leases and values continue to expand, providing more frequently updated and real-time information than ever before.
- And the revelations of the Panama Papers in early 2016 have led to mounting pressures for greater real estate transparency and put the fight against corruption decisively on the international political agenda.

FINDINGS from GRETI 2016

The timely release of GRETI 2016 reveals continued improvements in transparency in the majority of real estate markets surveyed. Two-thirds of markets globally have shown progress over the past two years.

These encouraging results highlight a global real estate industry that is making steady advances through initiatives to deepen the availability and quality of market data and performance benchmarking; by enacting new legislation to reduce roadblocks to progress; by setting higher ethical standards; and by taking steps to make transaction processes more fair and transparent.

The Global Real Estate Transparency Index, 2016

Key Changes		Real Estate Transparency Tiers		What can you expect from the different Transparency tiers?
Canada consolidates position due to improving performance measurement indices	High	1. United Kingdom 2. Australia 3. Canada 4. United States 5. France 6. New Zealand 7. Netherlands 8. Ireland 9. Germany 10. Finland		<ul style="list-style-type: none"> Anglosphere and 'core' Europe High liquidity - 75% of global real estate investment 1/2 of global corporate HQs Taking transparency to next level – to 'Hyper-Transparency'? Technology driving advancement Beneficial ownership disclosure in the spotlight
Germany moves to 'Highly Transparent', boosted by listed vehicles	Transparent	11. Singapore 12. Sweden 13. Poland 14. Switzerland 15. Hong Kong 16. Belgium 17. Denmark 18. Norway 19. Japan 20. Czech Republic 21. Italy 22. Spain 23. Taiwan 24. Austria 25. South Africa 26. Hungary 27. Portugal 28. Malaysia 29. Slovakia 30. Romania		<ul style="list-style-type: none"> Europe and 'high-income' Asia High investment intensity – 20% of global real estate investment 1/3 of global corporate HQs Strong regulation, governance and transaction processes Progress in performance measurement and market fundamentals required
Mexico and China Tier 1 Cities on the cusp of 'Transparent'	Semi	31. Israel 32. Mexico 33. China Tier 1 Cities 34. Brazil Tier 1 Cities 35. Luxembourg 36. India Tier 1 Cities 37. Greece 38. Thailand 39. India Tier 2 Cities 40. South Korea 41. Botswana 42. Russia Tier 1 Cities 43. Brazil Tier 2 Cities 44. Turkey 45. Indonesia 46. Philippines 47. Croatia 48. Dubai 49. China Tier 1.5 Cities 50. Bulgaria 51. Slovenia 52. India Tier 3 Cities 53. Serbia 54. Russia Tier 2 Cities 55. China Tier 2 Cities 56. Argentina 57. Zambia 58. Mauritius 59. Abu Dhabi 60. Cayman Islands 61. Kenya 62. Chile 63. Saudi Arabia 64. Peru 65. Egypt 66. China Tier 3 Cities 67. Bahrain		<ul style="list-style-type: none"> Dominated by large emerging markets – BRIC, MIST 1/4 of global corporate HQs ... and growing 5-10% of global real estate investment Very dynamic tier – most improved transparency group Disconnect between regulations and enforcement Strengthening corporate governance and market data Growing middle classes mobilising against corrupt practices
Vietnam on cusp of 'Semi-Transparent'	Low	68. Vietnam 69. Sri Lanka 70. Macau 71. Morocco 72. Uruguay 73. Kuwait 74. Qatar 75. Ukraine 76. Puerto Rico 77. Iran 78. Russia Tier 3 Cities 79. Jordan 80. Rwanda 81. Costa Rica 82. Bahamas 83. Nigeria 84. Ecuador 85. Ghana 86. Colombia 87. Kazakhstan 88. Pakistan		<ul style="list-style-type: none"> Emerging targets for corporates in Africa, Asia and South America Predominantly 'development' markets Regulations being introduced Commencement of market tracking Technology enabling this group to leapfrog normal evolution Weak corporate governance
Myanmar among top global improvers, but from a low base	Opaque	89. Oman 90. Uganda 91. Lebanon 92. Panama 93. Tunisia 94. Ethiopia 95. Myanmar 96. Algeria 97. Angola 98. Dominican Republic 99. Tanzania 100. Belarus 101. Mozambique 102. Guatemala 103. Iraq 104. Ivory Coast 105. Venezuela 106. Senegal 107. Djibouti 108. Honduras 109. Libya		<ul style="list-style-type: none"> Dominated by Africa and Central America Geopolitical and economic challenges constrain transparency progress Limited regulatory framework, weak corporate governance and market data almost non-existent Some 'Opaque' markets are regressing

Ten 'Highly Transparent' countries account for 75% of global real estate investment

The 'Highly Transparent' Markets

GRETI identifies 10 'Highly Transparent' countries. Combined, they account for 75% of global direct investment into commercial real estate and they are home to nearly half of the world's 2,000 largest public companies.

The Anglosphere continues to dominate the 'Highly Transparent' group – the **United Kingdom** (1st), **Australia** (2nd), **Canada** (3rd) and the **United States** (4th) hold the top positions. These traditional standard-bearers are taking real estate transparency to a new level; making improvements that go beyond other transparent markets, particularly in the granularity, quality, frequency and geographical spread of performance measurement, valuations and market fundamentals data, which now also extend to niche property sectors.

These 'Highly Transparent' markets are setting a high bar, but the pressure is now on for them to show the way for other markets. In the wake of the Panama Papers the world is looking to these countries to take the lead in tightening beneficial ownership disclosure and anti-money laundering procedures.

'Core' Continental Europe is gradually catching up with the Anglosphere. **Germany** (9th) has joined the 'Highly Transparent' group for the first time, in part due to growth in its listed sector, while **France** (5th) has consolidated its position among the top tier.

The 'Transparent' Markets

A further 20 countries have been identified as 'Transparent' and, of these, 14 are from Europe. **Poland** (13th) has been one of the standout countries in this category and is now close to joining the 'Highly Transparent' group, sitting more comfortably alongside neighbouring Nordic countries such as **Sweden** (12th).

Asia Pacific has been the most consistently improving region in recent years and is well represented in the 'Transparent' tier. **Singapore** (11th) and **Hong Kong** (15th) remain neck and neck for top spot in Asia, although, once again, they have fallen just short of the 'Highly Transparent' category. Several high-income Asian countries have made solid gains; **Taiwan** (23rd) has elevated itself into the 'Transparent' category for the first time, while **Japan** (19th) has moved up a healthy seven positions.

The 'Semi-Transparent' Markets

The most rapid progress in real estate transparency is found in the 37 markets that make up the 'Semi-Transparent' category. This group offers the substantive opportunity to tap into dynamic markets that are undergoing major structural change.

Regulatory reforms are essential for further progress and many governments appear to be taking steps forward, with recent examples including **Dubai** and **India**. However, our survey reveals that among the 'Semi-Transparent' group there is a notable disconnect between the existence of regulations and actual enforcement – particularly in land use planning, contracts and building codes.

At the top of this category, **Mexico** (32nd) and **China's Alpha cities** (33rd) are on the cusp of moving into the 'Transparent' category. Meanwhile, **India's key cities** (36th) are benefiting from proactive measures to increase transparency in the real estate sector. **South Korea** (40th) has also progressed but, given its economic maturity and real estate investment levels, is an outlier in the 'Semi-Transparent' category.

The 'Low Transparency' and 'Opaque' Markets

Among the 42 largely emerging markets that sit in the 'Low Transparency' and 'Opaque' categories, transparent real estate practices play a particularly significant role in the effort to raise living standards and enhance community well-being.

There is wide recognition among international organisations that security of property ownership (supported by functioning, clear and accessible land registry and processing systems); safe housing and workplaces (underpinned by robust legislation and consistent enforcement of standards); and being able to trust agents to act honestly and professionally (with regulatory oversight and professional bodies that enforce codes of conduct and fair treatment) are all key ingredients of well-functioning, inclusive and stable communities.

While concrete steps towards greater real estate market transparency are being made in several 'Low Transparency' and 'Opaque' countries, many others are struggling with forward momentum as the complexities of implementing new regulatory structures become apparent, or other priorities – such as the impact of slowing commodity markets – have taken precedence.

Real Estate Environmental Sustainability Transparency

There continues to be evidence that sustainability considerations are becoming more widely established, although the pace of progress in creating new tools and regulations is slow. There are encouraging signs that two cornerstones of environmental performance transparency (minimum energy efficiency standards and green building certification schemes) are available in the majority of key markets.

France is the top scorer globally through the roll-out of legislated mandates to transition to a low carbon economy. **Japan** has joined **France, Australia** and the **UK** in the top group for the first time through the introduction of several new sustainability tools.

Future improvements in real estate transparency will provide new opportunities to tap into dynamic markets that are undergoing structural change and are moving up the transparency continuum.

FUTURE Outlook for Real Estate Transparency

An Evolving Real Estate Market

The GRETI 2016 survey reveals a dynamic global real estate sector that is continuing to evolve and becoming more transparent. Yet there are too many examples of opaque and corrupt practices, poor corporate governance and failures in regulatory enforcement that are having serious consequences for society, for business activity and for investment. Investors and tenants will bypass countries unable to address these shortcomings, gravitating instead to more transparent markets.

Stopping Money Laundering through Property: Ownership Disclosure

Beneficial ownership disclosure and anti-money laundering procedures will be embraced more widely and rigorously. We expect to see material progress by many countries in their drive for greater transparency in corporate and real estate ownership.

Weight of Capital

Definitions of what is an acceptable level of transparency will be set even higher as capital allocations to real estate increase. And there is a considerable volume of capital to play for. Within the next decade we project that annual direct investment into commercial real estate assets will hit in excess of US\$1 trillion across the globe.

The case for 'Hyper-Transparency'

For real estate to compete effectively as an asset class, it needs to raise the bar for the highest level of transparency. As we look towards GRETI 2018, there may be merit in considering an even higher classification of 'Hyper-Transparency' to which those currently in the top tier may not yet qualify.

Tackling Corruption

The mounting intolerance of corruption within the world's growing middle classes will force the pace of change, particularly among 'Semi-Transparent' countries, with social media helping people to mobilise.

Transparency through Technology

Rapid technological innovations from an emergent 'prop-tech' industry offer the opportunity for a quantum leap in data access to support a rising culture of 'open data'. Technology will allow some countries to leapfrog the traditional route to transparency. There are examples of this already happening in places like Kenya, Ghana and Ecuador.

Regulatory Enforcement

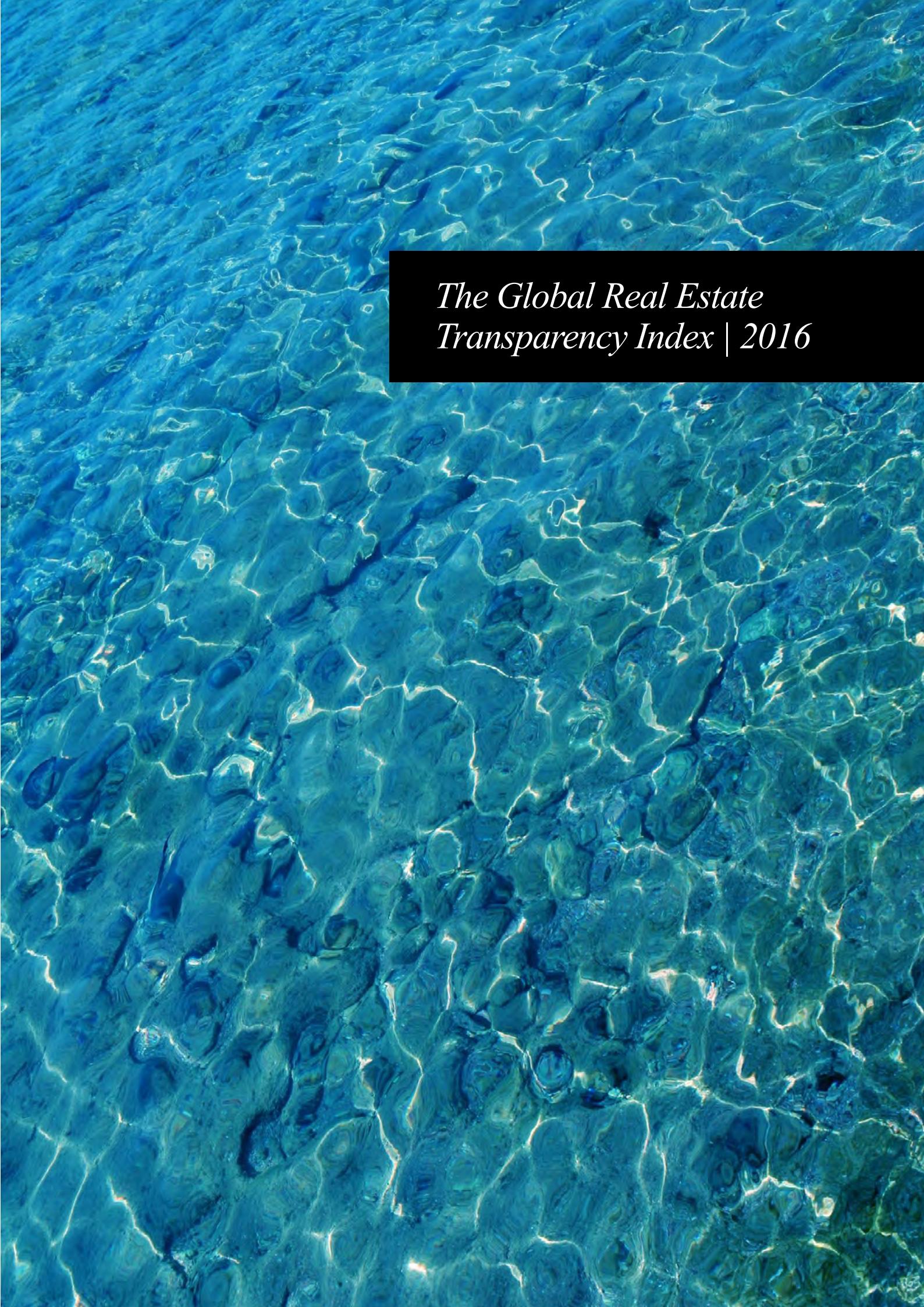
Regulatory reforms will be essential for further progress. Nonetheless, greater emphasis will need to be placed on regulatory enforcement, particularly in 'Semi-Transparent' markets, where there is the greatest disconnect between regulations and actual enforcement.

As investors and corporate occupiers extend their footprints into new, often less transparent markets, the need for rigorous due diligence and professional real estate services becomes even more crucial.

A Few Highlights Among the Many New Developments in Real Estate Transparency Over the Last Two Years

Canada	A new property fund index established	India	Land Acquisition, Rehabilitation and Resettlement Act of 2014 Real Estate (Regulation and Development) Act, 2016	Qatar	Real Estate Development Law
Dubai	Mandatory green building standards introduced Dubai Open Data Law, 2015	Japan	New Building Energy-Efficiency Labelling System	Rwanda	Land Administration Information System completed
Ecuador	New digital-based land registry system	Kenya	National Construction Agency operational Digitisation of land registry has been completed in Nairobi Kenya's first REIT launched in 2015 – Fahari I-REIT	Taiwan	Consolidated housing and land tax introduced in 2016
Europe	Launch of new ECB data on CRE debt	Pakistan	First REIT: Arif Habib Dolmen City - the first such vehicle in South Asia	United Kingdom	The UK commits to central database that discloses beneficial ownership information
Greece	Launch of new office and retail value index			United States	More frequent core fund valuations, plus a new Daily Priced Fund Index
				Worldwide	GRESB* coverage reached 61,000 assets in 2015, a jump of 24% since 2013





*The Global Real Estate
Transparency Index | 2016*

The Global Real Estate Transparency Index, 2016

This ninth edition of the **Global Real Estate Transparency Index** (GRETI) contains the most comprehensive country comparisons of data availability, governance, transaction processes, property rights, and the regulatory/legal environment around the world. The Index is updated every two years and has been charting the evolution of real estate transparency across the globe for 17 years. The 2016 Index covers 109 markets.

In the 2016 Index we have introduced greater granularity as the real estate industry demands more detailed data to inform decisions. Additional elements have been included relating to the availability of disaggregated datasets; data on alternative sectors (such as student accommodation and self-storage); and aggregate data on debt and financing conditions. This has increased the number of individual factors covered by 21% to 139 factors. Although the consistency of the survey is not compromised, greater scrutiny and the explicit inclusion of more factors underpin some of the changes in score between 2014 and 2016.

Coverage has been extended further into Africa to include **Djibouti, Ivory Coast, Rwanda and Tanzania**. **Ecuador, Luxembourg, Iran and Sri Lanka** are also new to GRETI. Recognising that cities are becoming more of a focus for real estate players, we have deepened the survey to include an extra city tier in **China**, and have assessed market fundamentals data availability for an additional 28 cities across the globe.

As in previous surveys, teams of researchers and business leaders from JLL and LaSalle Investment Management have worked together to assess the transparency in each of the 109 markets. Our Alliance Partners have also helped to provide additional 'on-the-ground' information. Accounting, finance and legal experts have been consulted too, especially in emerging markets, in order to supplement our collective real estate knowledge.

Since we launched the Index in 1999, its components have evolved and been refined to reflect the changing demands of cross-border investors and corporate occupiers. Therefore, to enable comparisons to be made across time, we have recreated an historic Transparency Index based on current weights and questions. We should like to emphasise that the recalibrated historic Indices differ from those published at the time of each survey.

In addition to this report, the results of the 2016 Transparency Index are also presented in an interactive website: www.jll.com/Transparency

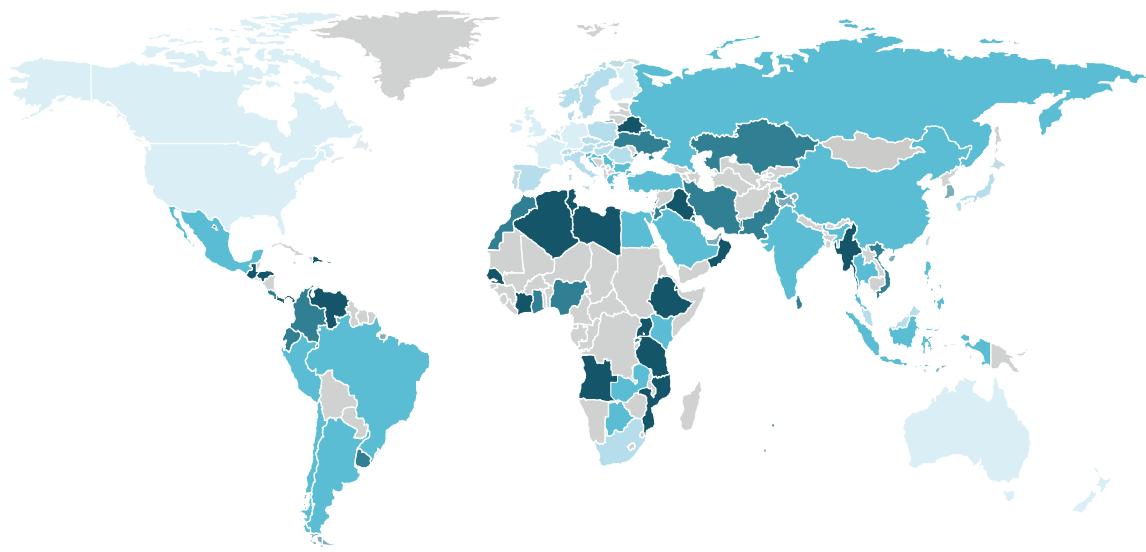
The website allows users to explore the different components of real estate transparency at a global, regional and national level. Datasets for all 109 markets covering composite and sub-index scores can also be downloaded. A series of interactive visualisations facilitate a comparison of transparency between markets.

We trust that GRETI 2016 will provide valuable insights into the changes in real estate transparency across the globe. A complete description of the methodology used to create this Index is set out in the Technical Note.

For more information about the Index and how we can help with your real estate decisions, please connect with one of the Global Real Estate Transparency Team.

Global Real Estate Transparency Index

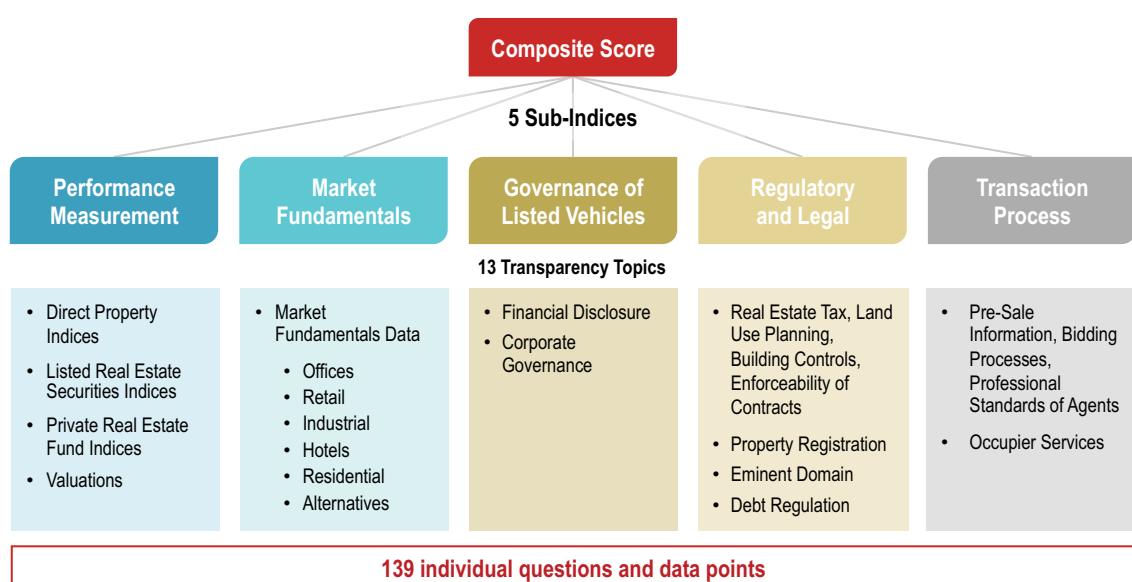
The 2016 survey covers 109 markets worldwide



Source: JLL, LaSalle Investment Management

Transparency Index Components

Incorporates 139 different factors, a 21% increase on 2014



Source: JLL, LaSalle Investment Management

Transparency in Action: How the Index is Used by Investors and Researchers

JLL has produced the Global Real Estate Transparency Index for 17 years as a service for clients, colleagues and the entire commercial real estate industry. We continue to improve and refine the methodology over time and, in like manner, our clients find new uses for the Index too.

In advance of the release of the 2016 edition, we asked clients of JLL and LaSalle Investment Management about their experiences with GRETI over the years. Here is a brief summary of their replies:

**Timothy Bellman,
Head of Global Research, Invesco**

“ This is an important contribution to the real estate industry and its globalisation. I have loved watching it grow and evolve into the industry standard tool that it has become. GRETI is a great resource for comparative market analysis. We use it as one of a number of screening tools to help structure investment strategies for some cross-border clients, for whom investing in markets with levels of openness and transparency comparable to their home market is an important consideration. It is also helpful in determining where execution opportunities might be easier to screen opportunistic/higher-risk strategies. The power of the tool is in the consistency of the methodology over time and across the world. Knowing that it is prepared rigorously within a centrally-directed global framework by respected real estate professionals at the local level gives it tremendous credibility and a comfort that local biases have not been allowed to creep into the analysis.

**Chris Taylor, Chief Executive Officer,
Hermes Real Estate and Head of Private Markets**

“ We use GRETI as an essential tool to help define our investment universe (and hence target markets) based on markets in the top tiers of the Index. Market size, liquidity and exit considerations, market fundamentals/operational aspects and maturity are also important in selecting markets. We aim to work alongside reliable local partners with whom we can establish strong and mutually beneficial business relationships, so business culture and ‘fit’ are always important too. The transparency scores will be part of and help condition our thinking on the risk premia we would want to apply to different countries. The key for us, in markets where we are less familiar, will be implementation risk and the risk of unanticipated/unexpected loss. So understanding valuation practices, land title systems and robustness of contracts is fundamental. **”**

**Neil Cable, Head of European Real Estate,
Fidelity International**

“ JLL has done a great service to the real estate industry with this publication for nearly two decades and the report has extended its breadth and depth of analysis yet again. It is encouraging to see transparency improving across all global regions but the report also highlights that there is still much more we can do. If real estate is to capture its fair share of capital from investors in the coming years, transparency will need to be enhanced and embraced even more, and in many more areas such as performance analysis and sustainability. JLL is leading the way by continuing to publish – and constantly improve – this invaluable index. **”**

Dr Paul McNamara OBE, Former Head of Property Research, M&G Real Estate

“ When considering investing abroad, organisations face an implicit contradiction of local knowledge versus central risk management. So, how to be local and global at the same time? How to make the unfamiliar, familiar? There are broadly three approaches to this: 1) develop partnerships with a local player; 2) develop your own expertise; and 3) make use of information from those already embedded in a global network. The Transparency Index plays a role in #3. We found the Index particularly useful in pricing the risk of various foreign markets and used it to identify generic risk premia, both relative to our UK home market and in absolute terms.

Going forward the Index has an important role to play in promoting transparency in real estate markets – in effect the Index may influence future patterns of overseas investment. I am particularly pleased to see a sustainability element has been added to the Index as this is a concern for a growing number of investors. **”**

Canadian Pension Fund

“ The use of the Index allows us to derive the impact from the change in the transparency level of real estate capital flows. Furthermore, the analysis of the variables in the Index provides a better idea of the targeted country's risk associated with the transparency and quantification of a proper risk premium. ”

Martha Peyton, Head of Research, TIAA Global Asset Management

“ I have been using GRETI for 10 years; I still have the 2006 edition in my files. GRETI is a very useful tool that we combine with a larger array of metrics to assess international real estate prospects. We use GRETI as a proxy for the maturity of each country's real estate sector. We appreciate that GRETI is real estate specific. More metrics on country-specific lease characteristics that may make some countries more tenant-friendly or more landlord-friendly would be useful. GRETI has become an industry standard resource for global real estate investors; we commend the GRETI team for their service! ”

Professor Graeme Newell, Professor of Property Investment, Western Sydney University

“ The JLL Global Real Estate Transparency Index is a key part of the real estate research resources available today. It is an essential ingredient in all of my real estate research and teaching activities. Tracking the transparency of over 100 real estate markets, it is a highly rigorous, informative and incisive global benchmark.

The depth and level of understanding provided by JLL as to why real estate transparency has improved is crucial to all real estate players in understanding the global real estate markets. As well as the developed real estate markets, this is particularly the case with the comprehensive coverage of the emerging real estate markets, which are taking on an increasingly important role in global real estate strategies.

Congratulations on the 2016 edition of the JLL Global Real Estate Transparency Index. It has added another quantum in our understanding of global real estate market dynamics. ”

Sovereign Wealth Fund

“ GRETI is a helpful reference point. We use it as a base for risk premia estimates. If a country has a low transparency score then we know we need to spend extra time developing in-house views and studying the market. As a broad tool, it is particularly useful for emerging markets where we don't have much insight. We also like the comparison and coverage of markets.

Low transparency can also be seen as an advantage, particularly when working with local partners who have knowledge of that market which a foreign investor might not. This potentially opens up opportunities and helps uncover strong relative value. As an investor, transparency is essentially about understanding a market, and this isn't possible if there isn't good-quality data. Leasing and transaction data is important and it needs to be consistent and of good quality. Valuation practices vary, so understanding different performance indices is important. Country-specific definitions make it difficult to compare like-for-like. ”

Europe-Based Fund Manager

“ We use the Global Real Estate Transparency Index for indirect investments globally, together with political and economic risk indices from various providers. The presentation materials are used in our fund meetings. Data and information availability is generally improving due to digital accessibility, particularly deal-level information. Lack of reliable benchmark/performance index data in most European countries outside the UK is challenging. ”

Youguo Liang, Head of Global Research and Public Markets, ADIA

“ The first time I used GRETI was to estimate country risk premiums at Prudential Real Estate Investors. I consider GRETI to be highly useful for global investors as it is one of the major parameters to understand global property markets. Keep the good work going! ”

Real Estate Transparency under Intense Scrutiny

A growing recognition of the importance of a transparent global real estate sector

The launch of GRETI 2016 comes at a time when the transparency of real estate is under intense scrutiny from international institutions, national governments, businesses and communities. It reflects a growing recognition of the crucial role that a transparent real estate sector plays, not only as a facilitator of new investment and business activity but also, significantly, in community well-being and inclusiveness. Moreover, the revelations in the Panama Papers have further increased pressures for greater real estate transparency and put the fight against corruption firmly on the international agenda.

Rising expectations of real estate transparency

The link between higher real estate transparency and higher real estate activity (i.e. investment, development, occupation) has been well-rehearsed in previous GRETI surveys. This relationship continues to hold firm, with our latest Index revealing that almost 75% of global capital invested directly into commercial real estate assets finds a home in 'Highly Transparent' countries.

But, as capital allocations to real estate grow, there are mounting pressures to make further improvements in transparency even among the world's most transparent markets, with market participants elevating expectations of what constitutes an acceptable level of real estate transparency in order to drive business efficiencies.

Investors and corporate occupiers are demanding more accurate, more granular and timely market data and performance measurement; they expect robust regulatory enforcement and adherence to ethical standards – as well as fair transaction processes and rigorous valuation practices.

The traditional standard-bearers of high real estate transparency, like the **United States, United Kingdom and Australia**, are responding proactively to these increasing demands, prompting considerable innovations in real estate data and performance measurement. This is being supported by rapid technological innovations from an emergent 'prop-tech' sector.

Real estate transparency firmly in the spotlight

The revelations of the Panama Papers in early 2016 have shone another spotlight on the world's most transparent markets (see INSET). At the forefront, in terms of real estate implications, is the focus on money laundering through the purchase of property, which is mainly residential – in cities such as **London, New York, Miami and Vancouver**, among others – that have an active market in luxury residential units. Weaknesses in beneficial ownership disclosure, vetting, and regulatory oversight and enforcement are at the core of this issue.

Yet over the last couple of years there has been a marked shift in regulation and we have seen a number of markets strengthening anti-money laundering (AML) checks on the real estate industry. Further regulatory focus, forced extensive disclosure and active enforcement and prosecution, including strong international cooperation, are now being employed, which in turn will offer clear dividends and give a further boost to these 'Highly Transparent' markets. Initiatives to increase transparency through identification of beneficial ownership will not only help combat money-laundering in the real estate sector, but should also help governments tackle broader corruption issues which have seen increasing enforcement through, for example, the U.S. Foreign Corrupt Practices Act and the UK Bribery Act.

Real estate transparency and community ‘well-being’

Further down the transparency spectrum and particularly in emerging economies, strong governance and transparent real estate practices play a key role in efforts to raise living standards and improve community well-being; which is why international organisations such as Transparency International and the World Economic Forum are focusing more keenly on real estate transparency issues.

There is wide recognition that security of property ownership (supported by functioning, clear and accessible land registry and processing systems); safe housing and workplaces (underpinned by robust legislation and consistent enforcement of standards); and being able to trust agents to act honestly and professionally (with regulatory oversight and professional bodies that enforce codes of conduct and fair treatment) are all key ingredients of a well-functioning, inclusive and stable society.

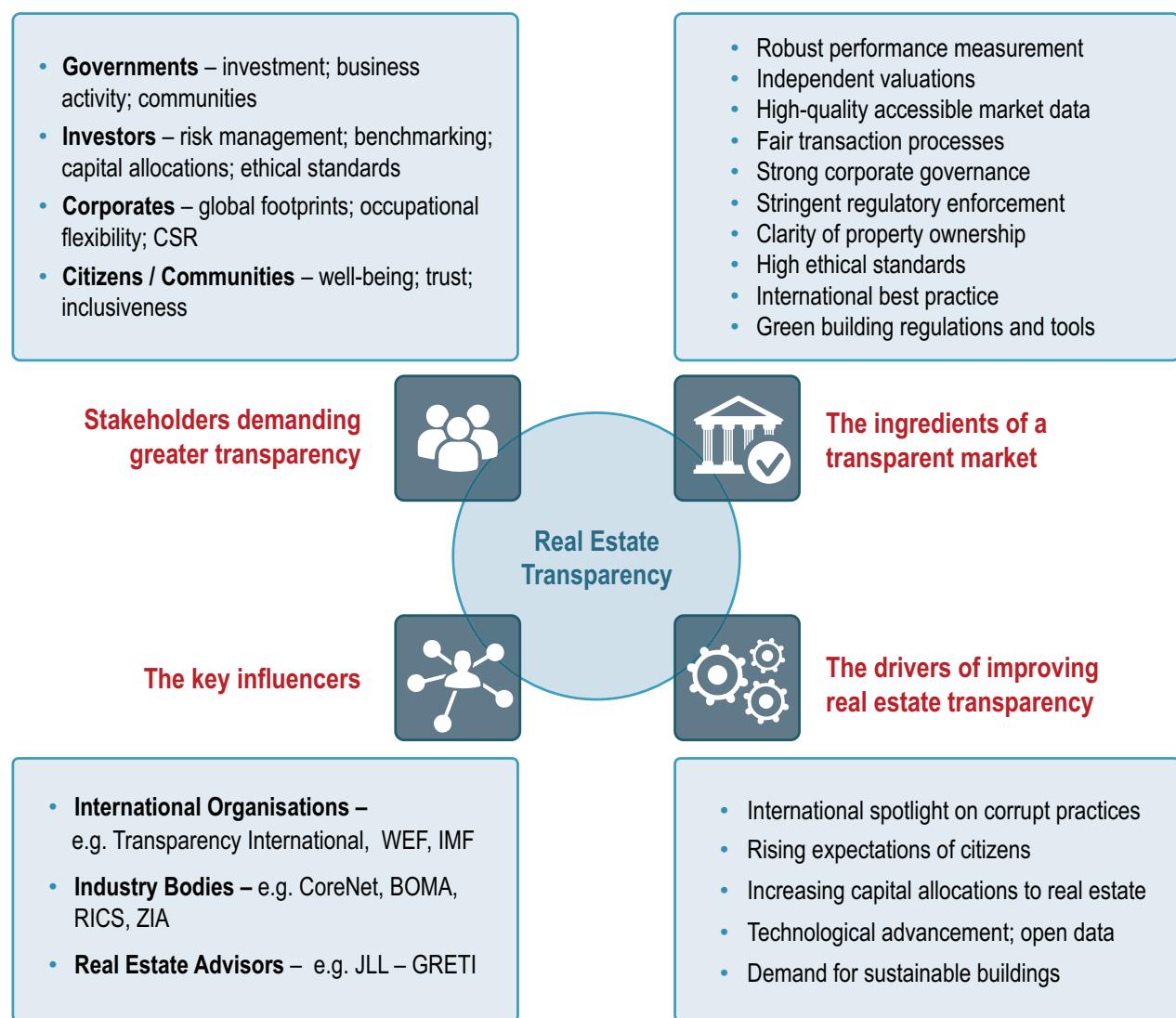
Many emerging economies are introducing regulation to improve transparency. But despite a reasonable level of regulation, our latest survey highlights that implementation, oversight and enforcement is lagging behind in several areas, particularly in land use planning, contracts and building codes. A series of building collapses across the globe have highlighted that a lack of regulatory enforcement can have devastating consequences.

A step change in real estate transparency

Our latest GRETI survey reveals a dynamic global real estate sector that is continuing to evolve and becoming more transparent. However, further progress undoubtedly needs to be made, with 2016 marking a step change for the industry as pressure mounts for increasing transparency. This will have implications for the way we measure transparency in future surveys:

- **Ownership Disclosure:** Beneficial ownership disclosure and anti-money laundering procedures will need to be embraced. In the wake of the Panama Papers, more countries will certainly join the growing international movement insisting on disclosure of beneficial ownership. We expect to see material progress by many countries in their drive towards greater transparency in corporate and real estate ownership.
- **The Weight of Capital:** At the top end of the transparency spectrum, definitions of an acceptable level of transparency will be set even higher. Real estate is becoming an ever more popular asset class for a broad array of investors – from institutions and sovereign wealth funds through to high-net-worth individuals – and within the next decade we could see annual direct investment into commercial real estate assets hitting in excess of US\$1 trillion across the globe; this is a considerable volume of capital to play for.
- **The Case for ‘Hyper-Transparency’:** For real estate to compete effectively as an asset class, it needs to raise the bar for the highest level of transparency. As we look towards GRETI 2018, there may be merit in considering an even higher classification of ‘Hyper-Transparency’ to which those currently in the top tier may not yet qualify.
- **Tackling Corruption:** The growing intolerance of corruption will force the pace of change. Paradoxically it is in ‘Highly Transparent’ markets that corrupt behaviour is more likely to be discovered and adjudicated, but it is in the lower-transparency markets where corrupt practices are more pervasive and rarely come to light.
- **Regulatory Enforcement:** Regulatory reforms will be essential for further progress in transparency, and several governments, such as those in **Dubai, India and Taiwan**, appear committed to taking steps forward. Nonetheless, greater emphasis will need to be placed on regulatory enforcement, particularly in ‘Semi-Transparent’ markets where there is the greatest disconnect.

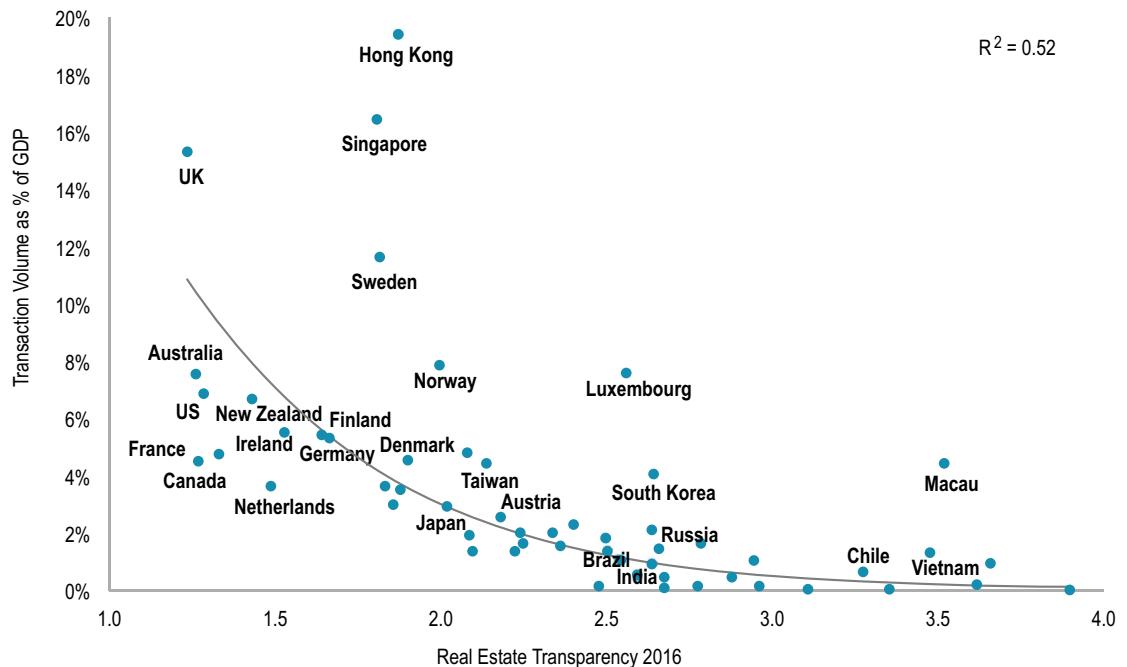
Why is Real Estate Transparency Important?



Source: JLL, LaSalle Investment Management

Real Estate Transparency Index and Investment Volumes

Transparency rises with investment

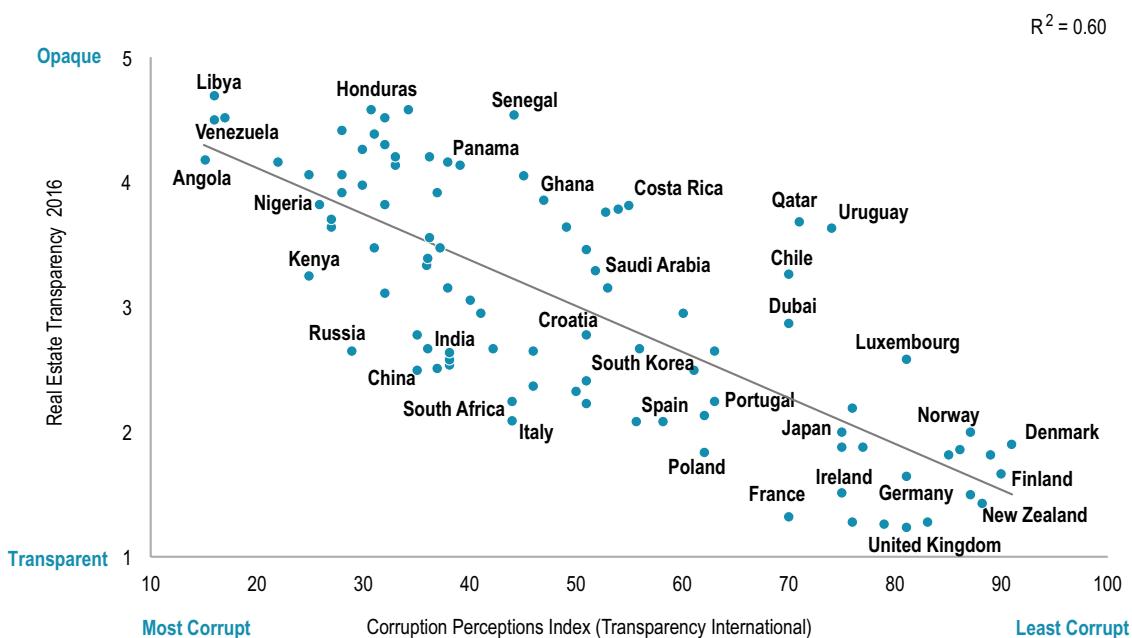


Based on direct commercial real estate volumes, 2011-2015

Source: JLL, LaSalle Investment Management, Oxford Economics

Real Estate Transparency Index and Corruption Perceptions

Closely correlated with corruption



Source: JLL, LaSalle Investment Management, Transparency International

The Panama Papers and Beneficial Ownership Disclosure

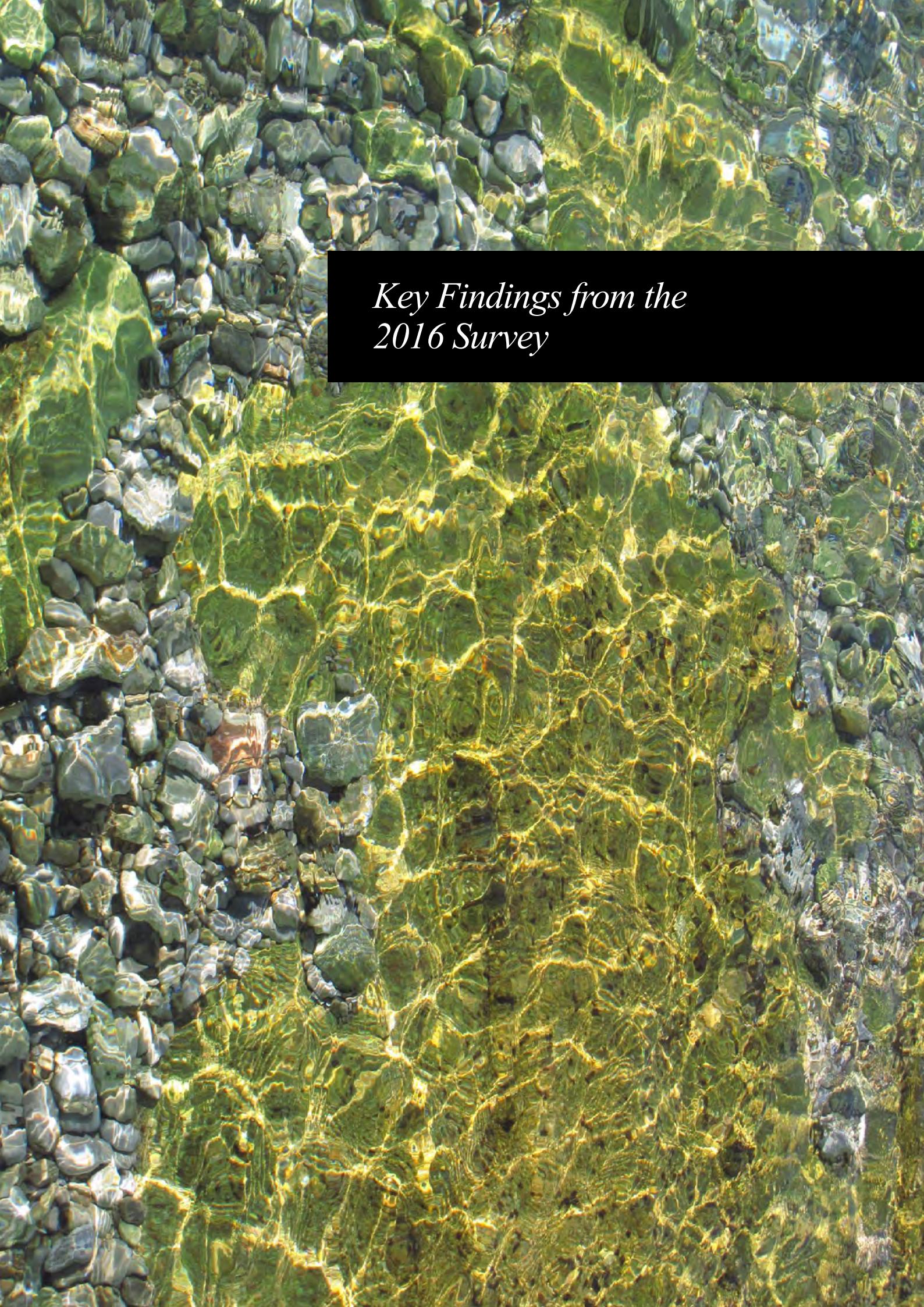
The leaking of the Mossack Fonseca Panama Papers in early 2016 and announcements at the May 2016 Anti-Corruption Summit in London have put the fight against corruption and demand for increased transparency in corporate ownership firmly in the spotlight.

Currently, several 'Highly Transparent' countries, including the **United Kingdom, Canada and Germany**, impose obligations on real estate agents to perform anti-money laundering (AML) checks to verify the identity of their clients and any underlying beneficial owners. However, a number of key international real estate markets, including the **United States** and **Australia**, do not impose direct obligations on real estate agents to perform AML checks and rely on general laws with prohibitions on assisting in corruption and money laundering activities.

The UK government has announced a series of steps to strengthen transparency both nationally and globally. The **United Kingdom** is the first country in the G20 to commit to a central public database that discloses the beneficial ownership information of companies owning and purchasing property in the UK. Ten additional countries have reportedly committed to concrete or (as yet) undefined steps towards beneficial ownership transparency in property (**Afghanistan, Argentina, France, Italy, Jordan, Kenya, Mexico, Nigeria, Spain and Tanzania**).

Australia and the United States have also announced moves to strengthen transparency, including in the real estate sector. The U.S. will pilot transparency initiatives in two of the nation's major destinations for global wealth: **Manhattan** and **Miami**, requiring shell companies involved in real estate cash transactions to disclose their beneficial ownership.

We believe that 2016 marks a step change in real estate transparency. In the wake of the Panama Papers, more countries will undoubtedly join the growing international movement insisting on disclosure of beneficial ownership. Looking to the publication of the next GRETI report in 2018, we expect to see material progress by many countries in their drive towards greater transparency in corporate and real estate ownership.



*Key Findings from the
2016 Survey*

Global Real Estate Transparency Index, 2016

Transparency Level	2016 Composite Rank	Market	2016 Composite Score	Transparency Level	2016 Composite Rank	Market	2016 Composite Score
High	1	United Kingdom	1.24	Semi	56	Argentina	3.12
	2	Australia	1.27		57	Zambia	3.14
	3	Canada	1.28		58	Mauritius	3.16
	4	United States	1.29		59	UAE - Abu Dhabi	3.24
	5	France	1.34		60	Cayman Islands	3.25
	6	New Zealand	1.45		61	Kenya	3.27
	7	Netherlands	1.49		62	Chile	3.28
	8	Ireland	1.60		63	Saudi Arabia	3.28
	9	Germany	1.65		64	Peru	3.36
Transparent	10	Finland	1.66		65	Egypt	3.39
	11	Singapore	1.82		66	China - Tier 3*	3.40
	12	Sweden	1.82		67	Bahrain	3.46
	13	Poland	1.85		68	Vietnam	3.49
	14	Switzerland	1.86		69	Sri Lanka*	3.49
	15	Hong Kong	1.89		70	Macau	3.52
	16	Belgium	1.90		71	Morocco	3.55
	17	Denmark	1.92		72	Uruguay	3.62
	18	Norway	2.00		73	Kuwait	3.64
	19	Japan	2.03		74	Qatar	3.64
	20	Czech Republic	2.10		75	Ukraine	3.66
	21	Italy	2.10		76	Puerto Rico	3.68
	22	Spain	2.11		77	Iran*	3.70
	23	Taiwan	2.14		78	Russia - Tier 3	3.73
	24	Austria	2.18		79	Jordan	3.75
	25	South Africa	2.23		80	Rwanda*	3.79
	26	Hungary	2.26		81	Costa Rica	3.80
	27	Portugal	2.26		82	Bahamas	3.82
	28	Malaysia	2.35		83	Nigeria	3.82
Semi	29	Slovakia	2.37		84	Ecuador*	3.83
	30	Romania	2.38		85	Ghana	3.86
	31	Israel	2.49		86	Colombia	3.91
	32	Mexico	2.51		87	Kazakhstan	3.92
	33	China - Tier 1	2.52		88	Pakistan	3.97
	34	Brazil - Tier 1	2.55		89	Oman	4.04
	35	Luxembourg*	2.58		90	Uganda	4.05
	36	India - Tier 1	2.61		91	Lebanon	4.06
	37	Greece	2.65		92	Panama	4.15
	38	Thailand	2.65		93	Tunisia	4.16
	39	India - Tier 2	2.65		94	Ethiopia	4.16
	40	South Korea	2.66		95	Myanmar	4.17
	41	Botswana	2.66		96	Algeria	4.19
	42	Russia - Tier 1	2.67		97	Angola	4.19
	43	Brazil - Tier 2	2.68		98	Dominican Republic	4.22
	44	Turkey	2.69		99	Tanzania*	4.26
	45	Indonesia	2.69		100	Belarus	4.30
	46	Philippines	2.78		101	Mozambique	4.39
	47	Croatia	2.80		102	Guatemala	4.41
	48	UAE - Dubai	2.88		103	Iraq	4.50
	49	China - Tier 1.5	2.90		104	Ivory Coast*	4.51
	50	Bulgaria	2.96		105	Venezuela	4.52
	51	Slovenia	2.97		106	Senegal	4.54
	52	India - Tier 3	3.00		107	Djibouti*	4.56
	53	Serbia	3.04		108	Honduras	4.58
	54	Russia - Tier 2	3.09		109	Libya	4.69

*New markets added to the 2016 survey

Source: JLL, LaSalle Investment Management

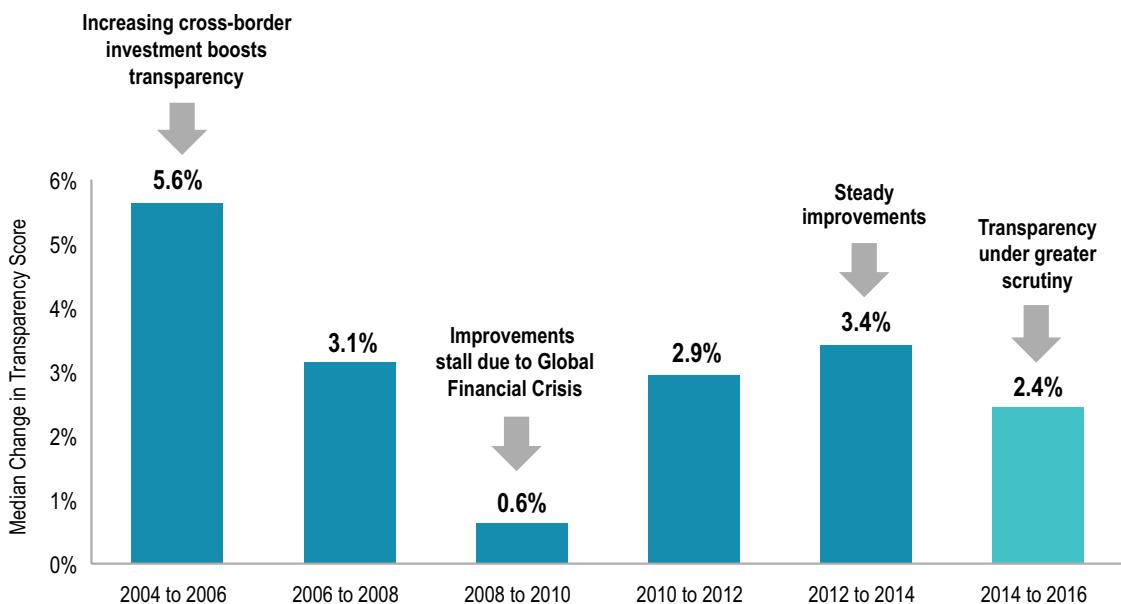
Real estate makes further progress

JLL's 2016 Global Real Estate Transparency Index reveals that real estate transparency has continued to improve steadily at a sub-national, national and international level. Globally, transparency scores have advanced by an average of 2.4% (2014-2016), matching broadly the improvements made between 2010-2012 (at 2.9%) and 2012-2014 (at 3.4%). Two-thirds of markets have shown progress over the past two years.

These encouraging results highlight a real estate industry that is making steady progress through initiatives to deepen the availability and quality of market data and performance benchmarking; by enacting new legislation to reduce roadblocks to progress; by setting higher ethical standards; and by taking steps to make transaction processes more fair and transparent.

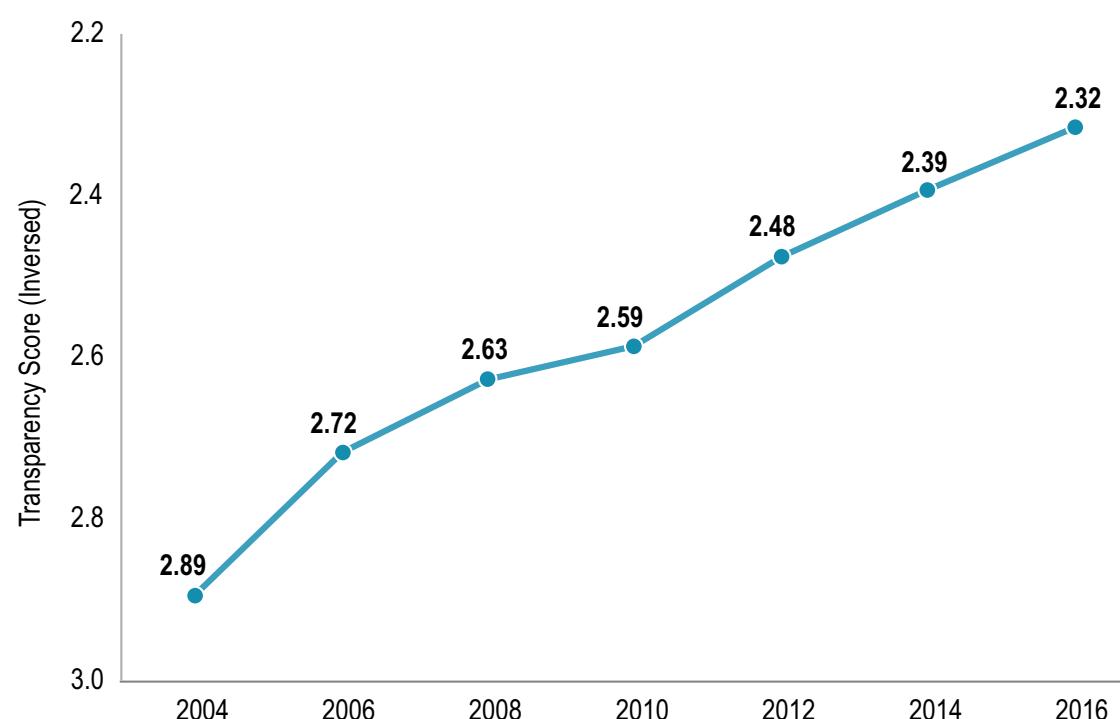
Real Estate Transparency Improvements since 2004

Steady progress across the globe



Median change for all markets included in each two-year period
Source: JLL, LaSalle Investment Management

The Path to Greater Real Estate Transparency
Average Transparency Score, 50 Markets



Based on 50 markets with data history extending back to 2004.

Source: JLL, LaSalle Investment Management

The Real Estate Transparency Spectrum

The Anglosphere still dominates top positions ... and they are setting the bar higher

The Anglosphere countries continue to dominate the upper echelons of the transparency hierarchy – accounting for six of the world's ten 'Highly Transparent' markets. The **United Kingdom (1st)**, **Australia (2nd)**, **Canada (3rd)** and the **United States (4th)** hold the top positions.

These traditional standard-bearers are taking transparency to a new level; making improvements that go beyond other 'Highly Transparent' markets, particularly in areas of performance measurement, market fundamentals data and valuation practices. In these markets, property data is increasingly available at the city sub-market level and by property type; and further improvements in performance measurement and market data are on the horizon, especially in tracking niche property sectors.

They are setting a high bar for transparency and are showing the way for other markets to follow. The world is looking to these 'Highly Transparent' markets to take the lead in introducing greater transparency on beneficial ownership disclosure and on tightening up anti-money laundering legislation and procedures in the wake of the revelations from the Panama Papers.

World's Most Transparent Markets, Global Top 15

'Highly-Transparent' group accounts for 75% of global real estate investment

Category	2016 Composite Rank	Market	2016 Composite Score	
Highly Transparent	1	United Kingdom	1.24	UK, Australia, Canada and U.S. raising the Transparency bar
	2	Australia	1.27	
	3	Canada	1.28	
	4	United States	1.29	
	5	France	1.34	
	6	New Zealand	1.45	
	7	Netherlands	1.49	
	8	Ireland	1.60	
	9	Germany	1.65	Germany moves into 'Highly Transparent'
	10	Finland	1.66	
Transparent	11	Singapore	1.82	Poland moving towards 'Highly Transparent'
	12	Sweden	1.82	
	13	Poland	1.85	
	14	Switzerland	1.86	
	15	Hong Kong	1.89	

Germany joins the ‘Highly Transparent’ group for the first time

‘Core’ Continental Europe is gradually catching up with the Anglosphere. **Germany** (9th) has joined the ‘Highly Transparent’ group for the first time, in part due to growth in its listed sector, while **France** (5th) has consolidated its position among the top group with advances in the regulatory and legal environment. Both countries are making good progress in the quality of and access to market fundamentals data; they are leading innovations in data digitisation and are home to several pioneering ‘prop-tech’ companies. Meanwhile, **Poland** (13th) is close to joining the ‘Highly Transparent’ group and now sits more comfortably with neighbouring Nordic countries (ranking just below **Finland** in 10th and **Sweden** in 12th position).

Several high-income Asian countries make steady gains

Singapore (11th) and **Hong Kong** (15th) remain neck and neck for top spot in Asia, although they have not shown any significant improvement and once again have fallen just short of the ‘Highly Transparent’ category. Nonetheless, further down the hierarchy, several high-income Asian countries have made solid gains, resulting in Asia Pacific being the most consistently improved region in recent years. **Taiwan** (23rd) has elevated itself into the ‘Transparent’ category, while **Japan** (19th) has moved up a healthy seven positions. **South Korea** (40th) has also progressed but, given its economic maturity and real estate investment levels, remains an outlier in the ‘Semi-Transparent’ category.

India and China lead the BRIC countries

India’s key cities (36th) are benefiting from proactive measures to increase transparency in the real estate sector. Land records have started to be digitised and made available via an online database, while the Land Acquisition, Rehabilitation and Resettlement Act (passed in 2014) has simplified procedures for acquiring land and determining fair compensation to sellers.

Progress in **China** (33rd) has been steady, with greatest advancement among its Tier 1 Alpha cities. **Shanghai**, which is on the cusp of moving into the ‘Transparent’ category, is a city that is fast-tracking to maturity and witnessing a structural uplift in real estate investment, development and corporate activity. It has seen a threefold increase in real estate investment since 2010.

Central and Eastern Europe feature strongly among the top improvers

Slovenia (51st) and **Serbia** (53rd) are the top improvers globally since 2014, followed by **Bulgaria** (50th). These three Balkan countries have moved up into the ‘Semi-Transparent’ category due to improving market fundamentals data and better valuation practices, but they remain well below most of the rest of Europe. Meanwhile, **Slovakia** (29th) and **Romania** (30th) have joined the core Central European group in the ‘Transparent’ category. **Turkey** (44th) – a ‘star improver’ in the 2010 and 2012 surveys – has made very limited progress, which has pushed the country down the global ranking since 2014.

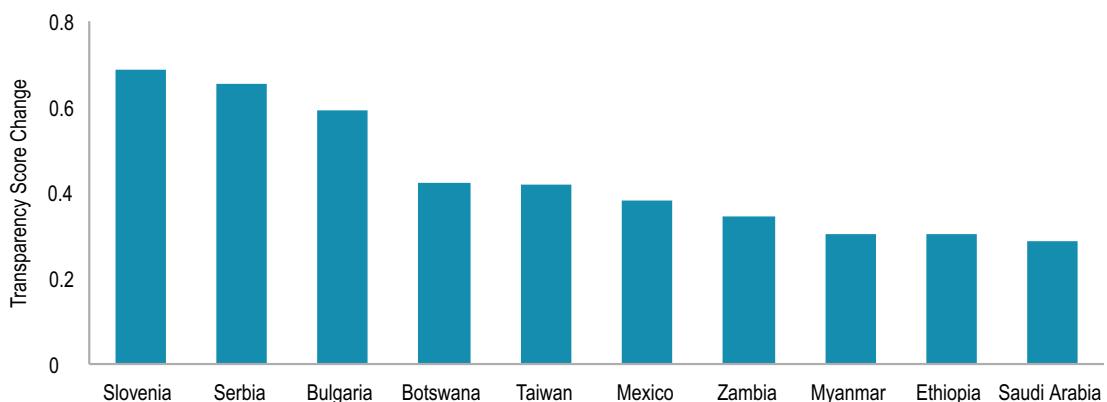
Sub-Saharan Africa – making progress, but patchy

Echoing the 2014 survey, Sub-Saharan Africa is home to some of the strongest improvers – notably **Botswana** (41st) and **Zambia** (57th). Also of note is **Rwanda**, which joins GRETI in 80th position and is the highest new entrant in the region. New building codes and urban planning regulations, together with full documentation of all land rights in Rwanda are boosting transparency in what is sometimes referred to as the ‘Switzerland of Africa’.

Several other key Sub-Saharan African markets, such as **Mauritius** (58th) and **Kenya** (61st), have been treading water. While concrete steps towards greater real estate market transparency continue to be made across the region, forward momentum has stalled in some countries as the complexities of implementing new regulatory structures become apparent, or other priorities – such as the impact of slowing commodity markets – have taken precedence.

Top Transparency Improvers, 2014–2016

Largest improvers concentrated in South Eastern Europe and Sub-Saharan Africa



Source: JLL, LaSalle Investment Management

Transparency generally improving in MENA

The Middle East and North Africa (MENA) region's larger markets have improved their transparency scores. **Dubai** (48th) has made further progress, but remains in the dynamic 'Semi-Transparent' group. Meanwhile, **Saudi Arabia** (63rd) and **Egypt** (65th) have nudged into the 'Semi-Transparent' group for the first time. Iran joins GRETI in a respectable 77th position (in the 'Low Transparency' category).

Mexico is the 'star improver' in the Americas

Mexico (32nd) is among the global top improvers and now sits just shy of the 'Transparent' category as Latin America's most transparent country. Mexico's REIT industry has blossomed since its inception in 2010, positioning the country among the top 20 globally in the 'Governance of Listed Vehicles' sub-index. **Argentina** (56th), **Chile** (62nd) and **Uruguay** (72nd) are also bright spots in a region that, in general, lags in many key areas of transparency.

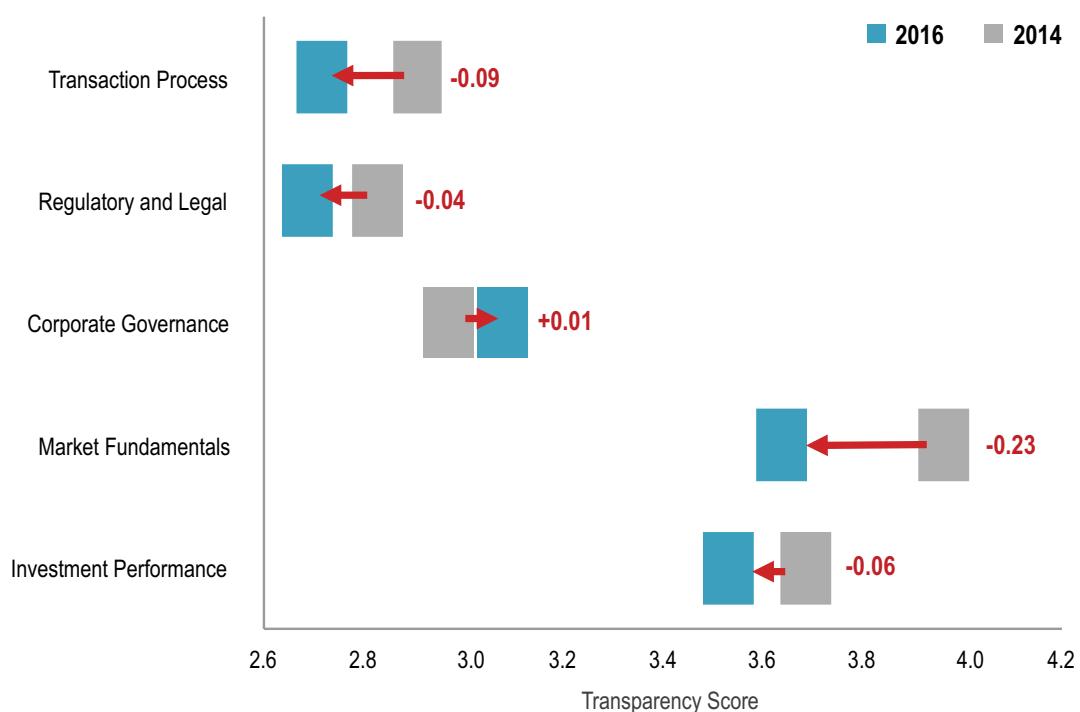
Some countries struggle to maintain transparency levels

While nearly one-third of markets have registered a decline in overall scores, in the vast majority of cases the changes are marginal and can be explained by tighter scoring and refined survey questions. However, there are a few exceptions, notably **Puerto Rico** (76th), **Lebanon** (91st), **Mozambique** (101st) and **Venezuela** (105th), where protracted political, economic or financial crises are negatively affecting real estate transparency.

Transparency by Topic

Transparency Sub-Index Change, 2014–2016

Access to higher-quality market fundamentals data underpins transparency improvements



Source: JLL, LaSalle Investment Management

Improving access, depth and quality of real estate data

Greatest progress over the past two years has been made in 'Market Fundamentals' – the access, depth and quality of aggregated and disaggregated data on real estate market conditions. Despite improvements, this is an area of real estate transparency that still has the strongest potential for further development.

Advancements have been made in several components of market data and performance benchmarking:

- **Greater Granularity:** At the top end of the transparency spectrum, we are seeing data availability at much greater granularity and frequency. The U.S., for example, has witnessed the creation of new types of indices in the last two years, including a Daily Priced Fund Index and closed-end fund indices. The tools to benchmark funds have improved thanks to newly-available appraisal data from Altus and new attribution analysis.
- **Data Initiatives:** Extensions of real estate monitoring programmes are taking shape among the lower tiers in Sub-Saharan Africa, South America and South Eastern Europe. In Asia, progress is also being made in Taiwan, South Korea, Indonesia and Japan for example, while Mexico leads the charge in the Americas.

- **Tracking of Alternative Property Sectors:** Investors are seeking more frequent and detailed data across a multitude of niche property sectors that have been largely overlooked until recently. For the first time the GRETI survey has included the tracking of alternative sectors, such as self-storage and student accommodation. Nearly one-third of markets are now tracking alternative sectors to some degree and several countries (including the **United States, United Kingdom, Australia and Netherlands**) are building reasonable levels of transparency.

Greater transparency has led to more big U.S. core funds (of which there are currently 24) investing in self-storage. This is starting to generate an index return history that is likely to increase transparency further. Large U.S. data providers like Axiometrics now cover student accommodation far better than they did two years ago.

- **More Data at a City Level:** As investors move into secondary and tertiary cities, we are seeing greater data availability beyond the prime cities – particularly in the **United States, United Kingdom, Australia and Canada**. The wide geographical availability of real estate data is what differentiates these most transparent countries from the rest. Elsewhere, the deterioration in the quantity and quality of data outside of the primary cities is often steep (see *Tracking City-Level Market Fundamentals*).
- **International Standards:** While not covered explicitly by the country-based GRETI survey, international standards are a key pillar of greater real estate transparency. There are a number of initiatives including:
 - The International Property Measurement Standards (IPMS) which have been developed by a group of 70 professional and non-profit organisations, including the RICS, ANREV, ZIA, BOMA, CoreNet, IMF and INREV.
 - Standards on construction (International Construction Measurement Standards), land tenure (International Land Measurement Standards) and ethics (International Ethics Standards) which have been developed by international coalitions of professional and not-for-profit organisations.

Transparency through technology

Data access and tracking is being facilitated by technology advancement and a rising culture of 'open data'. A real estate industry that was slower than others in technology innovation is seeing a quantum leap, with an emergent 'prop-tech' sector offering platforms of real-time, very granular data to corporate tenants and landlords.

The next two years are likely to bring about an even faster pace of change in the technology and data platforms and infrastructures that the commercial property industry utilises – and underlying transparency should improve as a result.

Technology is also allowing some emerging markets to leapfrog the normal transparency evolution. Examples include the digitisation of land registries in **Kenya** and **Ecuador**, while **Ghana** is reportedly trialling a system to record title deeds with blockchain technology.

The disconnect between regulation and enforcement

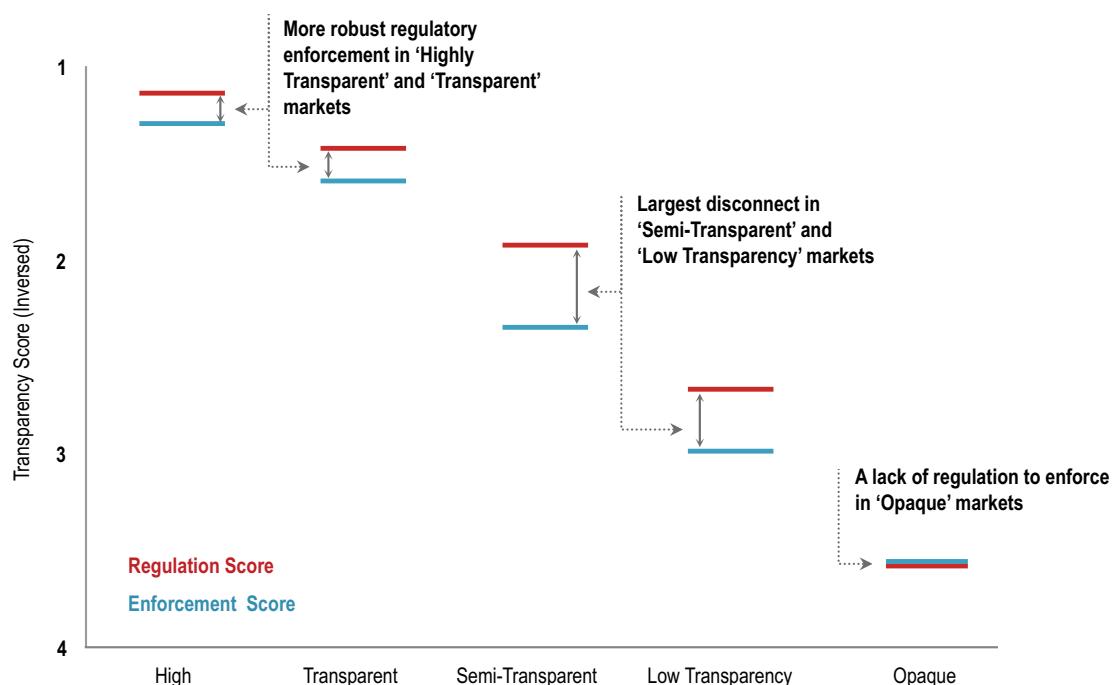
Regulatory reforms are essential for further progress in real estate transparency and a number of governments appear to be taking steps forward by introducing new legislation, with recent examples including **Dubai, India, Qatar, Rwanda and Taiwan**. However, in many markets there continues to be a disconnection between the existence of regulations and actual enforcement.

The largest differences between regulation and enforcement are found among the ‘Semi-Transparent’ group of countries, where progress still needs to be made in enforcement of financial regulation, land use planning, building codes and contracts, and where penalties for non-compliance need to be more stringently applied.

Meanwhile, ‘Opaque’ markets demonstrate little difference between regulation and enforcement – suggesting that a lack of regulation itself is holding these least transparent countries back, rather than a lack of enforcement.

Regulatory Reforms versus Enforcement

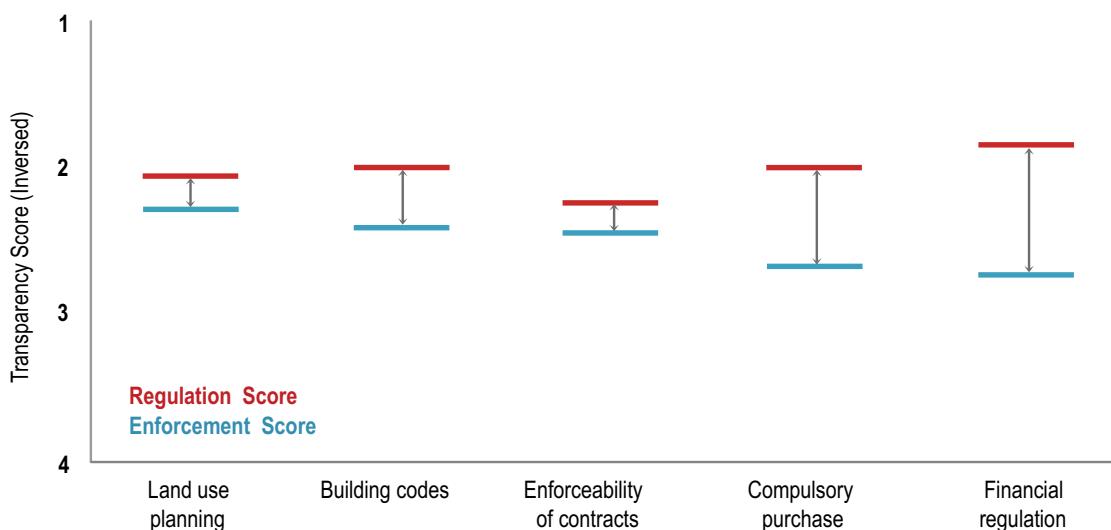
Largest disconnect (and opportunity) in ‘Semi-Transparent’ countries



Source: JLL, LaSalle Investment Management

Semi-Transparent Countries – Regulatory Reforms versus Enforcement

Continued challenges in regulatory enforcement across the board



Source: JLL, LaSalle Investment Management

Limited progress in corporate governance

Several recent high-profile examples of poor corporate governance and lack of financial accountability involving real estate have contributed to negative headlines, but have also had an effect on the 'Governance of Listed Vehicles' sub-index, which at an aggregate level is virtually unchanged. Tougher scoring, as listed and unlisted entities are better understood and followed, has contributed to the poor performance. Moreover, volatility in equity prices has brought more scrutiny to corporate governance, self-dealing and compensation arrangements. The continued development of the REIT industry, which has come to the forefront in many countries recently, should help drive future gains in transparency in 'Corporate Governance' by necessitating the requirement for professional management, improved public disclosures and increased governance.

Some encouraging signs in Real Estate Environmental Sustainability Transparency

There continues to be evidence that sustainability considerations are becoming more widely established, although the pace of progress in creating tools and regulations is slow. Most of the improvements have been driven by the introduction of minimum energy standards for new and existing buildings.

There are encouraging signs that two cornerstones of environmental performance transparency (minimum energy efficiency standards and green building certification schemes) are available in the majority of key markets.

France is the top scorer through the roll-out of legislated mandates to transition to a low carbon economy. **Japan** joins **France**, **Australia** and the **UK** in the top group for the first time through the introduction of several new tools. **Dubai** is another robust improver with its mandatory green building standards.

The World's 20 Most Transparent Real Estate Markets

How will real estate transparency be raised even further?



Performance Measurement
In the U.S., Australia and UK, performance data is now available at a more granular level and at a higher frequency. Alternative sectors are being tracked



Technology
An emerging 'prop-tech' sector is facilitating access to real-time, granular data in the leading markets



Beneficial Ownership
The UK has committed to a central database that discloses beneficial ownership

We could see the emergence of a new 'Hyper-Transparent' category in GRETI 2018

Highly Transparent

- 1 United Kingdom
- 2 Australia
- 3 Canada
- 4 United States
- 5 France
- 6 New Zealand
- 7 Netherlands
- 8 Ireland
- 9 Germany
- 10 Finland

Transparent

- 11 Singapore
- 12 Sweden
- 13 Poland
- 14 Switzerland
- 15 Hong Kong
- 16 Belgium
- 17 Denmark
- 18 Norway
- 19 Japan
- 20 Czech Republic

What can you expect in a transparent market?

- Granular, **high-frequency performance benchmarks** across multiple real estate sectors and cities
- In-depth, accessible real estate **databases tracking** market dynamics, inventory and deals
- A robust **regulatory and legal framework** on building codes, ownership, land use, contracts, debt and tax - that is rigorously enforced
- Fair and **consistent transaction processes** underpinned by professionalism and strong ethical standards
- Robust **corporate governance** and accounting standards of listed vehicles
- **Comprehensive regulations** and instruments for sustainable buildings

A Focus on Performance Measurement

For property investors, particularly those considering entering a new market, the ability to measure returns against a benchmark is an essential component of transparency. Yet only a handful of markets, led by the **United Kingdom**, **United States** and **Australia**, do this especially well.

We gauge performance measurement by looking at the quality, length, coverage and use of data in three broad areas: listed real estate securities indices to measure the performance of REITs; direct property indices to measure aggregate property level returns; and real estate fund indices.

Listed Real Estate Securities Indices

Listed real estate owners provide a valuable window into 77 of the 109 markets in our survey, including many emerging markets; 43 companies have been added to our coverage in 2016 as a result of IPOs since the 2014 update, including eight in **South Africa** and three in **Malaysia**. Many of the listed companies we track specialise in alternative property sectors and are among the few sources of market and performance data in these areas. In October 2015, Stor-Age REIT became the first self-storage firm listed in South Africa. **Ireland**, meanwhile, has seen the IPO of its first residential rental-focused REIT and **Pakistan** has launched its first official REIT.

Direct Property Indices

The pace of improvement in private indices continues to be positive but slow; 34 countries have a valuation-based direct property index, up from 33 two years ago. MSCI compiles the majority of these indices, yet there are also several independent providers such as NCREIF in the **United States** and the Instituto Brasileiro de Economia in **Brazil**. The Bank of **Greece** has launched the only new index since GRETI 2014, releasing a new biannual office and retail value series in March 2015. Twelve countries have indices that are now widely used as a performance benchmark, an improvement from nine in 2014.

Private Real Estate Fund Indices

Fund indices, unlike direct property indices, incorporate the impact of individual funds' capital structure and leverage, making them a superior benchmark for fund investors. **Canada** has a new fund index in this update, bringing the total number of countries with a fund index up by one to 15. The IPD Canada Property Fund Index was formally launched in 2014 and is comprised of seven open-ended direct property funds with a combined gross fund value of C\$24 billion.

Taking performance transparency to the next level

But having an index is only part of the story. The 'hyper-transparent' **United States**, **Australia** and the **United Kingdom** have taken performance transparency to the next level, making significant improvements over the last two years that go far beyond other 'Highly Transparent' markets. In these markets, property performance data can be sliced and diced in greater detail down to individual cities, property types, and even to postal zip codes in the U.S. Detailed index return attribution analysis – ascribing performance to particular decisions and market weightings by investment managers – has become widespread in these markets. The frequency of valuations and index releases is also superior. U.S. core open-end funds have migrated to standardised third-party managed quarterly valuations over the last two years. Australia and the UK even have monthly frequency return indices.

'Hyper-transparent' performance measurement

These 'hyper-transparent' markets on performance measurement have extended their lead over the rest of world between 2014 and 2016 by further increasing access to granular, high-frequency data, enabling investors to more quickly evaluate how their strategies are working. Further improvements in performance measurement, especially in measuring niche property type returns and returns for higher-risk non-core strategies, are on the horizon in these markets. They have set a high bar but have also shown the way for other markets. The low average score on performance measurement makes this area ripe for major future advancements, which are limited only by the drive of investors, data firms, governments, academics and investment managers to solve the coordination and technical challenges of creating and improving their property benchmarks.

Tracking City-Level Market Fundamentals

Recognising the growing importance of cities

Investors are becoming more sensitised to differential opportunities across cities. The globalisation of the commercial real estate market means that decisions are increasingly made between geographically diverse cities, rather than between countries. To capture the differences in real estate data transparency between a wider range of cities, as well as to understand the differences within countries, information on 'Market Fundamentals' has been gathered for an additional 28 cities in the larger economies, which have been selected to ensure a representative spread of secondary and tertiary cities.

City-Level Market Fundamentals

Smaller cities hold competitive advantage

Sub-Index Rank	City	2016 Market Fundamentals Score
1	Toronto	1.21
2	Auckland	1.33
3	New York	1.36
4	Amsterdam	1.41
5	Chicago	1.44
6	Sydney	1.44
7	Seattle	1.46
8	London	1.48
9	Brisbane	1.52
10	Hong Kong	1.57
11	Austin	1.58
12	Paris	1.61
13	Dublin	1.62
14	Calgary	1.64
15	Warsaw	1.66
16	Frankfurt	1.70
17	Eindhoven	1.70
18	Singapore	1.72
19	Montreal	1.73
20	Birmingham	1.78
21	Edinburgh	1.79
22	Copenhagen	1.91
23	Shanghai	1.92
24	Helsinki	1.97
25	Kuala Lumpur	1.99

Top positions dominated by 'Highly Transparent' markets

Unsurprisingly, the cities with the most comprehensive data availability are all found in the 'Highly Transparent' and most liquid markets, such as the **United States**, **Canada**, **United Kingdom**, **Netherlands** and **Australia**. In leading cities, like **Toronto**, **Auckland** and **New York**, time series data is available across multiple sectors with extensive inventory and deals databases covering the whole city.

Smaller cities have some competitive advantage

Smaller cities – **Auckland**, **Austin**, **Eindhoven** and **Birmingham** for instance – tend to have better scores on 'Market Fundamentals' data, suggesting a competitive advantage for more scalable real estate markets that are easier to monitor. By contrast, the poor score of **Tokyo** (ranked 58th), as well as the relative underperformance of **London** and **Paris**, highlights the difficulties in obtaining comprehensive coverage in some of the world's largest cities and real estate markets.

Select emerging cities outperform for 'Market Fundamentals'

A number of emerging cities score surprisingly well. **Warsaw** and **Shanghai**, for example, are ranked among the top 25 markets in terms of the transparency of 'Market Fundamentals'. In Shanghai, commercial real estate investment has grown tenfold in less than a decade, from US\$1.4 billion in 2006 to US\$14 billion in 2015. Meanwhile, Warsaw has one of Europe's highest levels of investment intensity. In addition, several Asian cities, like **Kuala Lumpur**, **Jakarta** and **Bangkok**, have transparency of market fundamentals that exceed their overall transparency levels, in part reflecting data initiatives by firms such as JLL.

Weaker data availability in domestically-driven 'Transparent' markets

Conversely, cities in a number of 'Transparent' markets have relatively poor data availability. This is true in **Oslo**, **Vienna**, **Tokyo** and the Swiss cities of **Zurich** and **Geneva**. These markets tend to be more domestically-driven, self-contained property investment markets, which have fewer external pressures to significantly improve data coverage.

Varied consistency across city tiers within countries

Markets with a long history of high market transparency are likely to have deep coverage beyond their primary cities. In the **United States**, **Australia**, **United Kingdom**, **Netherlands** and **Canada**, for example, strong data coverage extends to secondary and even tertiary cities. However, in **France**, and to a lesser extent **Germany**, which are more recent members of the 'Highly Transparent' group, data availability drops off more steeply outside of the primary markets. The same pattern is evident in **Spain** and **Italy**.

In the larger emerging economies, the degradation of market data between primary, secondary and tertiary cities is relatively rapid, with **Shanghai**, **Moscow** and **Jakarta** showing significantly superior data availability compared to other cities in their respective countries. India, by contrast, displays relatively consistent availability of data across its city tiers.

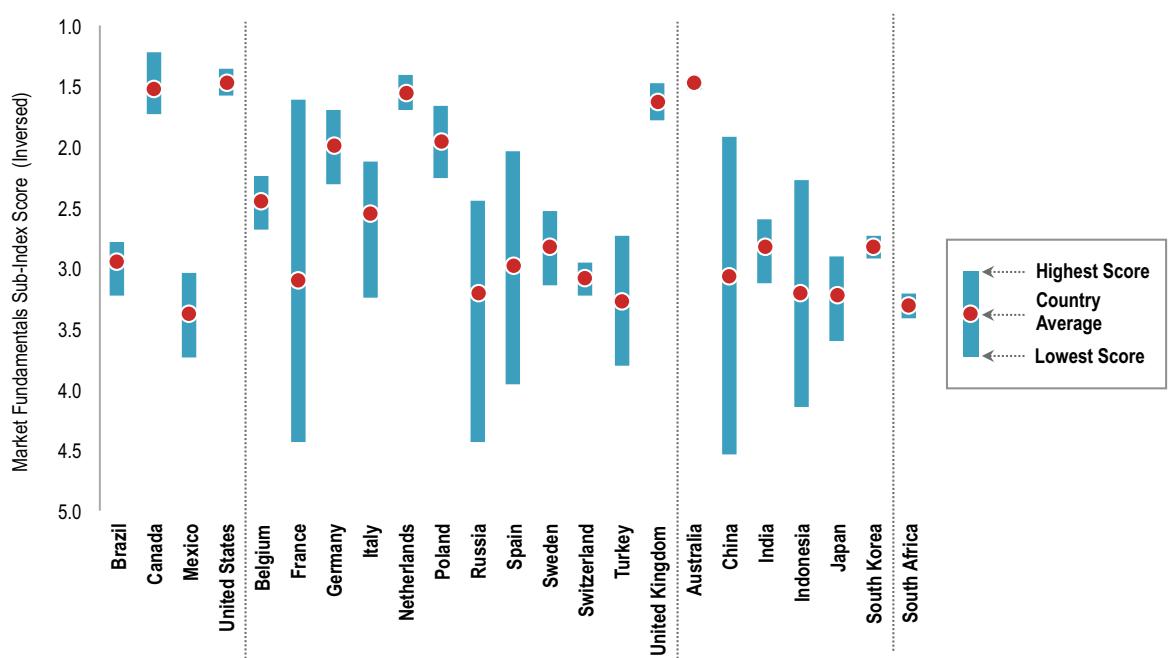
In a small number of markets, secondary markets appear to have better coverage than primary markets. This is most notable in Switzerland, within which **Geneva** scores better than **Zurich**. Different regulation across cantons means that market fundamentals data is more open and available in Geneva. This demonstrates that there is not necessarily a uniform decline in data availability beyond primary markets, and that the picture is, in fact, more complex.

Access to market fundamentals is critical to overall transparency

Robust, reliable and deep data is a key component of overall real estate transparency. While the availability of market fundamentals data largely reflects overall transparency, in some cases there appears to be a disconnect between the two scores. Both between and within countries, transparency around market fundamentals data is a key differentiator.

Market Fundamentals Data – Spread within Countries

United States, United Kingdom, Australia and Netherlands have most extensive coverage



Source: JLL, LaSalle Investment Management

Real Estate Environmental Sustainability Transparency Index

Slow but steady progress

2016 sees the third Sustainability Transparency survey alongside the main GRETI survey. We have extended our coverage by four markets to 37 to now include **Finland, Malaysia, Taiwan and Thailand**. As in past years the focus remains on environmental issues such as carbon emission reporting and energy efficiency standards.

The overall Sustainability Transparency Index continues to show slow but steady progress for a good number of countries. The Index now stands at 2.99, improving only slightly from 3.08 in 2014. It keeps hovering around the middle of the transparency scale.

17 countries have improved their overall scores. And one country, **Japan**, has even joined the group of 'Highly Transparent' countries. Finland, one of the four new entrants, has gone straight into the 'Transparent' tier and is now alongside some of the more advanced markets such as **Singapore** and **Germany**.

Half of all country index improvements have been driven by the introduction of voluntary minimum energy efficiency standards for existing buildings (seven countries). Notably, on a like-for-like country basis, comparing the index of the 28 original countries in 2012, we can identify a slow but steady progress: From 3.06 in 2012 to 2.98 in 2014, to 2.83 this year.

Green building certification systems ubiquitous

The most ubiquitous environmental transparency instruments are still minimum energy efficiency standards for the design of new buildings – mandatory in 87% of all countries – and market-specific green building certification schemes, where in 65% of all countries building ratings are made publicly available.

This is an encouraging sign and shows that the two cornerstones of environmental performance transparency are available in the majority of global real estate markets. It is worth mentioning that green building rating systems are actually available in all covered countries, if we also count internationally used schemes such as LEED or BREEAM that do not necessarily originate in the countries in which they are used. The LEED system, of all globally applied green building certification systems, is used most widely across the world and provides an even greater transparency, this time between countries.

Financial indicators still rare

The least available transparency instrument continues to be the financial performance indicator for green buildings, which is available in only four of the 37 analysed countries – **France, Canada, New Zealand and Australia**.

This absence of financial indicators in the wide majority of global real estate markets remains a considerable gap for market participants to assess the relative performance of more environmentally robust assets. MSCI-IPD has provided these indicators for four of the covered countries, but there have not been any recent developments that show the extension of these tools to any additional markets, except for **South Africa**.

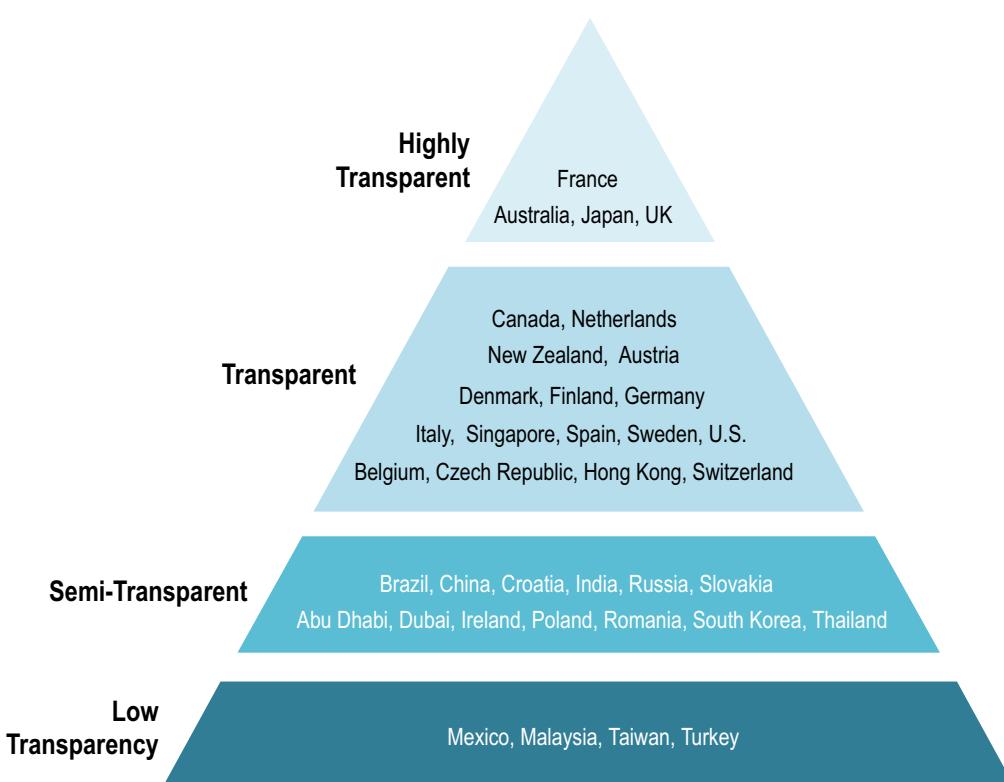
Carbon reporting – a critical gap

Another ‘rare’ transparency tool is carbon emission reporting frameworks, established as a mandatory obligation in four markets and as a voluntary tool in seven countries around the world.

This low penetration of consistent greenhouse gas reporting schemes within countries is becoming a stumbling block to demonstrating how the building sector is contributing to the global carbon emission reduction effort. At the 2015 Paris Climate Summit, the crucial role that buildings play in achieving the global greenhouse gas targets set by governments was again highlighted.

Real Estate Environmental Sustainability Transparency Index, 2016

Countries by transparency tiers



France, Japan and Dubai illustrate leadership at various stages

- **France** is the top scorer: It has moved into this position through its consistent roll-out of legislated mandates for companies and specific sectors to transition to a low-carbon economy over the next decades. The first holistic package of environmental laws was introduced in 2008, and last year the current government cemented France's advance in providing a sustainable development framework for the built environment through the introduction of mandatory carbon reporting for real estate investors. France's environmental efforts reached a high point with the historic Paris Climate Summit Agreement, which was achieved through the determined leadership of the French government as well as the foremost sustainability experts. France is also the only country in the world that makes green lease clauses mandatory for lease agreements.
- **Japan** has reached the top 'Highly Transparent' group of countries. This has been realised through the introduction of three new tools over the past two years:
 - A new Building Energy-Efficiency Labelling System (BELS) for the non-residential sector based on primary energy use.
 - The publication of specific guidance for landlords and tenants concerning voluntary green lease clauses.
 - The introduction of mandatory minimum energy efficiency design criteria for new non-residential buildings in excess of 2,000 square metres.

These efforts have been mutually reinforced by the **Tokyo** cap-and-trade programme for large facilities, which includes large office buildings and was introduced by the Tokyo Metropolitan Government in 2010.

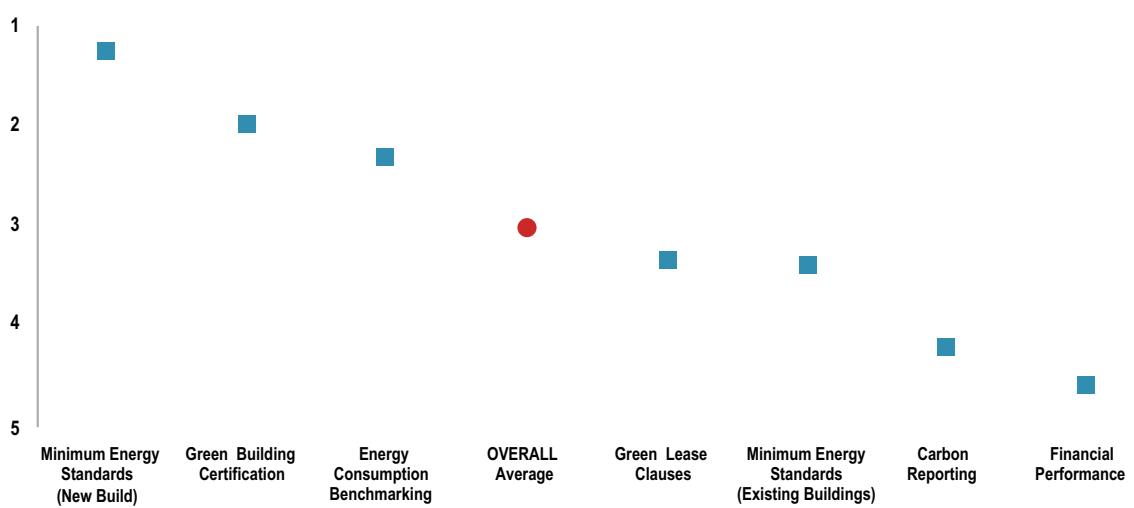
- **Dubai** has become 'Semi-Transparent', leaving the bottom tier behind. In 2015, as part of Dubai's Strategic Plan, the Government of Dubai introduced new building regulations for new constructions that apply mandatory green building standards to all residential, commercial and public buildings in the Emirate, although with some exemptions (e.g. extremely tall buildings and large shopping malls). The energy conservation and efficiency criteria of the green building regulations provide, at the same time, minimum performance requirements for new buildings. These regulations need to be respected as part of every building permit application submitted to the Dubai authorities.

Investor transparency tool use growing

As another encouraging sign, we see the most widely used investor portfolio benchmarking tool, the Global Real Estate Sustainability Benchmark (GRESB), now covering 61,000 assets worldwide, a year-on-year increase of 9%. The average rating stood at 56/100 last year. This is a comparable score to the GRETI sustainability average, which also stands just around the middle of its overall scale of 1-5. Both metrics seem to indicate that there is still a long way for the real estate industry to evolve towards being a more transparent investment environment in regard to the sustainability characteristics of their assets and portfolios.

Real Estate Environmental Sustainability Transparency Index, 2016

Score by transparency category



Source: JLL



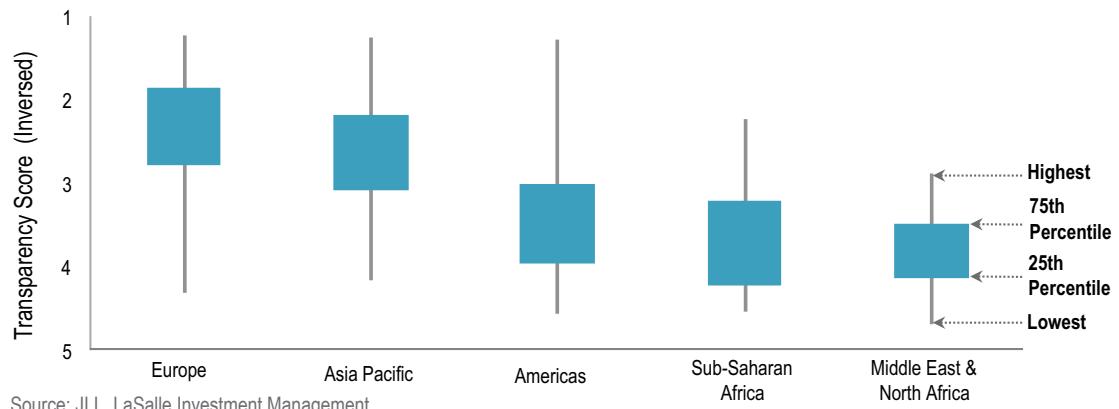
Regional Trends

Real Estate Transparency Index by Region and Sub-Index, 2016

	Global	Americas	Europe	Asia Pacific	Middle East & North Africa	Sub-Saharan Africa
Performance Measurement	3.48	3.93	2.93	2.91	4.10	4.23
Market Fundamentals	3.43	3.91	2.70	2.69	4.44	4.35
Governance of Listed Vehicles	3.04	3.74	2.28	2.64	3.47	3.93
Regulatory and Legal	2.64	2.75	2.07	2.48	3.43	3.10
Transaction Process	2.66	2.87	1.85	2.59	3.53	3.25
Composite Index	3.05	3.39	2.40	2.66	3.82	3.74

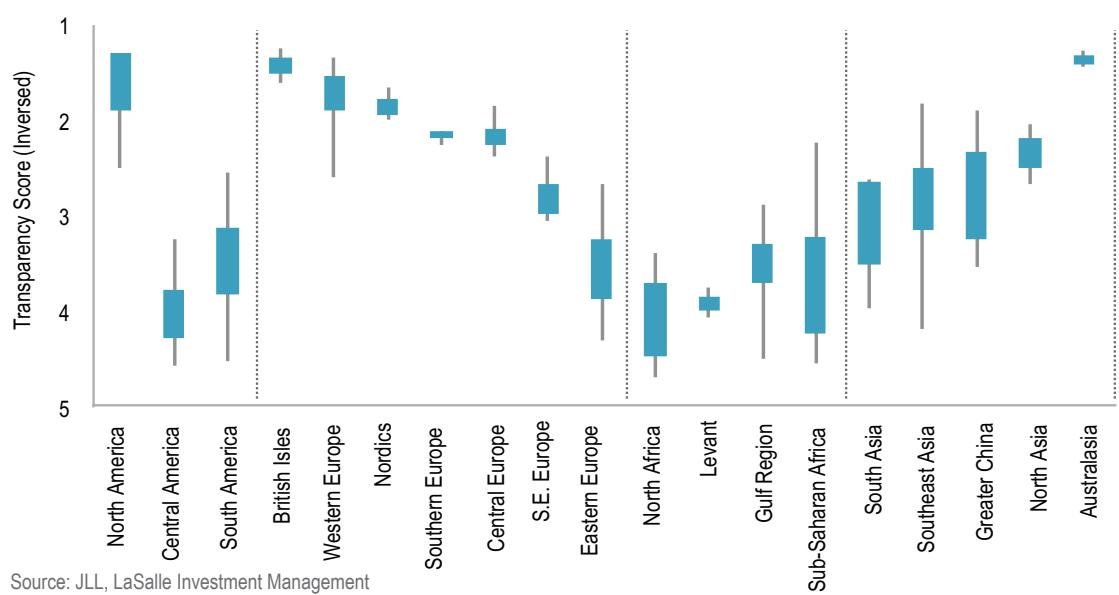
Source: JLL, LaSalle Investment Management

Real Estate Transparency Index by Region, 2016



Source: JLL, LaSalle Investment Management

Real Estate Transparency Index by Sub-Region, 2016



Source: JLL, LaSalle Investment Management



Americas a highly divergent landscape of transparency

Real estate transparency across the Americas remains a very mixed picture, with a large degree of variation by country and sub-region, as well as by transparency category. In aggregate, transparency overall has been very stable in recent years, showing almost no region-wide momentum in either direction. In fact, a good deal of the scoring movement within individual countries has been driven by question refinements and the implementation of more precise scoring. Still, a closer look at the wide variety of transparency levels reveals a dynamic region full of challenges for market participants in terms of understanding, assessing and executing transactions, but also rife with opportunities to markedly improve and expand opportunities for investors, governments and corporate tenants alike.

Real Estate Transparency in the Americas

Transparency Level	2016 Composite Rank	Market	2016 Composite Score	
High	3	Canada	1.28	Canada consolidates position on back of improving performance measurement
	4	United States	1.29	
	32	Mexico	2.51	Mexico on the cusp of 'Transparent'
	34	Brazil – Tier 1	2.55	Brazil struggles to maintain global position
	43	Brazil – Tier 2	2.68	Argentina improves as it returns to the international community
Semi	56	Argentina	3.12	
	60	Cayman Islands	3.25	
	62	Chile	3.28	
	64	Peru	3.36	
	72	Uruguay	3.62	Uruguay is a bright spot, particularly in land use planning
Low	75	Puerto Rico	3.68	Debt crisis is having a negative effect on transparency in Puerto Rico
	81	Costa Rica	3.80	
	82	Bahamas	3.82	
	84	Ecuador	3.83	Ecuador joins GRETI in a respectable 84 th position
	86	Colombia	3.91	
Opaque	92	Panama	4.15	Panama slips down into 'Opaque'
	98	Dominican Rep.	4.22	
	102	Guatemala	4.41	
	105	Venezuela	4.52	Political and economic challenges weaken transparency in Venezuela, Honduras and Guatemala
	108	Honduras	4.58	

**Latin America lags
in 'Performance
Measurement' and
'Market Fundamentals'**

The Americas is in the middle of the pack globally and registers somewhat lower transparency than the globe overall. Continuing to pose the greatest challenges for most countries throughout Latin America and the Caribbean are very low transparency within the general categories of 'Performance Measurement' and 'Market Fundamentals' data. Unlisted fund indices are non-existent throughout the vast majority of the region; private investment returns data is in general very limited; and publicly-traded real estate firms in several countries are still overwhelmingly or even exclusively homebuilders and construction-focused companies – as opposed to ownership-focused commercial property firms.

**Canada's transparency
boosted by better
'Performance
Measurement'**

By contrast, some of the most transparent countries – at a global level – are growing even more transparent in terms of investment performance transparency. A prime example is **Canada** (3rd), where the transparency of privately-held fund performance has improved meaningfully. This has occurred as the IPD Canada Quarterly Property Fund Index has, in relatively short order, gone from its infancy just a few years ago to become a widely recognised industry benchmark in 2016. The Index is reasonably well-positioned to see progressively more widespread usage and adoption as a benchmark. This area of improvement for Canada is one reason why it was able to essentially tie with the **United States** (4th) as the most transparent country in the region in 2016.

**Latin America expected
to see improvements in
'Market Fundamentals'**

'Market Fundamentals' data, although having made some small strides, is mainly at a low level of transparency in the Americas region. This is particularly true in Central America and the Caribbean, but also in several markets in South America. Aggregated time series data for the office sector are reasonably well available in many markets, but are significantly less available for other property sectors such as retail and residential. Equally slow to develop have been property or transaction-level databases, although more progress in this area is likely.

**'Regulatory and Legal'
climate stronger, but
still mixed**

The Americas overall has seen an improvement in transparency in the 'Regulatory and Legal' environment. In areas such as the predictability of real estate taxation level (as well as the consistency of its enforcement) for both domestic and foreign entities, more countries around the region score at least average. There are clear exceptions to this generalisation. For example, in **Venezuela** (105th), tax obligations are viewed to be unpredictable due to the current political regime. In addition, the country's legal climate and decision-making processes have turned more arbitrary in recent years, making even the signing of contracts a highly burdensome process. Finally, government expropriation of businesses as well as their assets, including real estate, has increased notably. Venezuela, it should be highlighted, is the most severe case of such examples of opacity in the region, as it ranks as the least transparent for 'Regulatory and Legal' matters.

Relatively robust land use planning in Argentina, Chile and Uruguay

As prefaced though, much brighter spots in terms of greater transparency in the regulatory and legal realm are easy to uncover. A prime example is land use planning and zoning matters in the southern part of South America. **Argentina** (56th), **Chile** (62nd) and **Uruguay** (72nd) each score well in the existence of rules specifying land use, predictability in obtaining change in land use, and the enforcement of land use planning. In fact, Uruguay is a model of transparency for this particular category within Latin America, as it rates as highly transparent across the board on this specific set of topics. In the case of Argentina, it seems poised for continuing improvement in a number of transparency areas – potentially including those involving foreign flows of capital, as the country has just recently returned to the international community.

Ecuador joins GRETI with an improving 'Regulatory and Legal' environment

There are notable examples within the regulatory and legal systems of select Americas' markets of improvements actively underway. Such a case can be found in a new entrant to the Index in 2016 – **Ecuador** (84th). In the quality of available land registry information, Ecuador places in the middle of the scoring range. However, a new digital-based land registry system has recently boosted access and ease of use, and these advancements are continuing to be rolled out.

Lack of data on real estate debt across the region

One regulatory category in particular in which most of Latin America needs significant improvement is in the tracking of real estate debt data. The majority of countries in the sub-region have very little in the way of government/central bank data on gross commercial property mortgages outstanding, originations, maturities, loan-to-value ratios, etc. This is in stark contrast to the Americas' two 'Highly Transparent' countries – Canada and the United States – which are among the 'gold standard' globally.

Brighter spots in the 'Transaction Process'

Better transparency can be found in the actual real estate 'Transaction Process'. Although there is clear room for further progress in most countries, the availability and quality of pre-sale information, the fair, equitable and confidential nature of the bidding process, as well as the existence of and adherence to a real estate professional's code of ethics all show at least reasonable transparency. Most of the smaller Caribbean island markets, such as the **Cayman Islands** (60th) and **Bahamas** (82nd), show transparent conditions with respect to ethical standards, and adherence to and enforcement of the process of transactions.

Performance is meaningfully more transparent in occupier management services. A standout showing here is **Mexico** (32nd), which scores highly transparent in areas like the knowledge of service providers, as well as exactly which facility or project management services they are supplying.

Mexico is Latin America's most transparent market

Indeed, **Mexico** (32nd) is Latin America's most transparent market overall, with a score high enough to land near the top of the 'Semi-Transparent' tier. The country has a strong showing in transparency of the overall transaction processes, with fairly high scores in the transparency of sales transactions too. Other categories of clear strength can be found in the 'Governance of Listed Vehicles' (in which the FIBRA or Mexican REIT industry has blossomed from its inception just six years ago) as well as in the overall 'Regulatory and Legal' environment – although commercial property debt information is something of an exception. As in virtually all of Latin America, ample room for further transparency improvement exists in the areas of privately-held performance measurement and real estate market fundamentals data.

What to look for going forward?

There are a number of developments within the Americas region that warrant close monitoring over the next couple of years for potential impacts on real estate transparency. Several challenges and mounting pressures face multiple countries, and these promise to highlight transparency – or a relative lack thereof – with an opportunity to refocus efforts on bringing to light issues of governance; anti-corruption efforts; open, clear and fair procedures; and the availability, quality and depth of data, all of which are so critical for organisations with commercial property interests.

Crises – but still opportunities

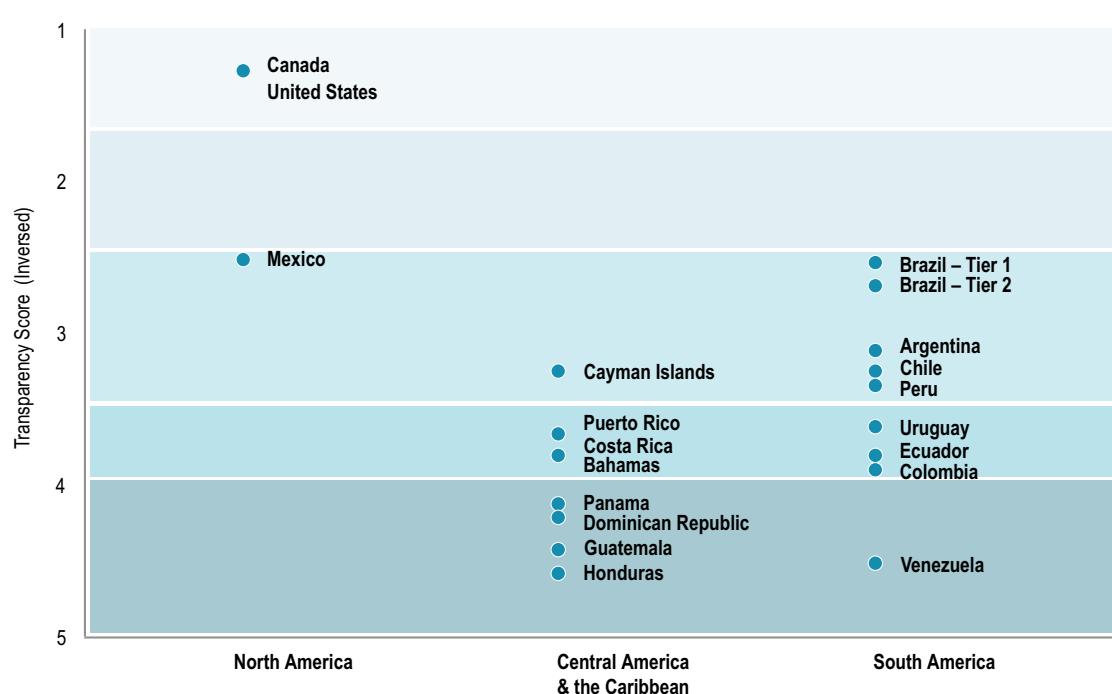
Significant economic, political and social challenges are currently being faced in several countries and territories, and the hard-won progress on transparency over the previous decade should be watched and safeguarded so that a time of crisis does not reverse earlier gains. In **Brazil** (34th), a severe and long-lasting economic downturn, an historic corruption scandal, and now a period of major political crisis pose myriad challenges. Although technical questions and scoring improvements were primarily behind Brazil's slippage in the ranking, the pressure is now clearly on the potential mobilisation among the public to strengthen regulatory and legal institutions and to weed out corruption and graft. This should feed through to real estate.

In a somewhat similar manner, **Puerto Rico** (76th) is in the middle of an economic and debt crisis that is having notable deleterious impacts on its society. The transparency of property markets is at risk at present, as holding onto open and clear real estate-related frameworks and processes – let alone making further improvements – will take a back seat to quelling the crises at hand.

Elsewhere, political, policy and social instability and inconsistent rule of law are hampering any positive movements in transparency in countries such as **Guatemala** (102nd), **Venezuela** (105th) and **Honduras** (108th), and in some cases causing deterioration.

Range of Real Estate Transparency

Americas, 2016



Source: JLL, LaSalle Investment Management

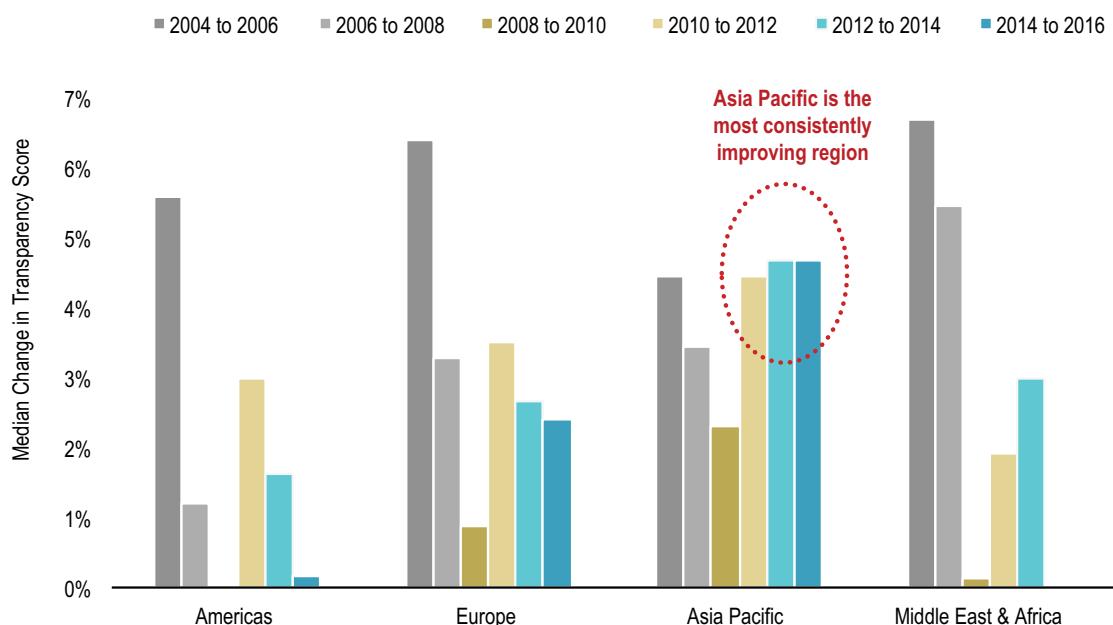


Asia Pacific the most improved region

The Asia Pacific region continues to make strides in transparency, but advances are not uniform across the region with a wide disparity still persisting between markets. **Australia** (2nd) and **New Zealand** (6th) have maintained their positions atop the regional ranking and in the global 'Highly Transparent' category. At the other end of the spectrum, **Myanmar** (95th) has held onto the title as the least transparent market in Asia Pacific, but moderate progress has been made following significant economic and political reforms.

Change in Transparency Score by Region

Asia Pacific is the most consistently improving region



Source: JLL, LaSalle Investment Management

Depth of data has improved

Overall, the improvements in most countries have been small, with gains in large part driven by 'Market Fundamentals' as the depth of real estate data has improved. **Taiwan** (23rd) features in the global top 10 improvers, while several other key markets – including the top-tier cities in **China** (33rd) and **India** (36th), as well as **Japan** (19th) and **South Korea** (40th) – have seen moderate progress. With the exception of a few countries, 'Governance of Listed Vehicles' remains one of the less transparent sub-indices in the region and no notable change is evident since the previous survey.

Real Estate Transparency in Asia Pacific

Transparency Level	2016 Composite Rank	Market	2016 Composite Score
High	2	Australia	1.27
	6	New Zealand	1.45
Transparent	11	Singapore	1.82
	15	Hong Kong	1.89
	19	Japan	2.03
	23	Taiwan	2.14
	28	Malaysia	2.35
Semi	33	China – Tier 1	2.52
	36	India – Tier 1	2.61
	38	Thailand	2.65
	39	India – Tier 2	2.65
	40	South Korea	2.66
	45	Indonesia	2.69
	46	Philippines	2.78
	49	China – Tier 1.5	2.90
	52	India – Tier 3	3.00
	55	China – Tier 2	3.10
Low	66	China – Tier 3	3.40
	68	Vietnam	3.49
	69	Sri Lanka	3.49
Opaque	70	Macau	3.52
	95	Myanmar	4.17

■ Japan jumps 7 places on back of market fundamentals
■ Taiwan moves into 'Transparent' as occupier services and market tracking improve
■ China's Alpha cities on cusp of 'Transparent'
■ India improves on back of regulatory reforms
■ Progress in South Korea, but remains an outlier in 'Semi-Transparent'
■ Vietnam on the cusp of 'Semi-Transparent'
■ Myanmar among top global improvers but from a low base

Source: JLL, LaSalle Investment Management

Australia edges up the global ranking

Australia has edged up the global ranking for real estate transparency to 2nd, sitting alongside the UK, United States and Canada as the world's most transparent countries.

China's Alpha cities on the cusp of the 'Transparent' tier

China's Tier 1 Alpha cities (i.e. **Shanghai** and **Beijing**) have shown the greatest improvements in transparency in the country, led by 'Market Fundamentals'. Strong occupier and investor interest in Tier 1 markets has underpinned a rise in demand for real estate data in recent years and these markets are on the cusp of the 'Transparent' tier.

Singapore and Hong Kong compete for top spot in Asia

Singapore (11th) and **Hong Kong** (15th) remain neck and neck for top spot in Asia; however, both markets have seen little change in overall transparency and continue to be on the border of the 'Highly Transparent' category. Alignment of shareholders' interests of listed vehicles in Hong Kong still requires improvement, while the depth of real estate data in disaggregated databases in Singapore trails many major global markets. In addition, reconciliation of service charges for facilities management remains an area that both markets lag relative to their market maturity.

Taiwan is the region's biggest improver

The region's biggest improver, **Taiwan**, has seen marked progress on the back of gains in 'Market Fundamentals' and 'Transaction Process'. A more competitive landscape has elevated occupier service offerings, while policy changes, both new and old, are flowing through to gains in information availability and accuracy. In 2016, a consolidated housing and land tax was introduced which brought the country in line with international standards and helped correct a flaw in the taxation system which saw declared land values often undervalued.

Advances in market data in North Asia

In North Asia, advances in market intelligence have contributed to moderate improvements in transparency for **Japan** and **South Korea**. Robust investor interest, both domestic and foreign, has led to increased demand for real estate information and encouraged more extensive tracking of property sectors by service providers including JLL.

India's government seeks to boost transparency

Modest but broad-based gains in **India** have, in large part, been driven by the Modi government's aim to stimulate growth and reduce red tape. Some key real estate-related reforms have been passed while many processes have begun to be streamlined. Land records have started to be digitised and made available via an online database. Meanwhile, the Land Acquisition, Rehabilitation and Resettlement Act, which was passed in 2014, has simplified procedures for acquiring land and determining fair compensation to sellers.

Myanmar improves from a low base

Stable or small gains have been made in most Southeast Asian markets with the greatest improvement being witnessed in **Myanmar** as it benefits from increased investor interest amid political/economic liberalisation.

Regulatory reforms will be essential for further progress

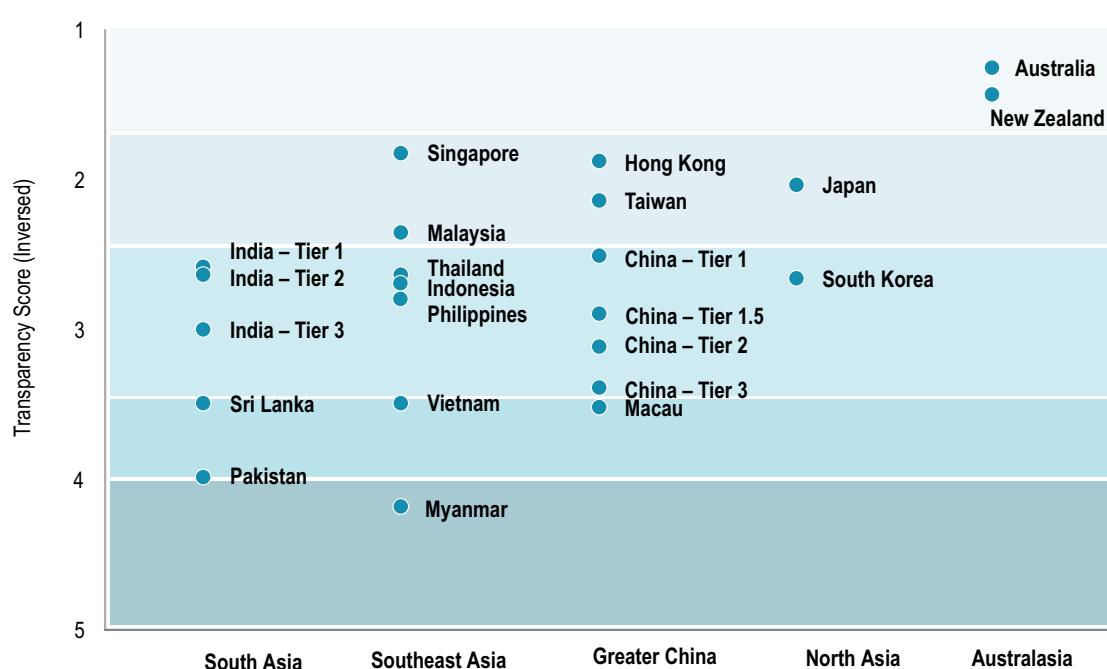
Looking ahead, the continued development of the region's economy and real estate industry will fuel the need for future enhancements in transparency as investor interest rises and the demand for quality buildings/management grows. Regulatory reforms will be essential for further progress in transparency and many governments appear to be taking steps forward. For example, **Vietnam** (68th) has proposed launching a national real estate database in a bid to improve the availability and accuracy of market information, while the recently passed Real Estate (Regulation and Development) Act in India should provide more buyer protection and an equitable platform to resolve disputes.

Expansion of the REIT industry should stimulate transparency gains

Although public sector initiatives are essential, private sector participation will also be needed. The expansion of the REIT industry, which has come to the forefront in many countries recently, should also help to drive gains in transparency by necessitating the requirement for professional management, improved public disclosures and increased governance. Several countries, including **India** and **Indonesia** (45th), have recently removed roadblocks which were hindering the industry's growth.

Range of Real Estate Transparency

Asia Pacific, 2016



Note: Pakistan is covered in the MENA section, but has been included in this chart for comparison purposes.

Source: JLL, LaSalle Investment Management



Europe the world's most transparent region

**Market transparency
boosts real estate
investment in Europe**

Europe continues to maintain its position as the most transparent region for real estate globally. It leads the top end of the global ranking with 20 of the 30 markets classified as 'Highly Transparent' or 'Transparent' based in the region. Europe remains attractive for investors, particularly foreign capital, with over half of the total European capital flows during 2015 sourced from cross-border investors.

**Wide spectrum of
transparency across
the region**

GRETI 2016 covers 34 European markets, with the introduction of **Luxembourg** (35th) to this year's survey. The most transparent markets in Europe are once more headed by the **UK** which again tops the ranking globally. **France** has maintained a strong 5th position globally with an improvement in 'Market Fundamentals' and advances in the 'Regulatory and Legal' framework. **Germany**, for the first time, has moved into the 'Highly Transparent' category, securing itself in 9th position globally.

Belarus (100th) finds itself, as in GRETI 2014, at the bottom of the European ranking as the only 'Opaque' market in Europe. **Kazakhstan** (87th) has achieved a slight improvement in its score and moved up from the 'Opaque' to the 'Low Transparency' category.

**Demands for more
robust regulatory and
legal frameworks**

Since the Global Financial Crisis, Europe has seen stricter regulation and legal frameworks, with a call for an increased level of financial as well as real estate market data and performance benchmarks across the region. Associations such as EPRA and INREV have helped to improve transparency in these areas. Central and Eastern European (CEE) and South Eastern European (SEE) countries have in particular observed advances in this area and there are now 14 European countries in the top 20 in the 'Regulatory and Legal' sub-index. Similarly, 15 European countries are ranked in the top 20 in the 'Transaction Process' sub-index.

Germany moves to the 'Highly Transparent' category

Germany has seen advancements across all sub-indices; in particular the 'Governance of Listed Vehicles' has improved due to the country witnessing enormous growth in the listed sector. Added to this is the increasing availability of market fundamentals data, which has been driven by successful entrepreneurs who are offering property listing sites and by several new 'prop-tech' companies in the property management, crowdsourcing and data provision sectors.

Further improvement in Central and Eastern Europe

Central and Eastern Europe continues to see large enhancements in transparency with **Poland** (13th) edging towards the 'Highly Transparent' category and positioning itself with core Western European countries. In addition, **Bulgaria** (50th), **Slovenia** (51st) and **Serbia** (53rd) are among the top five global improvers in this year's survey. Progress in the quality and frequency of valuations, as well as more robust levels of market data across the CEE markets, have contributed towards their advancement. Reports such as the KPMG Property Lending Barometer highlight the increasing accessibility of debt data in the region with a particular focus on the CEE markets.

Slovakia (29th) and **Romania** (30th) have moved up the ranking into the 'Transparent' category for the first time. Slovakia, joining the other Visegrad Group of countries, now has more frequent use of performance measurement benchmarks, with plans for MSCI to release a Slovakian index in the future. The introduction of mediators as common practice in the purchasing process has also bought positive change into the regulatory and legal environment.

Mediterranean countries struggle to maintain global rankings

The majority of Southern European countries have seen limited progress and hence have been unable to maintain their global ranking, with both **Portugal** (27th) and **Spain** (22nd) dropping in the ranking, although **Italy** (21st) has edged up by one position. These countries were hit harder than others during the Eurozone crisis and are still in the recovery phase, which has impacted their scope for advancement.

In South Eastern Europe, **Greece** (37th) has shown an improvement in score but a fall in the overall ranking. A lack of predictability around tax issues coupled with the absence of any tangible performance measurement benchmarks has contributed to a lack of real estate investments in Greece over recent years. **Turkey** (44th), which led the list of global improvers in 2010 and 2012, has not been able to maintain this momentum and has dropped 10 places in the overall ranking. The continuity of economic and structural reforms needed to encourage investors, especially foreign investors, has been lacking, and this has had a negative effect on investors' perceptions.

Real Estate Transparency in Europe

Transparency Level	2016 Composite Rank	Market	2016 Composite Score
High	1	United Kingdom	1.24
	5	France	1.34
	7	Netherlands	1.49
	8	Ireland	1.60
	9	Germany	1.65
	10	Finland	1.66
Transparent	12	Sweden	1.82
	13	Poland	1.85
	14	Switzerland	1.86
	16	Belgium	1.90
	17	Denmark	1.92
	18	Norway	2.00
	20	Czech Republic	2.10
	21	Italy	2.10
	22	Spain	2.11
	24	Austria	2.18
	26	Hungary	2.26
	27	Portugal	2.26
Semi	29	Slovakia	2.37
	30	Romania	2.38
	31	Israel	2.49
	35	Luxembourg	2.58
	37	Greece	2.65
	42	Russia – Tier 1	2.67
	44	Turkey	2.69
	47	Croatia	2.80
	50	Bulgaria	2.96
	51	Slovenia	2.97
Low	53	Serbia	3.04
	54	Russia – Tier 2	3.09
	74	Ukraine	3.66
	78	Russia – Tier 3	3.73
Opaque	87	Kazakhstan	3.92
	100	Belarus	4.30

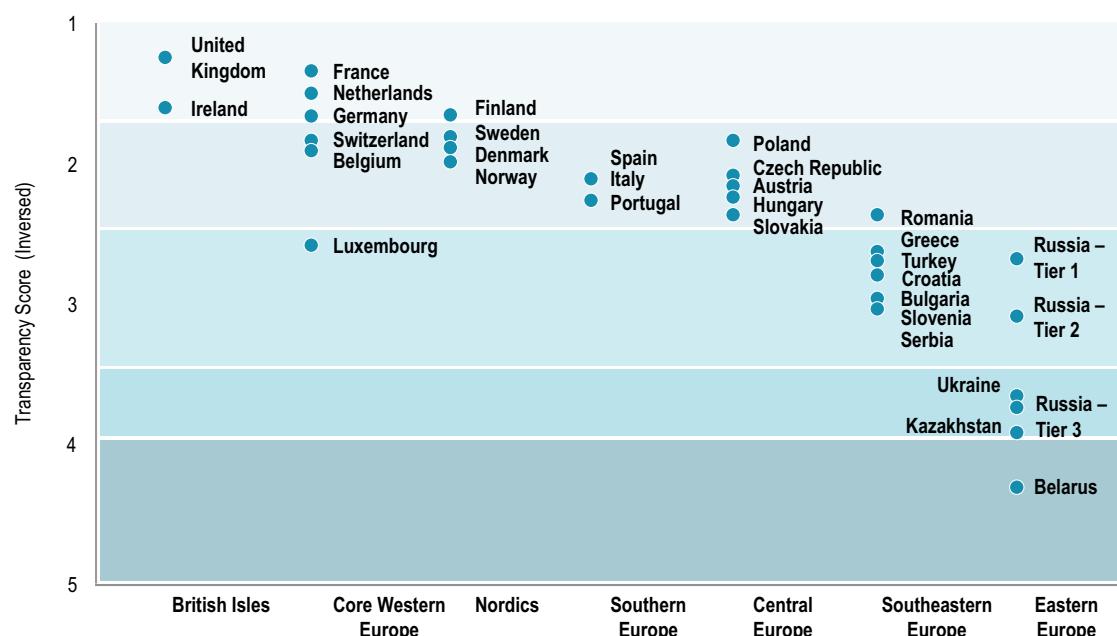
Source: JLL, LaSalle Investment Management

Technology drives transparency

An emerging 'prop-tech' sector and the advancement of technology in general has contributed to improved transparency in many markets across Europe. **France, Germany and the UK** are the front-runners, but other markets like the Nordics are not far behind. The trend for 'open data' has seen the introduction of analytic and visualisation tools for those in the real estate market. In previous years there has been a focus on the quantity of data which has now progressed to a demand for quality. Listing sites have improved transparency of available office, retail, logistics and residential space; however, they rarely provide information about completed leasing or investment deals. Asking rents are widely available, but not the contractual rents and details.

Range of Real Estate Transparency

Europe, 2016



Source: JLL, LaSalle Investment Management

New Sources of Data on Real Estate Debt in Europe

As it became apparent that debt exposure to real estate played an important role in the onset of the 2008 Global Financial Crisis, the transparency of real estate debt was included in GRETI for the first time in 2010. Since then, we have been seeking to uncover whether aggregate data on commercial real estate (CRE) debt is available, as well as some other features on real estate lending. For the past three editions the GRETI survey has highlighted the lack of transparency on debt in almost all of the surveyed countries.

In 2016 the arrival of a number of new regulatory regimes has started to shed some light on this darkest corner of Europe's real estate markets. The European Central Bank's (ECB) comprehensive assessment – which covered 123 Eurozone banks (accounting for 82% of assets) and was carried out in the second half of 2014 – revealed a snapshot of banks' exposures to CRE by country.ⁱ Combined with estimates of countries' GDP or invested stock, these data provide a valuable risk assessment tool.

Despite a marked improvement, the data from the ECB do not allow regular monitoring of exposure to real estate debt and therefore only marginally lift the GRETI scores for the European countries covered.ⁱⁱ However, further improvements in scores are expected as new regulations will make it possible to draw a clearer picture of CRE exposures on an ongoing basis. This applies not only to banks (under the FINREP and COREP supervisory reporting requirements), but also to insurers (under the Solvency II Directive, as from 2016) and real estate investment funds (under the AIFM reporting requirements).

It is unlikely that all countries where these regimes are in place will improve at the same rate though. Data collection, as part of these regimes, will need further refinement for information to become digestible for market participants, and subsequently to feed into GRETI. This highlights the value that is added by domestic research reports – notably the long-standing annual studies of De Montfort (UK) and ACPR (France), with IREBS's German Debt Project added in 2013 – in bringing data to a wider audience. With more data potentially coming available, we encourage others to take up the challenge and continue the line of improvement in real estate debt transparency.

i. Source: European Systemic Risk Board (ESRB) - Report on commercial real estate and financial stability in the EU (December 2015)

ii. Ireland, Cyprus, Denmark, Austria, Spain, Netherlands, Italy, Germany, Portugal, France, UK, Belgium and Greece.



Middle East and North Africa sees a gradual improvement

Out of the 18 Middle East and North African (MENA) markets covered in the Transparency Index, seven have shown a notable improvement since 2014. Five of the markets included in 2014 have seen little or no change, with a further four markets witnessing a decline in transparency. **Dubai** (48th) has retained its position as the most transparent market in the MENA region, recording continued progress. The strongest advances over the past two years have been achieved in **Saudi Arabia** (63rd), **Egypt** (65th) and **Pakistan** (88th). Two new markets – **Iran** (77th) and **Djibouti** (107th) – have been added to the Index for the first time, reflecting increased interest among international investors, developers and occupiers.

Real Estate Transparency in the Middle East and North Africa

Transparency Level	2016 Composite Rank	Market	2016 Composite Score	
Semi	48	Dubai	2.88	Dubai tracking towards 'Transparent'
	59	Abu Dhabi	3.24	
	63	Saudi Arabia	3.28	Saudi Arabia and Egypt move into 'Semi-Transparent'
	65	Egypt	3.39	
	67	Bahrain	3.46	
Low	71	Morocco	3.55	
	73	Kuwait	3.64	
	74	Qatar	3.64	
	77	Iran	3.70	Iran joins GRETI in 'Low Transparency'
	79	Jordan	3.75	
	88	Pakistan	3.97	South Asia's first REIT pushes Pakistan into 'Low Transparency'
Opaque	89	Oman	4.04	
	91	Lebanon	4.06	Political and economic challenges weaken transparency in Lebanon
	93	Tunisia	4.16	
	96	Algeria	4.19	
	103	Iraq	4.50	
	107	Djibouti	4.56	
	109	Libya	4.69	Libya and Iraq struggle to maintain rudimentary transparency levels

**Dubai remains
the region's most
transparent real
estate market**

The **Dubai** government acknowledges the role that improving transparency plays in increasing levels of foreign investment in its real estate market. Its new Open Data Law aims to promote the sharing of non-confidential data between government and non-government entities. The Dubai Land Department, which manages the Emirate's Real Estate Regulatory Agency (RERA), has implemented several new measures to advance the accessibility and quality of real estate data available to potential investors. Improvements have also been made to the drafting and enforcement of real estate contracts and the resolution of real estate disputes. Meanwhile, the greater use of standard residential leases has reduced complexity and increased transparency.

Despite these advancements, Dubai continues to be positioned in the 'Semi-Transparent' category with a number of significant constraints remaining. These include the lack of detail made public on real estate transactions and the absence of a market-wide index of real estate performance.

**Saudi Arabia
becomes second
most transparent
market in MENA**

Saudi Arabia has moved into the 'Semi-Transparent' category for the first time. The formation of real estate committees in the Chambers of Commerce has highlighted the issue of low transparency in the market and encouraged more action towards addressing the issue. As a result there has been some mild improvement in 'open data' platforms such as registering property transactions with the Ministry of Justice which is then shared publicly on its website. With the influx of international developers, real estate consultants have also entered the Saudi Arabian market, leading to an increase in coverage of the market.

**Egypt continues to
improve**

The improvements recorded in the 2014 survey have continued in **Egypt**, which has moved up to fourth place within the MENA region over the past two years. Much of this progress can be attributed to the new political roadmap which has seen the introduction of a new constitution. The government has implemented a number of initiatives to enable greater real estate transparency – these include stronger steps to register property title (an important first step in expanding the mortgage system in Egypt) and to provide more transparency in the allocation of government housing.

Iran – back on the radar

Following the lifting of sanctions, an increasing number of European, African and Asian investors, developers and corporate occupiers have renewed their interest in real estate opportunities in **Iran**.ⁱ As a result, we have included Iran in GRETI for the first time, where it makes its entrance at a respectable 77th in the global ranking, broadly in line with neighbouring MENA nations such as **Kuwait** (73rd) and **Qatar** (74th), and ahead of neighbouring **Pakistan** and **Iraq** (103rd).

Iran scores well in terms of the size of its listed real estate sector with 11 real estate companies (with a combined value of around US\$36 billion) listed on the Tehran market, the oldest of which dates back to 1970. There are, however, a number of areas where the country needs to seek further improvement: these include the quality of annual reports of these companies, data on real estate debt and corporate governance (with little current clarity on or alignment of shareholder interests).

Pakistan improves with the launch of South Asia's first REIT

The 'Arif Habib Dolmen City REIT' was launched in **Pakistan** in 2015, becoming the first such vehicle in South Asia. It was a result of a joint venture between one of Pakistan's leading investment management firms, Arif Habib Group, and one of the country's foremost real estate developers, Dolmen Group. The US\$213 million fund, which includes commercial and retail assets, comes on the back of REIT regulations that were finalised by the Securities and Exchange Commission of Pakistan (SECP) in 2015. While the regulatory framework for REITs was initially introduced by the SECP back in 2008, no funds were actually listed until these regulations were updated in 2015.

Abu Dhabi and Qatar remain relatively stable

Abu Dhabi's (59th) real estate transparency has remained relatively stable over the past two years. Even so, the Emirate continues to strive for clearer regulation of the real estate sector with the issuing of 'Law No. (3) 2015: Concerning the Regulation of the Real Estate Sector in the Emirate of Abu Dhabi'. The new legislation authorises Abu Dhabi's Department of Municipal Affairs (DMA) to implement laws, issue licenses and control the Escrow accounts of real estate developers. The law seeks to solidify the DMA as the Emirate's leading authority in real estate-related matters.

Some steps have been made to improve real estate market transparency in **Qatar** by introducing new regulatory and registration procedures, with the state's new Real Estate Development Law requiring developers to register an Escrow account for every project. Most of these initiatives remain in their infancy and have yet to bear any significant fruit, with Qatar recording limited overall improvement in real estate market transparency over the past two years.

i. While the U.S. has lifted its federal sanctions against Iran, state-level sanctions remain in place and this restricts the ability of JLL entities to do business within the country. Given this, we have cooperated with a number of external parties in completing our GRETI survey, with the principal contribution from Dr Leila Shojaei (Lecturer in Architecture and Urban Planning at the Islamic Azad University (IAU) in Dubai).

Lebanon struggles to maintain transparency

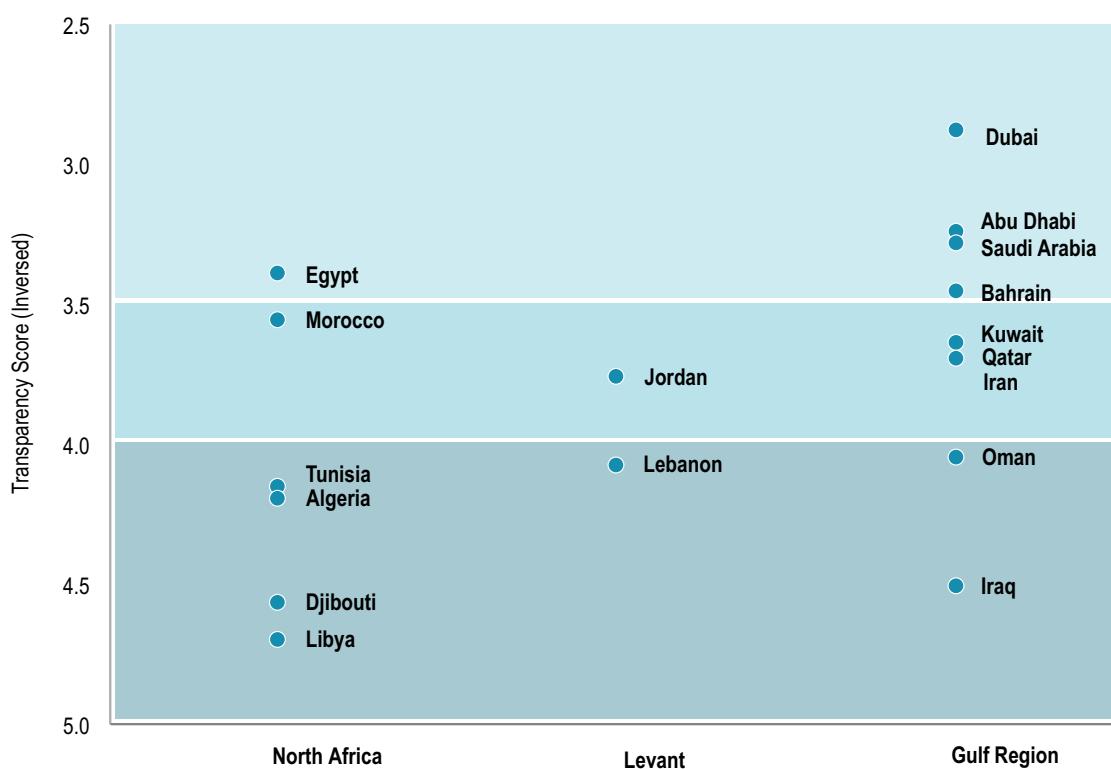
Transparency in **Lebanon** (91st) has deteriorated as a result of unstable security conditions that continue to plague economic and regulatory development and to reduce the appetite of both foreign and domestic investors as a result.

Libya remains least transparent market globally

The ongoing civil war in **Libya** (109th) has drastically affected the country's economy and living conditions. Unless the security conditions in Libya improve, there remains little chance of the country moving from the bottom of the global ranking.

Range of Real Estate Transparency

Middle East and North Africa, 2016



Note: Pakistan is included in South Asia Sub-Region (See Asia Pacific section)
Source: JLL, LaSalle Investment Management

DLD Initiatives Drive Improvement in Dubai's Transparency

Most Transparent Market in MENA: The Dubai Land Department (DLD) is delighted to see that Dubai has retained its place as the most transparent real estate market in the MENA region in JLL's latest GRETI survey, recording a 10% improvement in its score over the past two years. As a result, Dubai has moved closer to the top of the 'Semi-Transparent' category, where it sits on a par with Tier 1 cities in the BRIC countries (Brazil, Russia, India and China) and all four of the fast-growing MIST economies (Mexico, Indonesia, South Korea and Turkey).

The Dubai Government has recognised the importance of improving transparency in achieving its objective of increasing the level of inward investment into the Emirate's real estate market. A recent example of this is the new Dubai Data Law (Law 26 of 2015) which seeks to promote the sharing of data both between government agencies and with the private sector. More open sharing of data is seen as a key component in the implementation of Dubai's smart city strategy.

Role of the Dubai Land Department: In keeping with the overall strategy of increasing transparency, the DLD has introduced a raft of new initiatives over the past few years. These include:

DLD Investment Map: This portal was launched by the Real Estate Investment Management and Promotion Center, the investment arm of DLD, to attract major investors for off-plan available projects. It carries an integrated set of applications on best practices and gives investors and businesses access to many investment opportunities through their smart devices, easing the decision-making process and allowing online transactions through the secure government portal.

Rental Increase Calculator: This service increases the transparency of the rental market by providing data to both tenants and landlords. The rental calculator is based on data from all leases registered in the DLD's Ejari system, plus field surveys and analysis of units available through billboards, newspapers and websites, as well as periodic meetings with real estate companies. The rental index applies to both commercial and residential units and is currently updated on an annual basis.

Brokerage Ranking: RERA, the regulatory arm of the DLD, is applying a new system of categories: 'Gold', 'Silver', 'Bronze' and 'General'. The new system encourages competition between brokerage firms and promotes more efficient and transparent services in the real estate sector.

We are pleased that Dubai has recorded an improvement in 15 of the 28 areas covered in JLL's Global Transparency survey, and are particularly proud to see that the greatest advancement has been made in the area of market data, where the DLD can make the most direct impact on transparency.

Areas for further improvement: While we have certainly made good progress over the past two years, we recognise that further initiatives are required if Dubai is to achieve its goal of delivering a more transparent market. The most significant of these lie in the area of performance measurement, where the current lack of a real estate performance index is a major constraint for institutional investors seeking to benchmark the performance of their assets. The DLD is actively looking to create such an index (possibly in association with a specialist index provider). We are confident that such an index will be in place by the time of JLL's 2018 survey, supporting a further improvement in Dubai's transparency.

HE Sultan Buti Bin Mejren
Director General of Dubai Land Department



Sub-Saharan Africa progress, but patchy

Extending GRETI's footprint across Sub-Saharan Africa

Overall progress in Sub-Saharan Africa, but improvement is patchy...

...with limited progress in regulatory and legal reforms and enforcement

With growing interest in Sub-Saharan Africa (SSA) from corporates and international real estate investors, GRETI 2016 has further extended its footprint across the region to provide coverage of 15 countries, with **Rwanda** (80th), **Tanzania** (99th) and **Ivory Coast** (104th) joining the 12 countries surveyed in GRETI 2014 (which itself was up from eight SSA countries in GRETI 2012).

GRETI 2016 reveals that Sub-Saharan Africa has continued to make advances in real estate transparency over the last two years, although progress has been more mixed than in 2014, when SSA registered the largest improvement among the global regions.

Out of the 12 markets from the region included in the 2014 Index, six (**Botswana**, **Zambia**, **Ethiopia**, **Nigeria**, **Angola** and **Ghana**) have recorded reasonable progress in transparency. Advances in the 'Market Fundamentals', 'Performance Measurement' and 'Governance of Listed Vehicles' sub-indices have supported the overall regional improvement, as greater involvement by international real estate consultancies and local data providers elevates the level of access to information about real estate markets.

Despite these advances, the region has crucially also seen a slight deterioration in the sub-indices scores for the 'Regulatory and Legal Environment' and 'Transaction Process' sub-indices, as development in improving the legislative and operating environment appears to have slowed or stalled in several markets, with two markets – **South Africa** (25th) and **Mozambique** (101st) – registering a noteworthy decline in overall score.

While tangible improvements in transparency are being made, Sub-Saharan Africa is still some distance from competing equally with its regional counterparts and sizeable efforts will be needed to close the gap with other global regions.

Real Estate Transparency in Sub-Saharan Africa

Transparency Level	2016 Composite Rank	Market	2016 Composite Score
Semi	25	South Africa	2.23
	41	Botswana	2.66
	57	Zambia	3.14
	58	Mauritius	3.16
	61	Kenya	3.27
Low	80	Rwanda	3.79
	83	Nigeria	3.82
	85	Ghana	3.86
Opaque	90	Uganda	4.05
	94	Ethiopia	4.16
	97	Angola	4.19
	99	Tanzania	4.26
	101	Mozambique	4.39
	104	Ivory Coast	4.51
	106	Senegal	4.54

Source: JLL, LaSalle Investment Management

Sub-Saharan Africa's transparent and semi-transparent markets

South Africa remains Sub-Saharan Africa's most transparent market, supported by an active listed sector. It is the only country from the continent to feature in the 'Transparent' category, although the country has struggled to maintain its global ranking in the last couple of years.

Botswana (41st) and **Zambia** (57th) round out the three most transparent markets in the region, with Zambia moving slightly ahead of **Mauritius** (58th) to take third place this year. Botswana, Zambia and Mauritius have benefited from more robust regulatory and market governance frameworks than many of their regional peers, with greater involvement from international real estate consultancies, developers and investors promoting professional standards and availability of data. Meanwhile, **Kenya** (61st) has maintained its position as the only other SSA market in the 'Semi-Transparent' category.

Nearly half the Sub-Saharan markets covered by GRETI are 'Opaque'

The SSA region continues to have its largest number of markets (8 out of 15) positioned in the 'Opaque' category, with three markets in the bottom 10 globally – **Mozambique**, new entrant **Ivory Coast** (104th) and **Senegal** (106th). Renewed political instability and resulting policy uncertainty has negatively affected Mozambique's market transparency and resulted in a decline in its Index score.

New entrants **Tanzania** (99th) and **Ivory Coast** join GRETI in the 'Opaque' tier, reflecting the early stage of formal real estate market development in these rapidly-growing economies.

Botswana, Zambia and Ethiopia among top improvers

While progress across the region has been variable and generally slower than in 2014, seven of the 15 SSA markets have made advances in real estate transparency since 2014, with three of the region's markets among the global top 10 improvers: **Botswana, Zambia and Ethiopia**.

- **Botswana** is the most improved market in the region and among the top five improvers globally, rising seven places in the global ranking and maintaining its standing as the region's second most transparent market with advances in the 'Market Fundamentals', 'Governance of Listed Vehicles' and 'Regulatory and Legal' sub-indices.
- **Zambia** has moved up six positions to 57th, overtaking Mauritius and entering the 'Semi-Transparent' category for the first time.
- **Ethiopia** (94th) is also among the top 10 global improvers but from a very low base, with the country remaining firmly in the 'Opaque' category.

Nigeria (83rd), **Ghana** (85th) and **Angola** (97th) have also shown progress in transparency, although advances have been less notable than in 2014 when Ghana and Nigeria were among the top improvers. Despite more moderate levels of progress, improvements in 'Performance Measurement' and 'Market Fundamentals' have nudged Nigeria and Ghana from 'Opaque' into the 'Low Transparency' category.

Rwanda joins GRETI in 80th position (Low Transparency) and is the highest new entrant in Sub-Saharan Africa. The implementation of the Kigali City Master Plan has provided an overarching vision for land use, as well as new building codes and urban planning regulations for the city (introduced in 2015).

Technology allowing some SSA markets to jump ahead

Technology is allowing some SSA countries to leapfrog the normal transparency evolution process by introducing innovative new ways of improving access to data or to faster, more reliable services. Some examples include a one-stop online centre in **Rwanda** for development permit applications, including mobile payments for processing; meanwhile, in **Kenya**, the digitisation of the land registry has been completed in Nairobi, where land rate and stamp duty payments can now be made online or with mobile payment systems.

Some countries struggling to implement new regulatory structures

While solid steps towards greater real estate market transparency continue to be made across the region, forward momentum has stalled in some countries as the complexities of implementing new regulatory structures become apparent, or other priorities – such as the impact of slowing commodity markets – have taken precedence.

In **Kenya**, for example, progress on real estate market and urban planning regulation has been impacted by disputes over mandates and conflicting areas of authority between the recently created (2010) National Land Commission and the Ministry of Lands. Recently proposed bills that have potentially far-reaching consequences for the sector (such as the Physical and Spatial Planning Bill 2015 and the Omnibus Land (Amendment) Bill 2015) have become mired in disagreements between the different regulatory bodies.

Concrete examples of improving transparency

Despite the slowing of momentum in some markets, there are continuing examples of tangible advances being made around the region:

- **Kenya** – Its first REIT (Fahari I-REIT) was listed in 2015 and others in the pipeline are expected to list in 2016. In addition, a National Construction Authority to regulate construction firms became operational in 2015.
- **Rwanda** – New building code and urban planning regulations were introduced in May 2015, and Rwanda has become the only country in Africa to have all rights to land documented, with over 10 million parcels of land entered into its Land Administration Information System (LAIS).

Which transparency areas need greatest attention?

Improvements in regulatory oversight and enforcement have great potential to improve people's lives and promote greater transparency within the region. High-profile failures of regulation such as building collapses (like those recently in **Lagos** and **Nairobi**) have served to highlight that a lack of regulatory enforcement can have devastating consequences.

While Sub-Saharan Africa continues to see improvements in 'Market Fundamentals' data availability, the provision of reliable information by private companies and governments has significant scope to enhance transparency.

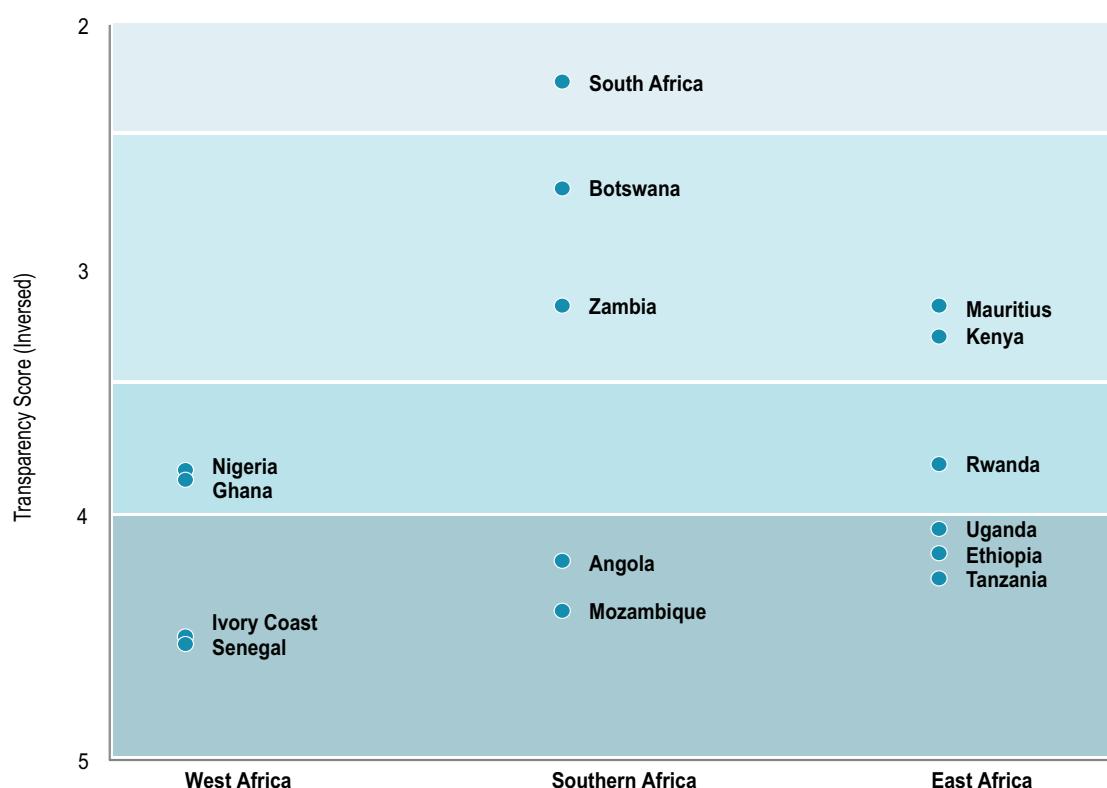
Currency and liquidity issues compound transparency risks

Since GRETI 2014, one of the main issues currently clouding investor and corporate appetites and Sub-Saharan African market sentiment more broadly is currency and liquidity risk as a result of the slump in oil and commodity prices. There is significant uncertainty, especially in **Nigeria**, **Angola** and **Mozambique** and to a lesser extent Zambia, owing to acute U.S. dollar illiquidity and lack of direction on monetary and central bank policies to alleviate this.

There is particular uncertainty and speculation in these markets on how the regulators (and intervention from the likes of the IMF) will facilitate capital importation and repatriation of funds for international investors and corporates. Dual and unofficial U.S. dollar markets have emerged in **Nigeria** and **Angola**, which is very problematic for transacting in these markets, be it paying rent or buying and selling assets.

Range of Real Estate Transparency

Sub-Saharan Africa, 2016



Source: JLL, LaSalle Investment Management

TOP 20 MARKETS BY TRANSPARENCY SUB-INDEX

Performance Measurement

Sub-Index Rank	Market	2016 Sub-Index Score	2016 Composite Score
1	United Kingdom	1.00	1.24
2	United States	1.16	1.29
3	Australia	1.30	1.27
4	France	1.32	1.34
5	Switzerland	1.42	1.86
6	Netherlands	1.48	1.49
7	Canada	1.57	1.28
8	Japan	1.69	2.03
9	New Zealand	1.77	1.45
10	Germany	1.84	1.65
11	Sweden	1.90	1.82
12	Finland	1.92	1.66
13	Singapore	1.99	1.82
14	Italy	2.00	2.10
15	Hong Kong	2.11	1.89
16	Belgium	2.21	1.90
17	South Africa	2.24	2.23
18	Austria	2.30	2.18
19	Ireland	2.34	1.60
20	China – Tier 1	2.44	2.52

Market Fundamentals

Sub-Index Rank	Market	2016 Sub-Index Score	2016 Composite Score
1	Canada	1.26	1.28
2	United States	1.40	1.29
3	New Zealand	1.42	1.45
4	Netherlands	1.45	1.49
5	Australia	1.48	1.27
6	United Kingdom	1.51	1.24
7	Hong Kong	1.64	1.89
8	France	1.66	1.34
9	Ireland	1.69	1.60
10	Germany	1.76	1.65
11	Poland	1.76	1.85
12	Singapore	1.78	1.82
13	Finland	1.97	1.66
14	Denmark	2.00	1.92
15	China – Tier 1	2.01	2.52
16	Taiwan	2.03	2.14
17	Malaysia	2.07	2.35
18	Spain	2.13	2.11
19	Czech Republic	2.15	2.10
20	Italy	2.17	2.10

Governance of Listed Vehicles

Sub-Index Rank	Market	2016 Sub-Index Score	2016 Composite Score
1=	United States	1.00	1.29
1=	Ireland	1.00	1.60
3	United Kingdom	1.02	1.24
4	Belgium	1.06	1.90
5=	Australia	1.08	1.27
5=	Finland	1.08	1.66
5=	Switzerland	1.08	1.86
8	New Zealand	1.15	1.45
9=	Canada	1.19	1.28
9=	South Africa	1.19	2.23
11	Austria	1.26	2.18
12	Germany	1.30	1.65
13	Netherlands	1.35	1.49
14	France	1.40	1.34
15	Mexico	1.42	2.51
16	Denmark	1.46	1.92
17	Sweden	1.47	1.82
18	Singapore	1.51	1.82
19	Norway	1.61	2.00
20	Zambia	1.69	3.14

Regulatory and Legal

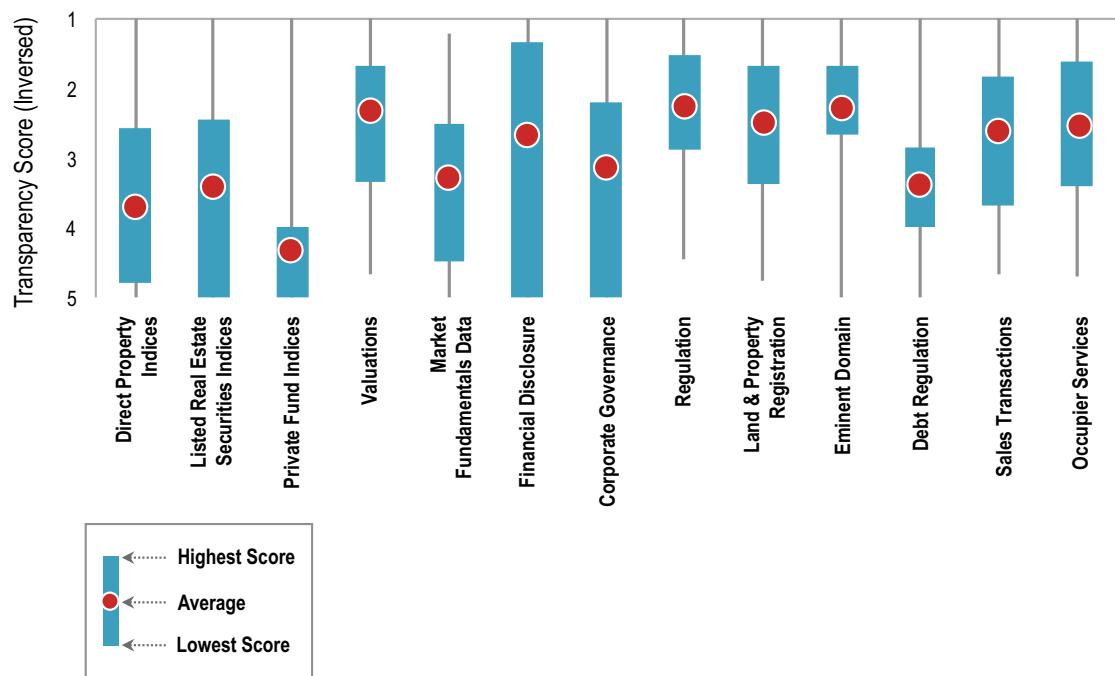
Sub-Index Rank	Market	2016 Sub-Index Score	2016 Composite Score
1	Canada	1.11	1.28
2	France	1.25	1.34
3	Australia	1.29	1.27
4	United Kingdom	1.31	1.24
5	United States	1.41	1.29
6	Ireland	1.44	1.6
7	Poland	1.48	1.85
8	Slovenia	1.49	2.97
9	New Zealand	1.52	1.45
10	Denmark	1.53	1.92
11	Czech Republic	1.58	2.10
12	Norway	1.63	2.00
13	Netherlands	1.64	1.49
14	Finland	1.68	1.66
15	Sweden	1.70	1.82
16=	Germany	1.73	1.65
16=	Singapore	1.73	1.82
18	Romania	1.75	2.38
19	Slovakia	1.75	2.37
20	Israel	1.77	2.49

Transaction Process

Sub-Index Rank	Market	2016 Sub-Index Score	2016 Composite Score
1=	Ireland	1.00	1.60
1=	Australia	1.00	1.27
1=	New Zealand	1.00	1.45
4	France	1.07	1.34
5	Finland	1.13	1.66
6	Israel	1.14	2.49
7=	Denmark	1.18	1.92
7=	Sweden	1.18	1.82
9	Canada	1.22	1.28
10	Spain	1.26	2.11
11	United Kingdom	1.27	1.24
12	Germany	1.29	1.65
13=	United States	1.33	1.29
13=	Poland	1.33	1.85
13=	Switzerland	1.33	1.86
16	Netherlands	1.38	1.49
17	Belgium	1.42	1.90
18	Norway	1.43	2.00
19	Romania	1.44	2.38
20	Czech Republic	1.53	2.10

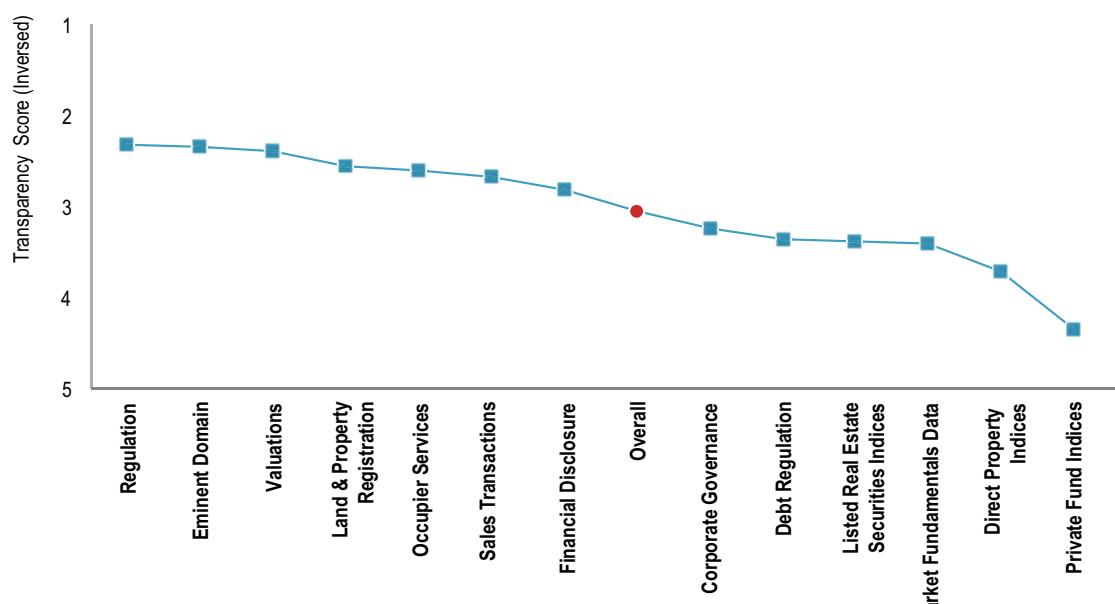
Transparency by Topic Area

Score Range by Topic Area, 2016



Source: JLL, LaSalle Investment Management

Average Score by Topic Area, 2016



Source: JLL, LaSalle Investment Management



Technical Note

The Transparency Index

The JLL Global Real Estate Transparency Index is based on a combination of quantitative market data and information gathered through a survey of the global business network of JLL and LaSalle Investment Management across 109 markets in 2016, up from 102 in 2014. This update adds coverage of Djibouti, Ecuador, Iran, Ivory Coast, Luxembourg, Rwanda, Sri Lanka, Tanzania and a new city tier in China. Jamaica and Mongolia were withdrawn from this update.

For each market we use 139 separate factors, both quantitative data points and survey questions, to calculate the composite score. The survey data and quantitative measures complement each other. For example, knowing the market coverage and length of a country's direct real estate index is only one half of the story; for a complete picture we also gather qualitative data on whether investors actually trust and use the index. Our local research teams, in consultation with business leaders and real estate professionals active in each market, complete the survey. A table summarising the factors behind the Index is at the end of this note.

In the 2016 Index we have continued to incrementally add depth to the Index, breaking general questions into more specific, granular components. From 2012 to 2014 we moved from 83 constituent factors/questions to 115. And, in this update, we have increased the number of factors to 139. The question wording and scoring methodology for the vast majority of our survey components (112) were unchanged; in this update we modified three components and added 24 new ones. Our additions were in three areas:

- **'Market Fundamentals'**: we added new factors asking about the depth of coverage by disaggregated databases, including those covering alternative property sectors.
- **'Governance of Listed Vehicles'**: we asked directly about shareholders' ability to change the direction of a property company.
- **'Real Estate Debt Information ('Regulatory and Legal')**: we incorporated quantitative data on the length of data series on outstanding commercial real estate debt, the length of data series on commercial real estate debt originations, and delinquency rates on that debt. For the first time we also asked directly about the availability of information on LTVs and spreads.

These gradual changes allow us to better capture where markets differ and reduce measurement error by making the overall scoring less reliant on any single factor.

Quantitative Factors

64 of the 139 scoring factors, accounting for 33% of the overall factor weighting, are quantitative: based on facts such as the first year that time series data on vacancy became available, market size, index coverage percentage, and the free float of public listed real estate securities markets. Many of these factors are collected centrally from third-party sources, ensuring consistency in methodology. We score most of these quantitative factors on a continuous scale from 1 to 5, with 1.00 indicating very high transparency. For data points on performance measurement indicators, like the market coverage of property return indices, we have set the top score of 1 equal

to the 90th percentile observation in 2012. The cut-off thresholds to qualify as a 'Highly Transparent' market have been fixed at their 2012 level, so that markets can improve to higher tiers over time. For data points on 'Market Fundamentals' data – for example, the length of a market's office vacancy series – we have set the top score of 1 equal to a time series of 30 years or more, which we view as the 'gold standard'.

Researchers at JLL and LaSalle Investment Management have collected detailed data on the available market fundamentals time series for each of five property types: office, retail, industrial, residential and hotels. We have included all available data series, not only those produced by JLL. The 'Market Fundamentals' data is based on conditions in the principal city of each country, with the exceptions of Brazil, China, India, Russia and the United Arab Emirates, where the Index differentiates between cities.

Market data on fundamentals and on properties from disaggregated databases comes from local sources that differ considerably across markets. It covers six property types: office, retail, industrial, residential, hotels and alternatives. Debt data is provided by a mix of central banks and third-party research firms. The available data on property level returns indices is provided from a variety of sources across markets, MSCI (IPD) and NCREIF prominent among them. Data on public listed real estate comes from the European Public Real Estate Association (EPRA), Bloomberg, NAREIT and the LaSalle Investment Management Securities group. Fund level index data is primarily from INREV, NCREIF, MSCI (IPD) and ANREV.

Qualitative Survey Factors

The balance of the scoring factors, totalling 75 data points, is qualitative survey questions scored by local JLL and LaSalle Investment Management teams. These factors measure data quality, how data is actually used in each market, and aspects of transparency that are impossible to boil down to a number for each market: like the quality of land use planning data and its transparency, or the transparency of the bidding process and pre-sale information. For each, local research teams are provided with a detailed rubric of five answer choices, ranging from 1 – most transparent – to 5 – opaque. Based on where their market fits within that rubric of options, local experts assign a score. Respondents consult JLL's local accounting, finance, asset management and legal experts to inform their responses to questions in those topic areas.

Scores within each region are then reviewed by regional and then global coordinators to ensure objectivity and rigour. Global and regional reviewers interrogate country teams' responses and challenge teams to justify changes in question scores from prior updates. The review process, the high level of detail provided in the answer choices and the improved question granularity reduce subjective bias in scoring, and all contributors strive for impartiality in their responses.

Compiling the Transparency Index

We group the 139 individual transparency measures into 13 topic areas, summarised in the table at the end of this note. Our weightings across sub-indices and topic areas are unchanged in 2016 from our 2014 update. These topic areas are grouped and weighted into five broad sub-indices:

- Performance Measurement – 25%
- Market Fundamentals - 20%
- Governance of Listed Vehicles – 10%
- Regulatory and Legal - 30%
- Transaction Process – 15%

The Transparency Index scores range on a scale from 1 to 5. A country or market with a perfect 1.00 score has total real estate transparency; a country with a 5.00 score has total real estate opacity. Markets are then assigned to one of five transparency tiers. The thresholds for these tiers are defined based on Jenks' Natural Breaks classification. 2012 scores are used to fix the thresholds, so that markets can move between tiers as transparency changes over time even if their relative position does not change. This algorithm finds the cut-offs that minimise within-group variance and maximise between-group differences. We create ten groups using this method and then aggregate them into five tiers with the following thresholds:

- | | |
|------------------------------|----------------------------------|
| • Tier 1: Highly Transparent | Total Composite Score: 1.00–1.69 |
| • Tier 2: Transparent | Total Composite Score: 1.70–2.45 |
| • Tier 3: Semi-Transparent | Total Composite Score: 2.46–3.46 |
| • Tier 4: Low Transparency | Total Composite Score: 3.47–3.97 |
| • Tier 5: Opaque | Total Composite Score: 3.98–5.00 |

Transparency Index Time Series

2016 marks the ninth edition of the JLL Global Real Estate Transparency Index. Since its inception in 1999, the Index has evolved and been refined to reflect the changing demands of cross-border investors and corporate occupiers. In previous Transparency Indices we calculated a 'Composite' score for the current update and an additional 'Classic' score to make comparisons over time. Rather than continuing to calculate two parallel indices, in 2014 we cleaned the historical data to make a single time series from 2004. Factors added over time have been included historically where available. Where no historic data is available, we have extended back 2012 data so that changes in the added factors do not drive movement in the historic scores. A brief history of recent additions to the Index includes:

- **2008:** New questions were added to embrace the perspective of corporate occupiers relating to occupier service charges and facilities management. Questions concerning debt financing and the frequency and credibility of property valuations were also included.
- **2010:** The existing questions regarding debt financing were substantially revised to more appropriately reflect the key issues of debt transparency relating to the availability of information on commercial real estate debt and the role of bank regulators in monitoring commercial real estate lending. There were also revisions to questions on the transaction process covering pre-sale information and the bidding and negotiating process.

- **2012:** Major additions were made to incorporate a greater number of quantitative measures of investment performance and market fundamentals. In each of these two areas, general questions were divided into many different granular questions to better capture nuanced differences between markets. In all, 50 new factors were added by decomposing general questions into more detailed questions.
- **2014:** We continued to decompose general questions into more specific ones, resulting in the addition of 32 new factors. These additions were spread across categories, as shown in the table opposite. For example, rather than asking a single general question on tax fairness as we did in 2012, we included four questions on tax in 2014, covering the consistency of enforcement and predictability of tax rates for both domestic investors and foreign investors.

Factor Comparison	Number of Factors		
	2012	2014	2016
Direct Property Indices	5	6	6
Listed Real Estate Securities Indices	5	7	7
Private Real Estate Fund Indices	2	3	3
Valuations	2	4	4
Fundamentals Data	47	47	68
Financial Disclosure	2	4	4
Corporate Governance	2	3	4
Regulation	6	13	13
Land and Property Registration	3	7	7
Eminent Domain	2	3	3
Real Estate Debt Information	2	7	8
Sales Transactions	3	5	5
Occupier Services	2	6	7

Source: JLL, LaSalle Investment Management

- **2016:** We have added 18 new factors that capture the proportional market coverage of disaggregated databases on leasing, buildings and transactions, one example being Real Capital Analytics. We have included coverage of alternative property sectors (such as student accommodation and self-storage). We have also enhanced our debt questions to make them quantitative (based on the start year of data time series) and to cover LTV and margin data.

Real Estate Environmental Sustainability Transparency Index

A separate Real Estate Environmental Sustainability Transparency Index has been developed for a subset of 37 countries. The Index is based on a survey completed by JLL Research and JLL Energy and Sustainability Services experts in each country. The survey comprises seven questions relating to different components of environmental sustainability, covering:

1. Financial Performance Indices for Green Buildings
2. Green Building Rating and Certification Systems
3. Carbon Reporting Frameworks
4. Energy Consumption Benchmarking Systems
5. Energy Efficiency Requirements for New Buildings
6. Energy Efficiency Requirements for Existing Buildings
7. Green Lease Clauses

For each question our expert teams were provided with a detailed rubric of three answer choices, ranging from 1 – most transparent – to 5 – opaque. Based on where their market fits within that rubric of options, respondents assigned a score. The questions were answered with respect to commercial office real estate. An overall Real Estate Environmental Sustainability Transparency Index was calculated by equally weighting the scores for the seven questions.

Note that there is no 'Opaque' group of countries in the Sustainability Transparency ratings as the inclusion of the 37 countries in this survey qualifies them as minimally transparent. Also, scoring tiers are different from the main Transparency index tiers but were kept the same as in 2014.

Global Real Estate Transparency Index, Transparency Components

Sub-Index	13 Topics	Factors (139 Total), Changes and Additions Emboldened
Performance Measurement	Direct Property Indices	Existence of Direct Property Index Reliability of the Index and Extent to which it is Used as a Benchmark of Performance Type of Index (Valuation Based vs. Notional) Length of Direct Property Level Returns Index Time Series Size of Institutional Invested Real Estate Market Market Coverage of Direct Property Index
	Listed Real Estate Securities Indices	Dominant Type of Listed Real Estate Securities (i.e. Long-term Holders of Real Estate vs. Homebuilders and Conglomerates) Use of Listed Real Estate Securities Data on the Real Estate Market Years Since the First Commercial Real Estate Company was Listed Value of Public Real Estate Companies as % of GDP Existence of a Domestic Listed Real Estate Index and Its Use as a Benchmark Existence of an International Listed Real Estate Index and Its Use as a Benchmark Length of Public Real Estate Index Time Series
	Private Real Estate Fund Indices	Existence of a Domestic Fund Index and Its Use as a Benchmark Existence of International Fund Index and Its Use as a Benchmark Length of Unlisted Fund Index Time Series
	Valuations	Independence and Quality of Third-Party Appraisals Use of Market-based Appraisal Approaches Competition in the Market for Valuation Services Frequency of Third-Party Real Estate Appraisals
Market Fundamentals	Market Fundamentals Data	Existence and Length of Time Series on Property Rents (Office, Retail, Industrial, Residential) Existence and Length of Time Series on Take-up/Absorption (Office, Retail, Industrial, Residential) Existence and Length of Time Series on Vacancy (Office, Retail, Industrial, Residential) Existence and Length of Time Series on Yields/Cap Rates (Office, Retail, Industrial, Residential, Hotels) Existence and Length of Time Series on Capital Values (Office, Retail, Industrial, Residential, Hotels) Existence and Length of Time Series on Investment Volumes (Office, Retail, Industrial, Residential, Hotels) Existence and Length of Time Series on Revenue per Available Room for Hotels Existence and Geographical Coverage of a Database of Individual Buildings (Office, Retail, Industrial, Residential, Hotels, Alternatives)
		Existence and Geographical Coverage of a Database of Leases (Office, Retail, Industrial, Residential, Hotels, Alternatives)
		Existence and Geographical Coverage of a Database of Property Transactions (Office, Retail, Industrial, Residential, Hotels, Alternatives)
		Proportional Coverage of Databases on Individual Buildings (Office, Retail, Industrial, Residential, Hotels, Alternatives)
		Proportional Coverage of Databases of Leases (Office, Retail, Industrial, Residential, Hotels, Alternatives)
		Proportional Coverage of Databases of Property Transactions (Office, Retail, Industrial, Residential, Hotels, Alternatives)
Governance of Listed Vehicles	Financial Disclosure	Stringency of Accounting Standards Level of Detail in Financial Statements Frequency of Financial Statements Availability of Financial Reports in English
	Corporate Governance	Manager Compensation and Incentives Use of Outside Directors and International Corporate Governance Best Practice Alignment of Interests / Shareholder Power Free Float Share of the Public Real Estate Market

Sub-Index	13 Topics	Factors (139 Total), Changes and Additions Emboldened
Regulatory and Legal	Regulation	Extent to which the Tax Code is Consistently Applied for Domestic Investors Extent to which Real Estate Tax Rates are Predictable for Domestic Investors Extent to which the Tax Code is Consistently Applied for Foreign Investors Extent to which Real Estate Tax Rates are Predictable for Foreign Investors Existence of Land Use Rules and Zoning Predictability of Changes in Land Use and Zoning Enforcement of Land Use Rules and Zoning Existence of Building Codes and Safety Standards for Buildings Enforcement of Building Codes and Safety Standards for Buildings Simplicity of Key Regulations in Contract Law Efficiency of the Legal Process Level of Contract Enforceability for Domestic Investors Level of Contract Enforceability for Foreign Investors
		Existence of Land Registry Accessibility of Land Registry Records to Public
		Availability of Title Insurance Accuracy of Land Registry Records
		Completeness of Land Registry Records on Ownership Completeness of Public Records on Transaction Prices Completeness of Public Records on Liens and Easements
		Notice Period Given for Compulsory Purchase Fairness of Compensation to Owners in Compulsory Purchase Ability to Challenge Compulsory Purchase in Court of Law
		Existence and Length of Time Series on Commercial Real Estate Debt Outstanding Existence and Length of Time Series on Maturities and Originations of Real Estate Loans Existence and Length of Time Series of Delinquency and Default Rates of Commercial Real Estate Loans
		Availability of Data on Loan-to-Value Ratios for Commercial Real Estate Loans Availability of Data on Margin Rates for Commercial Real Estate Loans Requirements for Lenders to Monitor Cash Flows and Collateral Value of Property with Loan Facilities Requirements for Lenders to Carry Out Real Estate Appraisals Penalties for Non-Compliance with Requirements
		Quality and Availability of Pre-Sale Information Fairness of the Bidding Process Confidentiality of the Bidding Process Professional and Ethical Standards of Property Agents Enforcement of Professional and Ethical Standards of Property Agents
		Availability of Professional Third-Party Facilities and Project Management Companies Providers of Property Management Services Known to Occupiers Service Expectations for Property Management Clear to Occupiers Alignment of Occupier and Property Manager Interests Frequency of Service Charge Reconciliation Accuracy and Level of Detail in Service Charge Reports Ability for Tenants to Audit Landlord's Accounts and Challenge Discrepancies
Transaction Process	Sales Transactions	
Occupier Services	Occupier Services	



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