

# EUROHYPO MARKETS

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EXECUTIVE  
SUMMARY

## Global real estate market trends up to 2050 – no clear shift for another 15 years

- Real estate has developed into an established asset class with an individual return structure consisting of ongoing returns and a capital growth component.
- The real estate stock presently available for investment purposes of institutional investors is dominated by the USA, Japan and the UK, followed by Germany and France. These 5 countries have a share of around two thirds of the entire global stock.
- Projections of the global population development up to 2050 suggest a reduction in many western industrial nations and significant growth in the developing economies.
- The emerging markets in Asia, Eastern Europe and Latin America are currently the largest building sites on the global real estate markets. The parallel process of economic upturn will lead to a clear rise in significance of these real estate markets. For example, the growth rates of the real estate stock in the BRICs countries after 2020 will be at least double that of the established western real estate markets.
- In Asia, the Chinese real estate market will be competing with Japan for the top position in terms of size by 2050.
- In Europe (incl. Central and Eastern Europe) the Russian real estate market will have reached proportions comparable with Germany and France by 2050 and the Turkish market will be competing for the top positions in terms of size with Spain and Italy.
- Global strategies are focussing increasingly on the structuring of portfolios. Expansion of activity in developing countries and regions can therefore be expected. In the established western real estate markets, on the other hand, optimisation in the sense of active portfolio management regarding development, purchasing and selling of properties will assume an increasingly important role.

## Contents

### The emerging markets in Asia and Eastern Europe are on the run!

The increasingly global capital allocation of institutional investors requires a global capital investment strategy on the part of the investor. A criterion for the capital allocation is the size of the markets concerned. While, for listed real estate, this is still easy to determine through the relevant market capitalisation, the solution to this issue is more difficult with direct real estate investments. This study approaches the answer to this question on a broad national level. Based on a current assessment of the global real estate stock available for investment purposes of institutional investors, this study assesses the effects of demographic and economic projections on the real estate stock and its regional distribution up to 2050.

## Real estate as a global asset class

In 2006 worldwide real estate transactions totalled almost USD 700 billion, equalling an increase of over one third from the previous year. Around half of these transactions concerned cross-border investments. Europe, and Germany in particular, are presently high on the agenda of international investors, as the current capital flow shows. At the same time this globalisation process has prompted an improvement in transparency on the global real estate markets. During this process, and in the search for high ongoing returns, international investors are increasingly focussing on countries, which up until a few years ago were not seen suitable for pension funds and insurance companies on account of their market transparency. Examples of this are the Central and Eastern European states like Bulgaria, Slovakia and the Baltic States as well as the emerging markets like China and Thailand.

Along with shares and bonds, real estate became an established asset class during this development and now represents a hybrid asset class for investors. It provides an ongoing return, giving it a structure similar to bonds. It also has the growth component that shares have, which can result from increasing rents and/or falling yields, and the resulting change in value.

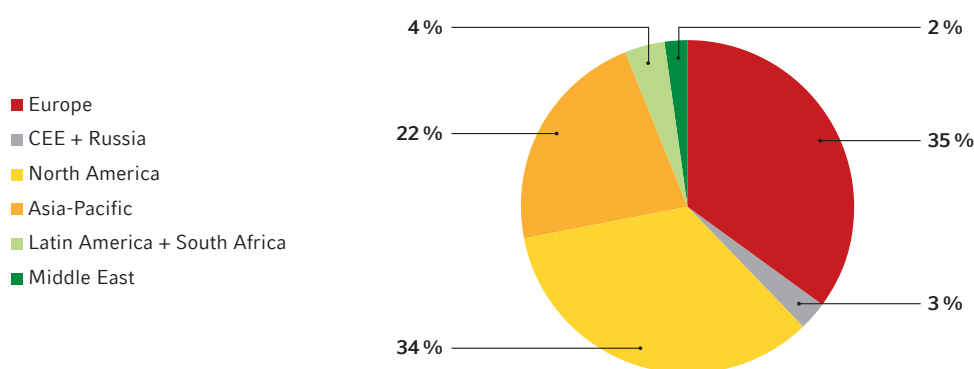
The globalisation and establishment of real estate is supported to a significant degree by the increasing spread of REITs, which have made a large contribution to the improvement in transparency on the real estate markets. REITs provide investors with a transparent, liquid investment vehicle. This puts investors in a position to develop a real estate exposure that can be adapted relatively quickly to changing investment preferences. REITs give investors the option of buying and selling real estate exposure whenever they choose, without going through long transaction processes and bearing the associated costs.

The increasingly global capital allocation of institutional investors requires a global capital investment strategy on the part of the investor – with direct and indirect (i. e. listed or not non-listed) investments. The starting point for this type of investment strategy is always the risk/return preference of the investor. In this connection, a criterion for the capital allocation is the size of the markets concerned. While, for real estate equity investments, this is still easy to determine through the relevant market capitalisation, the solution to this issue is more difficult to determine with direct real estate investments. This study approaches the answer to this question on a broad national level. Based on a current assessment of the global real estate stock available for investment purposes of institutional investors, this study will assess the effect of demographic and economic projections on the real estate stock and its regional distribution up to 2050. This will identify the basic shifts triggered by the changes in the global economy. ■

## Global real estate stock in 2006

The global real estate stock available for investment purposes of institutional investors can be assessed with the help of a top-down appraisal approach. The basis of the appraisals is the GDP and the GDP per head of a country (see appendix). With this process it should be noted that only statements on the available stock are made. It cannot be concluded from this how much this supply is currently under institutional ownership. For this, it is necessary to examine the institutional peculiarities of the countries concerned. For example, the owner-occupancy portion of US companies (c. 25 %) is significantly lower than that in Germany (approx. 70 %), which means the portion of the real estate supply owned by institutional investors is significantly higher in the USA than in Germany.

**Regional distribution of the global real estate stock available for investment purposes of institutional investors in 2005**



Source: Eurohypos RAC Research

At the end of 2005, the global real estate stock amounted to USD 16,036 billion. The most important regions are Europe (excluding CEE and Russia) and North America with 35 and 34 per cent respectively, followed by the Asia-Pacific region with 22 per cent. The largest national real estate markets are in the USA, Japan and the UK, followed by Germany and France. These 5 countries have a share of approx. two thirds of the global real estate stock available to institutional investors. It is therefore unsurprising that the majority of real estate investments is concentrated in these 5 countries.

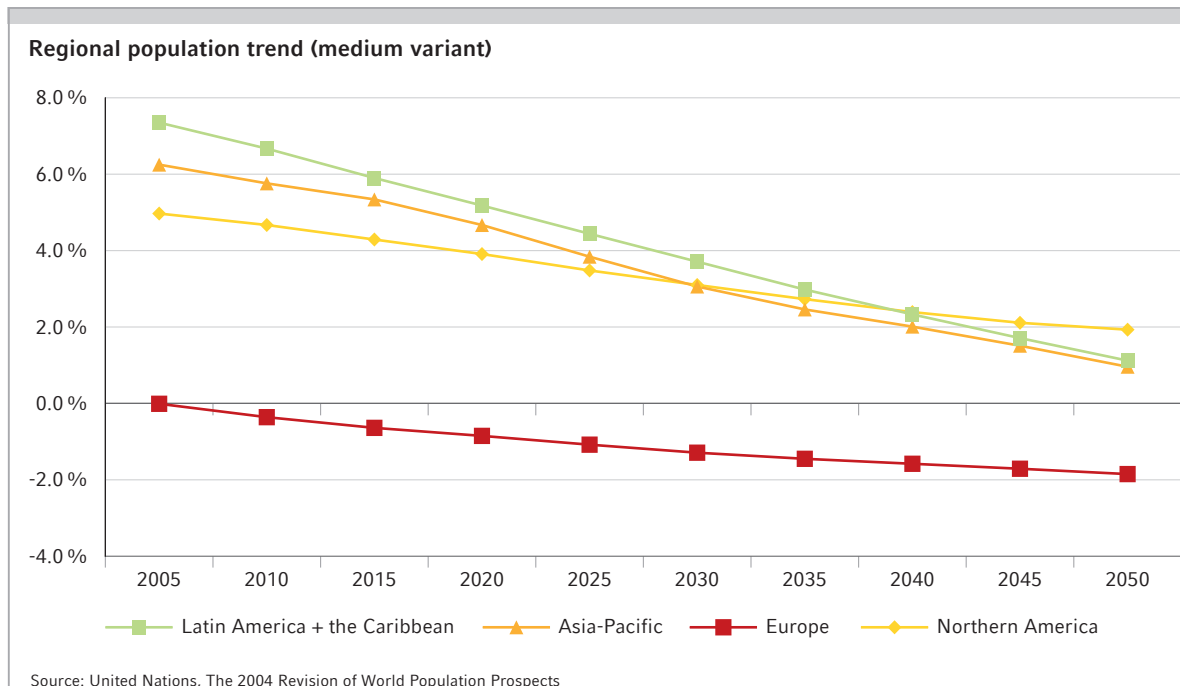
**Top 5 global real estate markets 2005**

	GDP in bn. USD	GDP per capita in USD	investable real estate stock in bn. USD	share of global stock
USA	12,452.42	41,975.98	5,166.69	32.22 %
Japan	4,672.29	36,598.78	1,992.43	12.42 %
United Kingdom	2,196.84	36,429.28	1,165.47	7.27 %
Germany	2,799.76	33,785.33	1,160.80	7.24 %
France	2,113.43	33,854.82	864.40	5.39 %

Source: Eurohypos RAC Research

## Global trends

The starting point for appraising the sizes of the national real estate markets is the relationship between the economic power of a country, its population and the real estate stock. Global economic growth will shift its focus in the next decades to the emerging markets, particularly Asia. Added to this is the demographical development in these countries, which may also bring about opportunities. However, the associated risks, such as deterioration into slums, must not be underestimated.



The growth in population in the Asia-Pacific region is associated with increasing urbanisation in these countries. This raises the significance of the tertiary sector. Both developments are positive for the real estate stock available for investment purposes of institutional investors. This results on the one hand from the growing demand of the service sector, which partly consists of international companies with standard requirements. On the other hand, the rising income per head implies an increasing demand for higher-value residential property. As part of these changes, the development of retail premises gathers pace due to increased consumer spending and there is a requirement for modern logistics premises for the smooth transportation of goods.

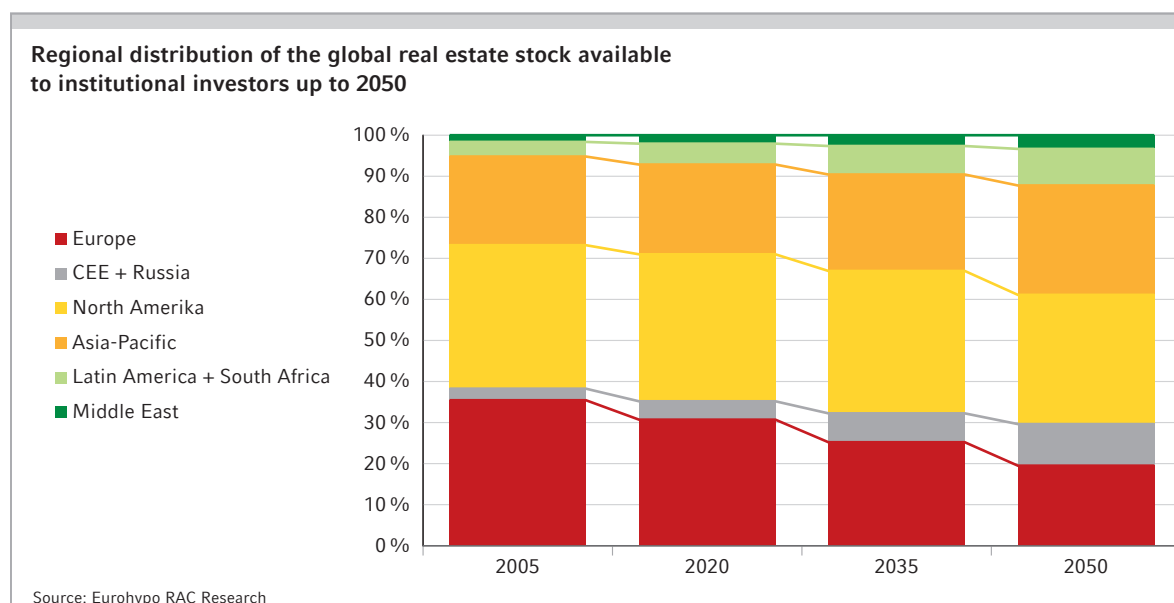
Alongside these economic changes, economic growth in the developing nations will be significantly higher than in the industrialised nations. This leads to an increase in the global economic significance of the emerging markets. Conversely, the relative significance of the OECD countries in terms of their share of global GDP

will reduce. At the same time, companies in the industrialised nations will also benefit from a gradual specialisation, while exploiting their comparative advantages, caused by global growth. Consequently, new potential for global real estate investors will emerge in the established western real estate markets as well.

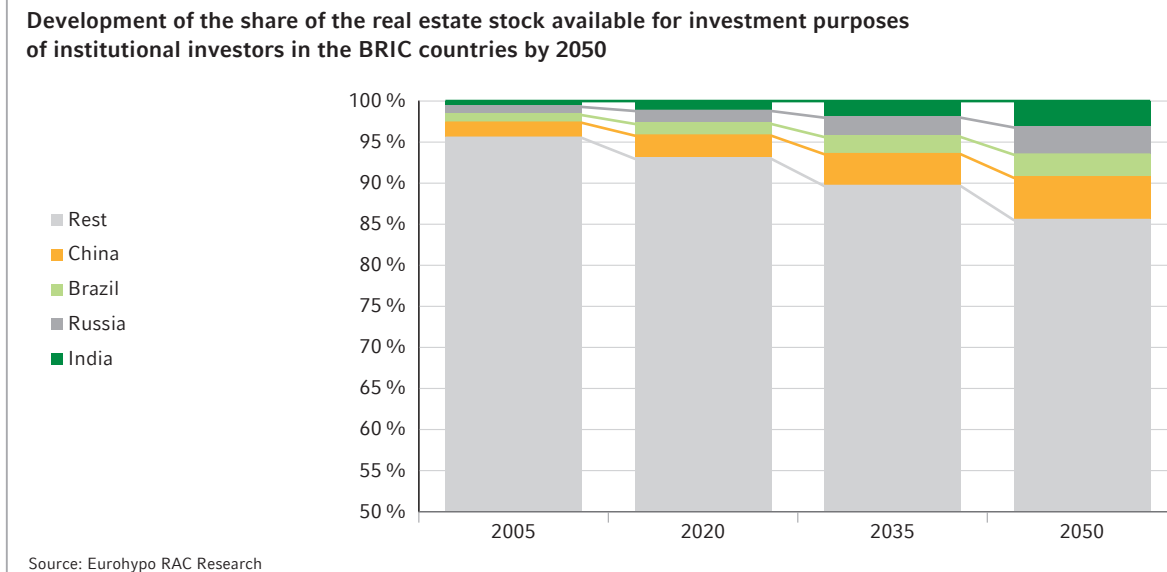
For institutional investors, this increases the range of potential investment alternatives. On the one hand, new target markets appear, particularly in the emerging markets. On the other hand, the global changes and the consequent specialisation trends result in new investment potentials in the established real estate markets. So what effects do these processes have on the real estate stock available for investment purposes of institutional investors? ■

## Projection of the global real estate stock

In connection with the top-down appraisal approach for the assessment of the global real estate stock, a projection of the regional distribution of the real estate stock up to 2050 can be made.

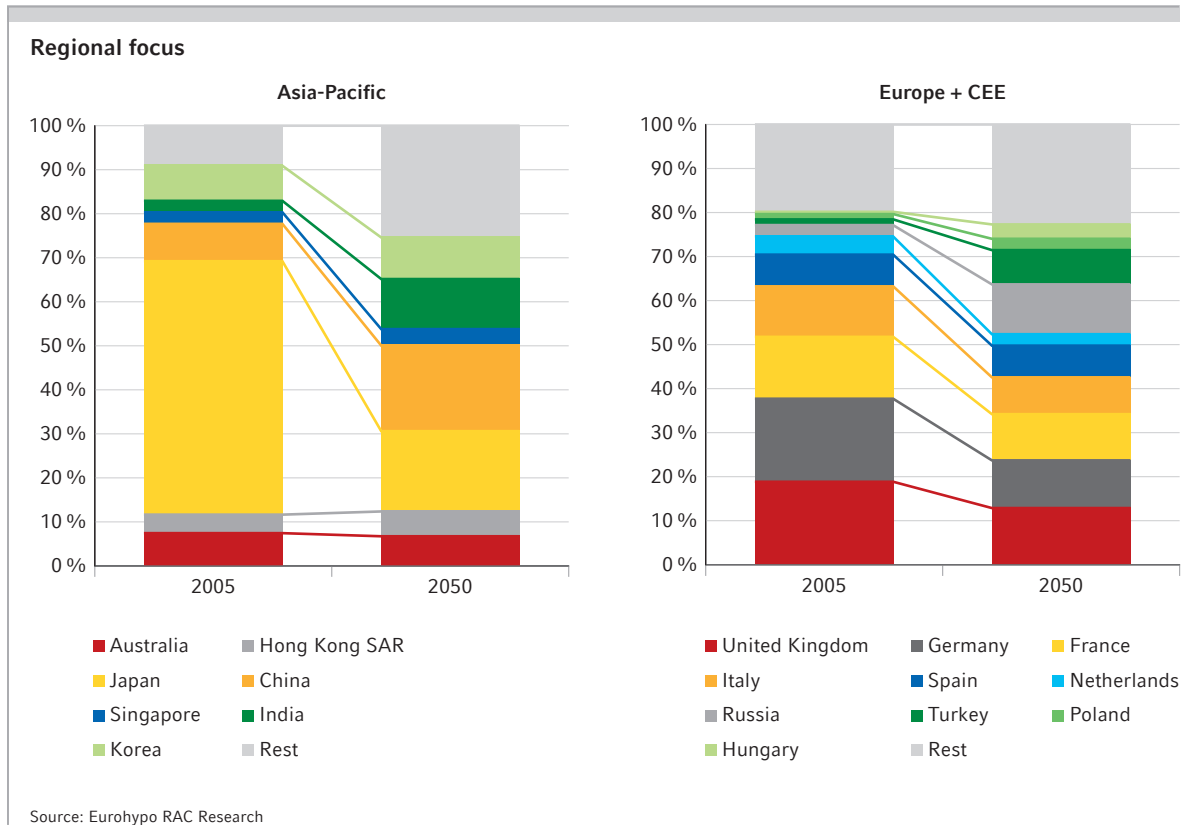


The projections do not serve to reach conclusions on how large the global real estate stock is. They support strategic decision-making for market players, in a way that they give information on how the shares will shift in the next years, i. e. they help to assess future market potential. It also should be noted that a decreasing share of a country or region in the global real estate stock does not necessarily equate to a shrinking market. It means that the growth rate of the real estate stock in that country/region is behind that of the global real estate stock available for investment purposes of institutional investors.



It appears that the emerging markets in Asia, Eastern Europe and Latin America, will rise sharply in significance during their process of economic upturn. However, this process will be barely noticeable in the next 15 years. After approx. 15 to 20 years, the development of the real estate stock in these countries will experience dynamic development based on the economic progress achieved. The share of these countries in the global real estate stock will increase significantly as a result, mainly at the expense of (Western) Europe. In contrast, the established real estate markets of North America will lose very little significance for institutional investors.

An example of this development is the situation in Brazil, Russia, India and China – the BRIC countries. Given that their share in the global real estate stock in 2005 was approx. 5 per cent, it will have almost trebled to 14 per cent by 2050. Despite this, the expansion process of the BRIC countries will not show any notable effects on their share in the global real estate stock until after 2020. Based on the current very low real estate stock in these countries, the dynamic of these markets is now only becoming clear in the growth rates and not in the absolute growth in stock (base effect).



The shift in favour of the developing countries is even clearer when analysed by region, as shown when looking at Asia-Pacific and Europe (incl. Central and Eastern Europe). In the Asia-Pacific region, Japan will have to take a back seat by 2050 from its dominant role as the world's second largest real estate market and by far the largest Asian real estate market. It may be expected that the Chinese real estate market will then be competing in terms of size with Japan for the leading position. In Europe, incl. Central and Eastern Europe, Russia and Turkey will be the winners of this upturn process. By 2050, the Russian market will have reached a size comparable to Germany and France and Turkey, in terms of size, will be competing with Spain and Italy for the leading position in Europe. ■

## Summary

Because of the increase of funded private pension provisioning, a further increase in demand for real estate investments is likely from the capital investment side. In light of this, the projections have far-reaching consequences for international/global real estate investors/companies. Global strategies are becoming increasingly important. The target portfolios of global investors will focus more on global real estate stock available for investment purposes of institutional investors, rather than on Europe (increasingly including CEE) and North America as is currently the case. A further expansion in the activities in the emerging countries and regions can therefore be expected in the next years.

Profiteers of this development are mainly the Asian countries. However, Central and Eastern Europe, particularly Russia and Turkey, will achieve elevated significance in international real estate portfolios. In the long term, these regions will enjoy greater focus during reallocation and the portfolios of institutional investors in this region will expand significantly.

For the established western markets the global shifts will lead to different consequences. First of all one has to keep in mind, that the real estate stock in these markets is also growing, only at a slower pace than in the emerging markets. Optimisation in the sense of active portfolio management regarding development, purchasing and selling of properties will therefore assume an increasingly important role in these markets during strategic decision-making.

The extent and speed at which the outlined developments will occur in the global real estate allocation will depend on the transparency of the markets concerned. The improvement in the transparency situation and the advancement in professionalisation of the real estate sector seen in the last few years, particularly in the developing countries, suggest that this development will continue in the next years. From this side, there should be nothing to stand in the way of a continuation in professionalisation. However, there will be political and legal conditions that will mould this process over the next years. If there are stable conditions in the developing economies, which will guarantee investors sufficient security of invested funds, these countries will be integrated into the global real estate investment domain sooner rather than later. ■

## Appendix

### Top-down appraisal approach

There are no exact figures on the global real estate supply suitable for institutional investment and a bottom-up calculation of the supply, which would mean valuing every single building, is not feasible due to the data collection costs this would involve. However, it is possible, with the help of an appraisal approach based on a country's GDP and a top-down analysis, to estimate the global real estate stock available for investment purposes of institutional investors.

With such a process it should be noted that the significance of real estate markets changes according to a country's development status. As wealth increases and the significance of services in a national economy rises, the significance of real estate in that national economy rises and the real estate stock thus expands in size in that country. The appraisal approach used in the study takes this fact into account, and a size-related component is applied in the form of a threshold value for GDP per head. GDP per head in this process represents an indicator of the economic development of a country. The basis of the appraisal and the projections is a modified approach of the formula derived by Prudential.<sup>1</sup>

#### Appraisal approach dependent on economic development

GDP per head at least USD 20,000:

$$RE_i = GDP_i \times 0.44$$

GDP per head less than USD 20,000:

$$RE_i = GDP_i \times 0.44 \times \left( \frac{GDP \text{ per capita}_i}{20,000} \right)^{1/3}$$

$RE_i$  = real estate supply available for investment purposes of institutional investors in the country  $i$

As the construction of a property involves considerable time, the weighted average of the GDP from 2002 to 2005 is taken as the basis for the appraisals. The weightings used for individual years are 10 %, 20 %, 30 % and 40 %, with 2005 having the highest weighting and 2002 the lowest. The data used for GDP and GDP per head comes from the IMF's World Economic Outlook Database. Additionally, adjustments were made during the appraisals for some countries in order to take account of special structural factors. Examples of this are the city states of Hong Kong and Singapore.

The projections of the regional distribution made are based on the average population prognosis of the UN and various scenario analyses relating to economic development, e. g. by PwC and Goldman Sachs. The starting point for the projections is the supply in 2005 in USD and no alterations in the exchange rates are incorporated into the projections. ■

<sup>1</sup> Prudential Real Estate Investors (Youguo Liang and Nancy M. Gorden), A Bird's Eye View of Global Real Estate Markets, March 2003. Modifications partly based on the findings of Aart Hordijk and Carl-Ivar Ahlquist, European market dimensions: An inventory of the investible market in 11 European countries, 2004.

**Overview of the global real estate markets 2005**

	GPD in bn. USD	GPD per capita in USD	investable real estate stock in bn. USD	share of global stock
United Kingdom	2,196.84	36,429.28	1,165.47	7.27 %
Germany	2,799.76	33,785.33	1,160.80	7.24 %
France	2,113.43	33,854.82	864.40	5.39 %
Italy	1,718.90	29,635.26	706.14	4.40 %
Spain	1,124.46	27,174.79	443.33	2.76 %
Netherlands	622.77	38,180.14	256.54	1.60 %
Switzerland	364.85	50,157.69	152.01	0.95 %
Belgium	364.99	35,067.68	148.42	0.93 %
Sweden	354.02	39,100.87	145.37	0.91 %
Austria	306.83	37,688.22	124.66	0.78 %
Norway	294.57	63,794.62	112.81	0.70 %
Denmark	252.47	46,691.46	102.50	0.64 %
Greece	219.59	20,005.52	83.93	0.52 %
Ireland	200.11	48,753.26	78.86	0.49 %
Finland	190.92	36,522.19	78.34	0.49 %
Portugal	173.82	16,524.80	65.16	0.41 %
Luxembourg	33.58	73,147.06	13.43	0.08 %
<b>Europe</b>			<b>5,702.16</b>	<b>35.56 %</b>
Russia	772.10	5,458.76	158.64	0.99 %
Turkey	353.21	4,924.86	78.20	0.49 %
Poland	285.71	7,486.81	75.03	0.47 %
Czech Republic	121.80	11,929.41	37.64	0.23 %
Hungary	107.94	11,058.52	33.38	0.21 %
Romania	79.91	3,602.68	16.44	0.10 %
Slovenia	36.94	18,526.51	13.21	0.08 %
Slovak Republic	46.24	8,549.37	12.54	0.08 %
Croatia	37.87	8,416.29	10.61	0.07 %
Lithuania	24.89	7,268.06	6.50	0.04 %
Bulgaria	25.81	3,327.52	5.35	0.03 %
Latvia	15.72	6,793.34	3.94	0.02 %
Estonia	12.73	9,423.77	3.61	0.02 %
<b>CEE incl. Russia</b>			<b>455.10</b>	<b>2.84 %</b>
United States	12,452.42	41,975.98	5,166.69	32.22 %
Canada	1,106.21	34,375.19	434.80	2.71 %
<b>North America</b>			<b>5,601.48</b>	<b>34.93 %</b>

**Overview of the global real estate markets 2005 (cont.)**

	GPD in bn. USD	GPD per capita in USD	investable real estate stock in bn. USD	share of global stock
Japan	4,672.29	36,598.78	1,992.43	12.42 %
China	1,909.66	1,461.63	294.40	1.84 %
Korea	799.75	16,492.90	277.11	1.73 %
Australia	683.76	33,526.27	264.53	1.65 %
Hong Kong SAR	173.56	24,714.93	146.08	0.91 %
Taiwan Province of China	330.74	14,446.99	119.61	0.75 %
Singapore	115.32	26,252.71	92.82	0.58 %
India	746.12	686.65	91.54	0.57 %
Indonesia	270.21	1,232.54	43.22	0.27 %
New Zealand	107.10	26,233.00	41.11	0.26 %
Thailand	167.85	2,562.82	34.30	0.21 %
Malaysia	132.62	5,110.40	32.18	0.20 %
Pakistan	119.68	777.25	14.99	0.09 %
Philippines	95.38	1,111.25	14.21	0.09 %
Vietnam	47.25	567.54	5.70	0.04 %
<b>Asia-Pacific</b>			<b>3,464.22</b>	<b>21.60 %</b>
Mexico	758.05	7,182.99	213.12	1.33 %
Brazil	789.32	4,297.36	159.14	0.99 %
South Africa	234.13	4,992.90	53.32	0.33 %
Argentina	177.34	4,512.27	38.86	0.24 %
Venezuela	131.00	4,956.47	29.19	0.18 %
Chile	100.74	6,223.57	25.92	0.16 %
Colombia	112.27	2,436.48	20.61	0.13 %
Peru	77.21	2,762.81	15.27	0.10 %
Costa Rica	19.56	4,526.18	4.93	0.03 %
Panama	14.53	4,513.24	3.64	0.02 %
Uruguay	16.41	4,800.27	3.64	0.02 %
<b>Latin America + South Africa</b>			<b>567.63</b>	<b>3.54 %</b>
Saudi Arabia	314.20	13,593.85	96.40	0.60 %
Israel	124.07	18,464.33	49.62	0.31 %
United Arab Emirates	133.76	28,579.41	48.39	0.30 %
Kuwait	68.37	24,940.42	24.09	0.15 %
Qatar	38.28	48,048.66	13.44	0.08 %
Oman	30.46	12,548.41	9.34	0.06 %
Bahrain	13.34	16,681.18	4.53	0.03 %
<b>Middle East</b>			<b>245.80</b>	<b>1.53 %</b>

Source: Eurohypo RAC Research, IMF

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**Author:****Dr. Marcus Cieleback****Eurohypo AG****Head of Research Real Estate Appraisal & Consulting****+49 (0)69. 2548 21533****[marcus.cieleback@eurohypo.com](mailto:marcus.cieleback@eurohypo.com)**

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