

A Bird's Eye View of Global Real Estate Markets: 2009 Update

Research

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Executive Summary

The ongoing global recession and financial market turmoil have taken a big toll on asset values and investment flows around the world, particularly in developing nations. According to the Institute of International Finance, private capital flows to emerging markets rose to a record \$929 billion in 2007 before dropping by about half in 2008, and the Institute estimates that that number will fall to \$165 billion in 2009. Commercial property values are under pressure globally and many markets have already experienced significant declines in both asset values and investment activity. Yet investors continue to be interested in cross-border real estate, despite the recent resurgence in risk aversion and probable increase in risk premiums that has dampened enthusiasm for emerging markets. Many investors are looking to take advantage of distress in the property markets by focusing on a much broader set of potential markets to find the best risk-adjusted opportunities.

That property investors have expanded the opportunity set to include foreign and domestic investments is not surprising. Cross-border investing has become much more common in recent years for a host of reasons, and the truly global nature of the current downturn will create opportunities in markets across all regions. But to be successful, investors need timely and meaningful information as a basis for making decisions about where and when to invest. With that in mind, this report updates our 2003 estimates of the size of the commercial real estate markets in developed and emerging countries using a GDP-based approach, taking into consideration the current slowdown in the global economy. (For the original report, see "A Bird's Eye View of Global Real Estate Markets," Pramerica Real Estate Investors, March 2003). The updated analysis also extends the study to a larger universe of countries and includes projections of market size over the next 20 years to give investors a better understanding of where growth is likely to be strongest.

Real Estate Universe

Pramerica's global universe of real estate markets consists of 55 countries with \$23.5 trillion of assets. We have divided them into five geographical regions: Asia Pacific, Europe, Latin America, U.S./Canada and Gulf Cooperation Council (GCC). Exhibit 1 lists the population, gross domestic product (GDP), the GDP per capita and the estimated dollar value of the institutional commercial real estate market in those countries. The combined population in the 55 countries is slightly greater than 4.8 billion, or 71.4% of global population. The GDP of these countries is \$56.7 trillion, or 96.8% of the global total. The average GDP per capita, weighted by each country's GDP, is about \$34,900.

Exhibit 1: Global Universe of Real Estate Markets

		Population (M)	GDP (US\$B)	GDP per Capita (US\$)	Real Estate (US\$B)
Asia Pacific	Australia	20.6	975	47,270	439
	China	1,328.5	4,196	3,160	948
	Hong Kong	7.0	231	32,840	207
	India	1,148.0	1,175	1,020	182
	Indonesia	237.5	490	2,060	96
	Japan	127.3	4,977	39,100	2,240
	South Korea	49.2	858	17,430	342
	Malaysia	27.7	212	7,640	64
	New Zealand	4.3	126	29,290	57
	Philippines	92.7	169	1,820	32
	Singapore	4.6	178	38,990	160
	Taiwan	22.7	406	17,900	164
	Thailand	67.0	278	4,150	69
Vietnam	86.1	87	1,010	13	
Europe	Austria	8.4	424	50,730	191
	Belgium	10.6	521	49,120	235
	Bulgaria	7.5	51	6,750	15
	Czech Republic	10.2	213	20,870	90
	Denmark	5.5	344	62,750	155
	Finland	5.3	270	50,960	121
	France	62.0	2,864	46,240	1,289
	Germany	82.7	3,594	43,440	1,617
	Greece	11.0	345	31,400	155
	Hungary	9.9	154	15,470	59
	Ireland	4.3	287	66,490	129
	Italy	58.1	2,306	39,660	1,038
	Netherlands	16.4	885	53,930	398
	Norway	4.8	439	91,550	198
	Poland	38.1	528	13,860	195
	Portugal	10.6	244	23,000	107
	Romania	21.5	196	9,140	63
	Russia	141.8	1,671	11,790	585
	Slovakia	5.5	88	16,130	34
	Spain	45.5	1,618	35,550	728
	Sweden	9.2	477	51,770	215
Switzerland	7.7	491	63,750	221	
Turkey	71.9	738	10,260	247	
Ukraine	46.0	180	3,900	43	
United Kingdom	61.4	2,671	43,500	1,503	
Latin America	Argentina	39.8	297	7,480	89
	Brazil	191.9	1,603	8,350	500
	Chile	16.8	186	11,080	64
	Colombia	47.6	241	5,060	64
	Ecuador	13.8	47	3,430	11
	Mexico	110.0	1,036	9,430	337
	Peru	29.1	128	4,420	32
	Venezuela	27.7	317	11,420	110
US/Canada	Canada	33.2	1,497	45,090	674
	United States	303.9	14,281	47,000	6,426
Gulf Cooperation Council	Bahrain	0.8	20	25,245	11
	Kuwait	3.4	160	46,397	90
	Oman	2.6	56	21,704	24
	Qatar	1.1	117	106,460	66
	Saudi Arabia	25.0	470	18,790	192
	U.A.E.	4.8	270	56,667	152
Total/Weighted Average		4,830.6	56,682.3	34,904.1	23,486

Economic Intelligence Unit, International Monetary Fund, Pramerica Real Estate Investors; data as of 2008

The largest country by population is China (1.3 billion), followed by India, with 1.1 billion. The least populous country – Qatar, with 1.1 million – also has the highest GDP per capita (\$106,460).¹ Vietnam’s \$1,010 GDP per capita ranks at the bottom. The U.S. has the largest economy, with a GDP of \$14.3 trillion. At the other end of the scale is Bahrain, with a \$20 billion GDP, followed by Ecuador, with a GDP of \$47 billion.

Some regions and countries are absent from this analysis. Africa is excluded because of the generally low level of economic development and widespread political strife. South Africa is relatively more developed, but it was excluded due to its status as a “stand-alone” destination, which makes it a costly location in which to invest. Some other countries, including Pakistan and some Middle Eastern nations, were excluded due to their political instability.

Asset values have been estimated using a GDP-based top-down approach that adjusts for the economic development of each country. For the purpose of this discussion, we consider only higher quality commercial real estate, not owner-occupied housing. Our model uses GDP as the base to estimate the value of institutional-grade commercial real estate, after adjusting for the level of economic development in each country, indicated by the level of per capita GDP. We have determined in the past that institutional-grade real estate represents about 45% of GDP in mature, developed countries. In developing countries, the ratio of commercial real estate to GDP tends to be lower.

To calculate the level of economic development, we use as a proxy a dynamic GDP per capita threshold, above which we do not make any adjustment. The value of the per capita GDP threshold – \$20,000 in 2000 and \$25,000 in 2008 – was adjusted annually based on the U.S. inflation rate. In any given year for a particular country with GDP per capita (GDH in the formula) less than the threshold, we used the following relationship:

$$\text{Value of Real Estate} = 45\% \times \text{GDP} \times (\text{GDH}/\text{Threshold GDH})^{1/3}$$

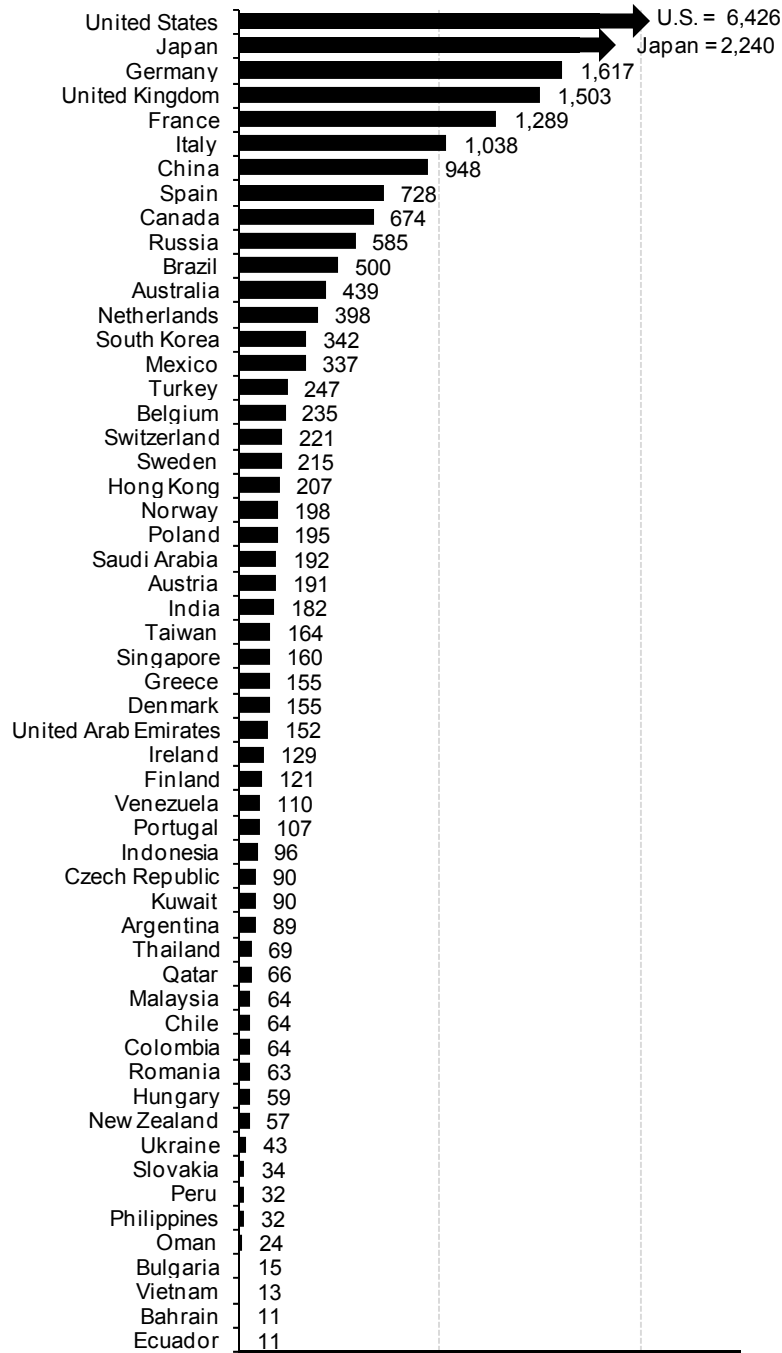
For the countries with a GDP per capita greater than the threshold for that year, the value of its real estate sector is calculated as 45% of the GDP. To illustrate our model, we calculate the value of commercial real estate in Australia and China. Australia’s per capita GDP is higher than the \$25,000 threshold, while China’s is lower. The value of the real estate market in Australia is calculated simply as 45% x \$975 billion, or \$439 billion. For China it is 45% x \$4,196 billion x $(3,160/25,000)^{1/3} = \$948$ billion.

We have also adjusted the value of the real estate market in seven countries. Hong Kong and Singapore were adjusted upwards by 100% to take into account their high population densities. The U.K. was adjusted up by 25% due to London’s status as a global financial center. The GCC countries of Bahrain, Kuwait, Qatar and United Arab Emirates also were adjusted up by 25% because of their population densities and proliferation of planned urban development projects.

Exhibit 2 shows the estimated value of institutional real estate in individual countries. The U.S. is far ahead of other nations, with \$6.4 trillion. Japan is next with \$2.2 trillion, followed by Germany (\$1.6 trillion) and the U.K. (\$1.5 trillion). Bahrain and Ecuador, each with \$11 billion of commercial real estate, are at the bottom. As these sizes indicate, real estate globally is concentrated in a relatively small number of countries.

¹ Qatar’s per capita GDP is inflated somewhat by the large number of expatriate workers who are not counted as part of the population.

Exhibit 2: Estimated Size of Institutional-Grade Real Estate By Country (US\$B)



EIU, IMF, Pramerica®, data as of 2008

Exhibit 3 illustrates the concentration of property markets in a few large countries. The top five countries by share – the U.S., Japan, Germany, the U.K. and France – comprise more than 55% of the total. The top 10 countries represent a 73% share and the top 15 have an 81% share. Despite those numbers, the global commercial real estate universe is becoming less concentrated over time. In our 2003 study, the top five

countries accounted for about 70% of the global universe. The main reasons for the shift are the addition of the GCC countries to the analysis and the relatively faster growth of the developing countries in comparison to developed countries. We will examine this issue in more detail in subsequent sections.

Exhibit 3: Country Concentration of Institutional-Grade Real Estate

	Country Share	Cumulative Share
1. United States	27.4%	27.4%
2. Japan	9.5%	36.9%
3. Germany	6.9%	43.8%
4. United Kingdom	6.4%	50.2%
5. France	5.5%	55.7%
6. Italy	4.4%	60.1%
7. China	4.0%	64.1%
8. Spain	3.1%	67.2%
9. Canada	2.9%	70.1%
10. Russia	2.5%	72.6%
11. Brazil	2.1%	74.7%
12. Australia	1.9%	76.6%
13. Netherlands	1.7%	78.3%
14. South Korea	1.5%	79.7%
15. Mexico	1.4%	81.2%
16. Turkey	1.1%	82.2%
17. Belgium	1.0%	83.2%
18. Remaining Countries	16.8%	100.0%

EIU, IMF, Pramerica®; data as of 2008

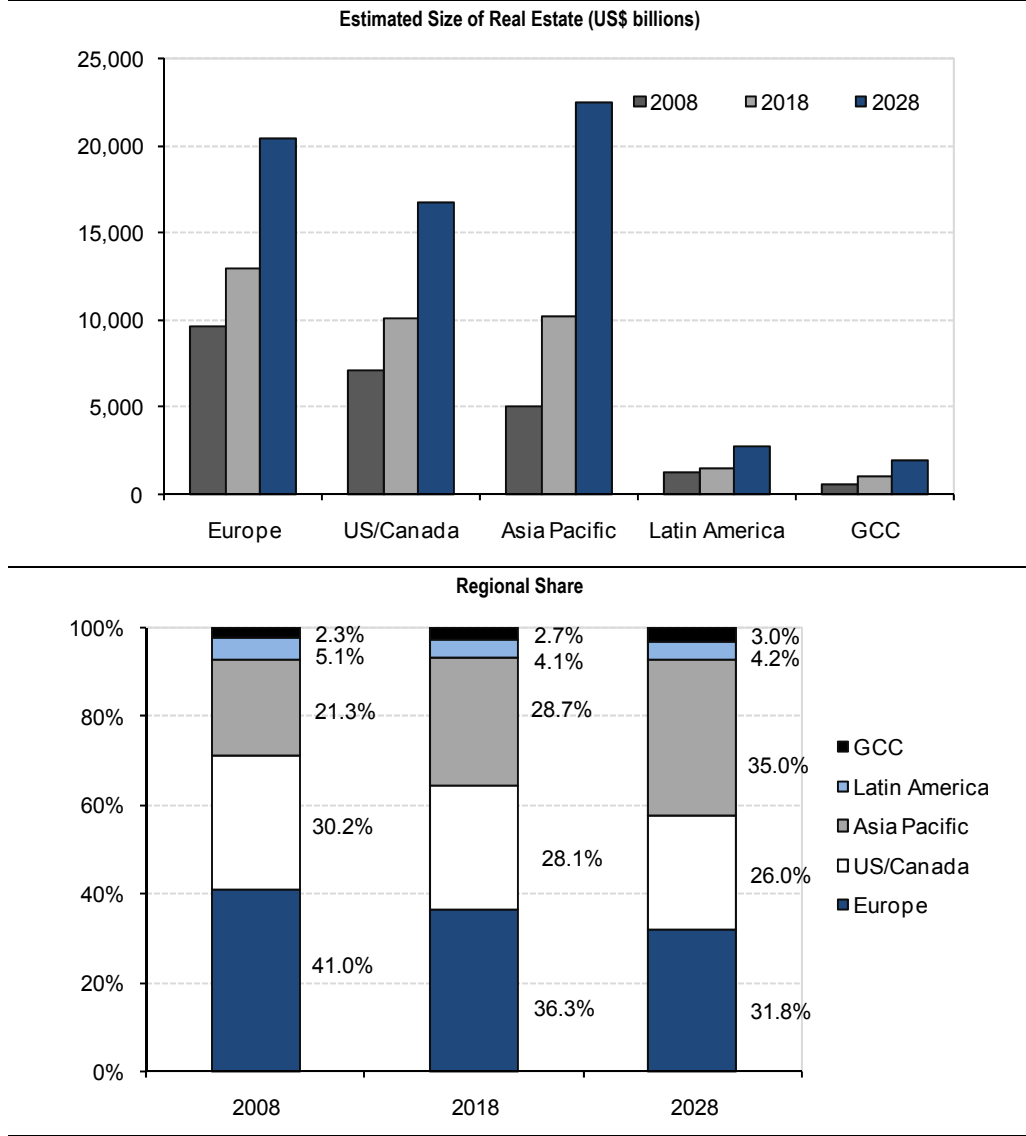
Distribution by Region

To assist investors in making investment decisions, it is helpful to create a broader perspective beyond individual countries, such as categorizing the countries using different criteria. One important way to group countries is to classify them according to geographical regions, as shown in Exhibit 4. The chart demonstrates that the regional distribution of global real estate is forecast to change significantly over the next two decades.

For example, between now and 2028 the Asia Pacific region is forecast to grow much more quickly relative to the rest of the world. The region's market share is projected to grow to 35% by 2028 from 21% at year-end 2008, while the proportions of Europe and U.S./Canada are projected to stagnate or shrink. The size of commercial real estate market in Asia Pacific is forecast to reach \$22.5 trillion in 2028, up from just \$5 trillion in 2008, making it the largest region by dollar value. Although Europe's commercial real estate market will also increase in value over this period, growing to \$20.4 trillion from \$9.6 trillion in 2008, Europe's share of the global universe, currently the largest at 41%, will shrink to 32% in 2028.

Similarly, the U.S./Canada region's real estate market will more than double over the next 20 years, from \$7.1 trillion today to \$16.7 trillion in 2028, but its share will drop to 26% from 30% over that span. The proportions of Latin America and the Gulf countries are projected to be relatively stable.

Exhibit 4: Regional Distribution of Real Estate Over Time



The shift in the regional distribution is expected to come from the higher economic growth of the emerging Asian countries, notably China and India, along with the capital markets transformation that is making it increasingly easier for foreign capital to flow to those countries. The development of financial infrastructure and investment vehicles that did not exist 10 or 15 years ago has facilitated the ability of institutions to invest in emerging markets globally.

Distribution by Country Risk

A second way to classify markets is by country risk based on market maturity and the overall level of economic development. Exhibit 5 shows the distribution of commercial property by region and market maturity. The largest bloc by size is Developed Europe, which represents 35% of global real estate value

and is comprised of the mature economies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the U.K. The U.S./Canada is the second largest bloc, with a 30% share of the total global real estate market. Developed Asia Pacific, which accounts for 15% of the global universe and includes Australia, New Zealand, Japan and the four Asian Tigers (Hong Kong, Singapore, South Korea and Taiwan), makes up the balance of the developed nations' \$19 trillion in commercial property.

Developing nations account for a relatively small but growing share (19%) of the global commercial real estate market. Emerging Asia Pacific (6%) includes the developing economies of China, India, Indonesia, Malaysia, Philippines, Thailand and Vietnam. Emerging Europe (6%) consists of the developing economies of Bulgaria, Czech Republic, Hungary, Poland, Romania, Russia, Slovakia, Turkey and Ukraine. Latin America (5%) consists of Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Venezuela. The six Gulf countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates make up the GCC bloc (2%).

Exhibit 5: Real Estate Distribution by Country Risk

	2008		2018		2028	
	Real Estate (US\$B)	% of Total	Real Estate (US\$B)	% of Total	Real Estate (US\$B)	% of Total
Developed Europe	8,299	35.3%	10,590	29.7%	15,873	24.7%
Developing Europe	1,333	5.7%	2,370	6.6%	4,539	7.1%
Developed Asia Pacific	3,608	15.4%	4,972	13.9%	7,600	11.8%
Developing Asia Pacific	1,404	6.0%	5,282	14.8%	14,911	23.2%
Latin America	1,208	5.1%	1,460	4.1%	2,730	4.2%
US/Canada	7,100	30.2%	10,041	28.1%	16,714	26.0%
Gulf Cooperation Council	535	2.3%	980	2.7%	1,903	3.0%
Total Developed Nations	19,007	80.9%	25,603	71.7%	40,187	62.5%
Total Developing Nations	4,479	19.1%	10,093	28.3%	24,084	37.5%
Global Total	23,486	100.0%	35,696	100.0%	64,271	100.0%

EIU, IMF, Pramerica®; data as of 2008; Latin America and Gulf Cooperation Council countries are classified as developing countries

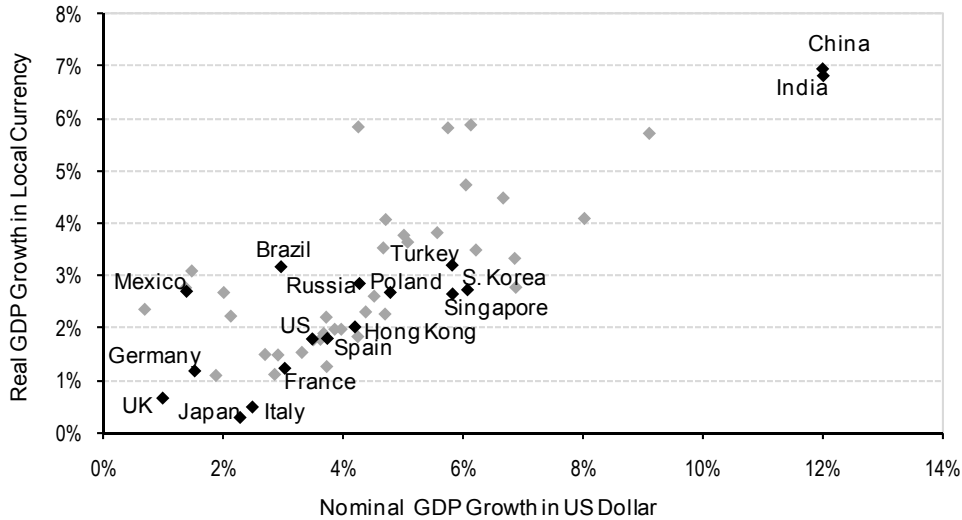
Currently, developed countries comprise an overwhelming majority (more than 80%) of global commercial high grade real estate. However, the share of the emerging economies is projected to nearly double to 37% over the next two decades. The bulk of the growth is forecast to come from the Emerging Asia bloc, whose GDP is forecast to grow much faster than other regions.

A Key Country Perspective

The growth patterns of the country blocs are largely driven by “key countries” in each bloc. Exhibit 6 graphs the forecast economic growth of all the countries in Pramerica’s global universe, with some of the key countries labeled. Generally, the highest growth rates are projected to come from emerging nations, particularly China and India, which are expected to grow at a pace of about 7% (real) annually for the next decade. The other four largest emerging countries by GDP – Russia, Brazil, Mexico and Turkey – are all forecast to grow at real rates of almost 3% or higher per year over the same period. Developed Western economies are mostly forecast to grow at a slower pace. Over the next decade, real GDP growth is projected to average 0.3% in Japan and 1.8% in the U.S. (This projection factors in a GDP contraction in the current recession.)

The horizontal axis of Exhibit 6 shows the countries' nominal growth rate in U.S. dollars, which reflects the dual effects of inflation and currency trends. For cross-border investors, the nominal rate measures an economy's impact on global investments. China and India both are poised to grow at about 12% (nominal) per year over the next decade. The nominal growth rate for the U.S. over the same period is projected at 3.5%.

Exhibit 6: Wide Divergence in Projected GDP Growth (2008-2018)

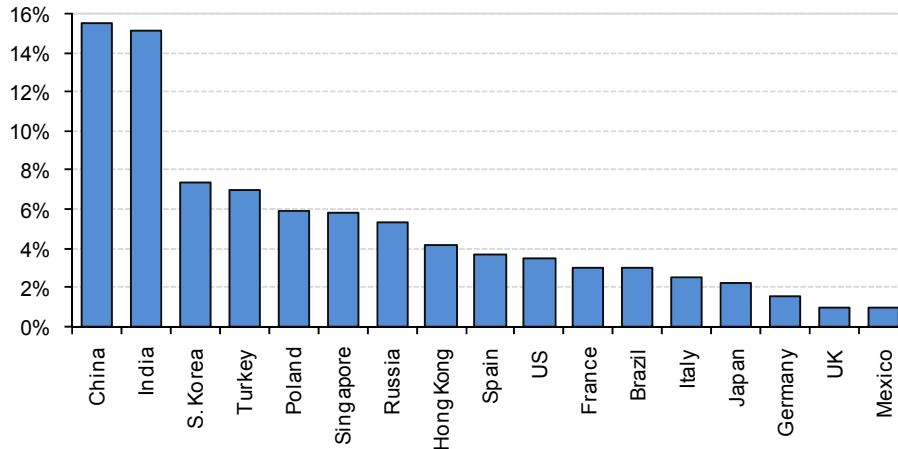


Note: Only select countries labeled

EIU, IMF, Pramerica®

Along with the increase in GDP, there will be a concomitant rapid growth in the estimated size of the property markets in emerging economies. China tops the list, with its institutional-grade commercial real estate market projected to grow at an annual 15.5% clip between 2008 and 2018. India follows close behind with a 15.2% projected growth rate.

Exhibit 7: Growth in Institutional-Grade Real Estate in Select Countries (2008-2018)



EIU, IMF, Pramerica®

Exhibit 7 illustrates the rapid growth of some developing economies. Contributing factors to the emerging countries' relative gain in GDP and commercial real estate include economic growth, urbanization, favorable demographics, improving financial infrastructure and – most importantly – the rapid growth in the middle class in the emerging markets.

China and the U.S. are the dominant countries in a ranking of the growth of institutional real estate by dollar value (Exhibit 8). China is projected to have the largest increase (\$3.1 trillion) over the next decade, representing a quarter of global growth during that span. While the U.S. commercial real estate market is slated to grow at a pace of almost one-fifth that of China and India over the next decade, by dollar value its growth will almost rival China and far outstrip India. The U.S. real estate sector is forecast to grow by \$2.6 trillion, contributing 21.5% to the global total. Since India's institutional real estate market is currently only \$182 billion, its expected growth contributes only 4.6% of the global total, putting it a distant third. Other major contributors to global growth include mostly developed economies such as Japan, France, South Korea and Spain.

Exhibit 8: Top Contributors by Absolute Growth of Real Estate

	Real Estate in 2008 (US\$B)	Growth over 2008-2018 (US\$B)	Contributions to Global RE Growth
1. China	948	3,051	25.0%
2. United States	6,426	2,620	21.5%
3. India	182	565	4.6%
4. Japan	2,240	564	4.6%
5. France	1,289	446	3.7%
6. Russia	585	397	3.3%
7. South Korea	342	354	2.9%
8. Spain	728	322	2.6%
9. Canada	674	321	2.6%
10. Italy	1,038	288	2.4%
11. Germany	1,617	262	2.1%
12. Turkey	247	236	1.9%
13. Brazil	500	173	1.4%
14. United Kingdom	1,503	154	1.3%
15. Netherlands	398	153	1.3%
16. Poland	195	151	1.2%
17. Singapore	160	122	1.0%
18. Other Countries	4,413	2,031	16.6%
TOTAL	23,486	12,210	100.0%

EIU, IMF, Pramerica®

Summary

Global commercial real estate asset values are undergoing a correction in that will create risks and opportunities for investors everywhere, as the global economy and financial markets adapt to a lower-leverage world. The resulting limited transaction activity and growing distress may lead to some near-term divergence between the current estimates we produced for each country using the GDP-based approach and more granular, bottom-up estimates. Nonetheless, the current estimates and long-term projections provide a solid foundation for investors to make decisions about portfolio allocations within and across regions.



Most importantly, perhaps, our results showed that developing nations today represent 19% of the global institutional real estate market, but they will produce nearly half of total growth over the next two decades. In particular, the Asia Pacific region will gain market share at the expense of the more mature economies of Western Europe, the U.S. and Canada.

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