

September 2007

## Implications of the Financial Market Turmoil on Global Real Estate Markets

### Table of Contents

1. Introduction.....	1
2. Pre-turmoil outlook.....	2
3. Financial market turmoil...3	
4. Economic impacts.....	5
5. Real estate impacts.....	7
6. Downside risks.....	9
7. Implications.....	9

#### Authors:

##### Peter Hobbs

+44 (0)20 7547 4855  
[peter.hobbs@rreef.com](mailto:peter.hobbs@rreef.com)

##### Asieh Mansour

+1 415 262 2044  
[asieh.mansour@rreef.com](mailto:asieh.mansour@rreef.com)

##### Alan Billingsley

+1 415 262 2017  
[alan.billingsley@rreef.com](mailto:alan.billingsley@rreef.com)

##### Henry Chin

+44 (0)20 7545 6611  
[henry.chin@rreef.com](mailto:henry.chin@rreef.com)

##### Tan Yen Keng

+852 2203 8062  
[yenkeng.tan@rreef.com](mailto:yenkeng.tan@rreef.com)

##### Koichiro Obu

+81 3 5156 6000  
[koichiro.obu@rreef.com](mailto:koichiro.obu@rreef.com)

### 1. Introduction

After the financial market turmoil of late-July and early-August, the financial markets showed some signs of greater stability in the latter half of August. Following the Fed's intervention in mid-August, the oft quoted VIX index of market volatility fell from a peak of 31 on August 16 to close to 20 at the start of September, and there has been a recovery in most equity markets around the world. Despite these improvements, volatility remains elevated and there remains considerable uncertainty over the outlook for the financial markets, the economy, and for real estate markets. It is within this context that this paper provides a review of the issues and potential implications across global real estate markets.

It seems clear that global financial markets are engaged in a process of de-leveraging following the credit bubble of recent years. Perhaps the key issue facing the global economy is the way in which this de-leveraging takes place – whether it is effectively and smoothly managed, or whether it has a dramatic spill-over effect on the wider economy. Despite the widespread uncertainty, most economists remain cautiously optimistic, expecting the turmoil to slow growth but, due to the strength of the corporate sector and the global economy, avoiding a prolonged slow-down or recession. As had already been expected, real estate returns are expected to fall back from recent strong levels but this would represent a “soft landing” for real estate and the asset class will continue to remain attractive to a broad range of investors.

Although this relatively optimistic outlook remains the most likely scenario, there is a series of downside risks facing global real estate markets. Most specific is the possibility that the credit crunch spills over into the real economy leading to a recession in the US that will slow growth across global markets. Within this scenario, there could be general disaffection with real estate such that the sector experiences very weak performance over the remaining years of the decade.

In order to understand these issues and their implications for real estate, the paper covers a number of distinct areas:

1. A recap of RREEF's outlook before the recent uncertainty
2. An overview of the turmoil in financial markets
3. The impact of the financial turmoil on the global economy and real estate
4. Some of the risks associated with a Downside scenario
5. Implications for investment strategy.

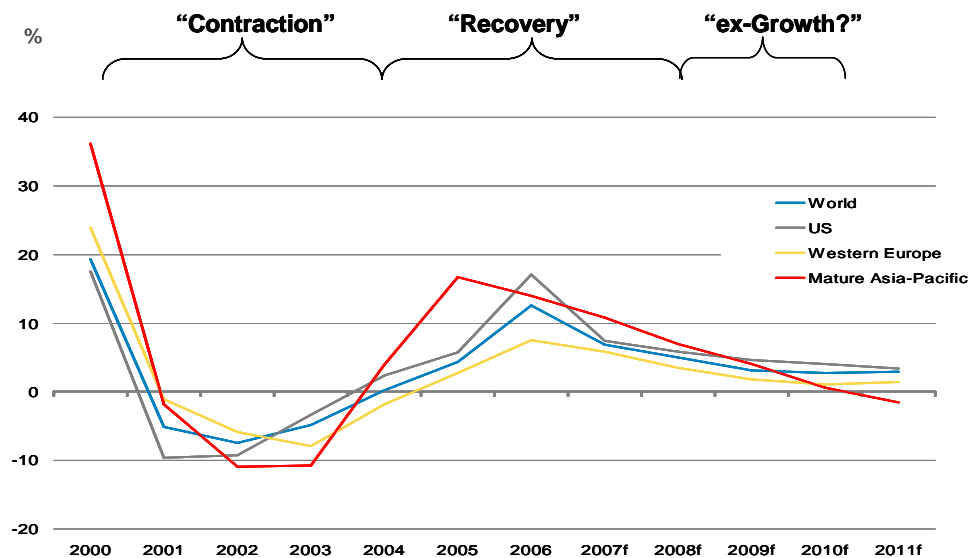
IMPORTANT: PLEASE SEE  
 IMPORTANT DISCLOSURES AND  
 ANALYST CERTIFICATION  
 IMMEDIATELY AT THE END OF  
 THE TEXT OF THIS REPORT

## 2. Global Real Estate Market Outlook – Pre-turmoil

In order to assess the implications of recent events on real estate markets, it is important to understand the position of markets before the financial turmoil (ie) as at mid-July. In this respect, real estate markets were already set to slow after five years of extraordinary growth<sup>1</sup>.

Recent strong economic growth coupled with low supply had started to lead to a surge of rental growth across most global office markets. Most markets were expected to continue to experience strong growth during 2007 but the increase of construction meant that rent growth was expected to fall off towards the end of the decade. This was particularly the case for the more volatile markets such as London, Hong Kong, Shanghai, Madrid and some of the US Sunbelt markets.

**Chart 1: Office Rent Growth Across Global Real Estate Markets, 2000-2011**



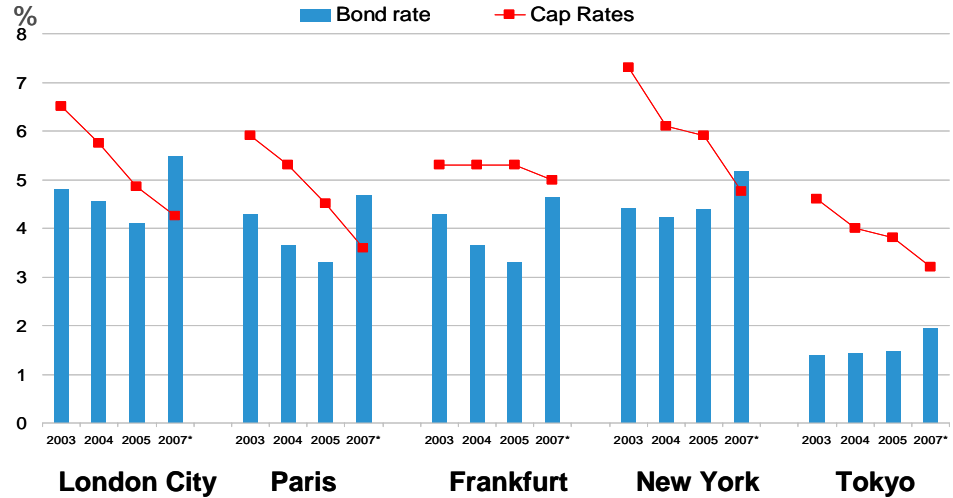
*Note: Weighted aggregate performance based on twenty four global markets – 10 in US, 10 in Europe and 4 in Asia Pacific. "f" indicates Forecast. Source: RREEF Research*

Most other sectors were also performing well, especially those benefiting from structural change such as the emergent markets of Asia and Eastern Europe. Major exceptions were retail markets in the UK and the US, both of which were suffering from increased supply and weakening demand.

Although the outlook for fundamentals remained robust, there were increasing signs of aggressive pricing of real estate. Cap rates had started to stabilise in the UK and the US, but there was further cap rate compression in many other markets during H1 2007. The compression of cap rates coupled with the rise in long bond yields led to negative spreads in many markets. This lowering of cap rates meant that by mid-2007, cap rates had become very low in a range of markets on a number of measures – in absolute terms, relative to short and long term finance costs and relative to other asset classes (such as the dividend yield for equities). The combination of these factors suggests that markets were reaching a peak and that certain markets had become overpriced.

<sup>1</sup> RREEF Research "Global Real Estate Investment Performance 2006 and 2007", March 2007

**Chart 2: Cap Rate and Bond Rates for Key Global Markets (%)**



*Note: Year end datapoints except 2007\* where Q2 cap rates and mid-July bond yields*  
*Source: RREEF Research; CBRE; JLL; NREI; Deutsche Bank Global Markets*

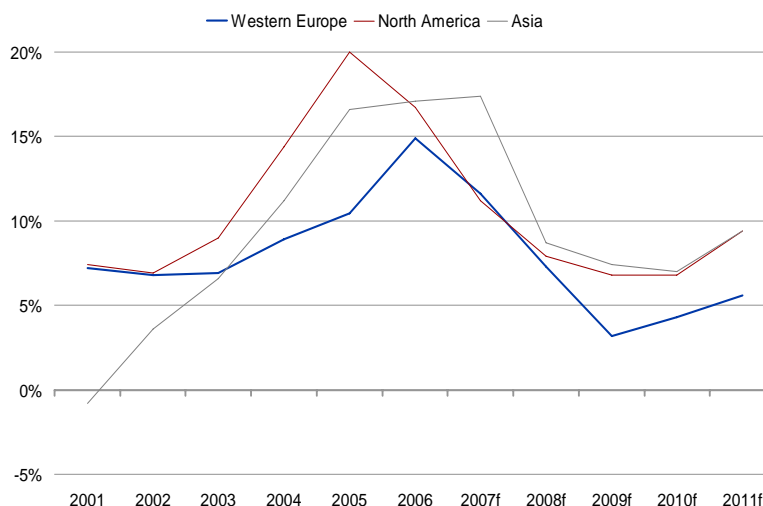
In anticipation of the weakening of direct real estate markets, real estate securities markets around the world had started to retreat from the strong performance of recent years. The decline in stock prices was most marked in Europe, with US markets being held up (until mid-year at least) by corporate acquisition activity. Asian markets tended to hold up better, given the stronger prospects for market fundamentals and the structural growth occurring in the market. Over recent weeks markets have continued to experience weaknesses with some of the most marked declines occurring in the Asian markets.

Based on the combination of these factors, RREEF Research’s view was for 2007 returns to hold up fairly well across most global markets, at double-digits in Europe and the US, and close to 20% in Asia. The strong European performance concealed significant variations, with the UK expected to slow sharply to sub-10%, and other markets such as Germany and Sweden performing better than in 2006.

At this time, returns were expected to fall off across all markets during 2008-10, but remain relatively attractive compared with long term performance. This fall off was expected to be greatest in Europe where returns, averaging around 5% a year, were expected to be pulled down by very weak performance in the UK and Spain. This was expected to be weaker than the 7% a year for the US and 8% for Asia.

---

**Chart 3: Global Unlevered Real Estate Total Returns (2001-11)**



Source: RREEF Research; PMA; IPD; NCREIF; BulwienGesa. "f" indicates Forecast.

Note: Western European Returns is a weighted average of Germany, France, Spain, Ireland, Sweden, Italy, Netherlands and the UK. North America Returns is a weighted average of Canada and the US. Asia Return(s) is a weighted average of Australia, China, Hong Kong, Japan, Singapore and South Korea.

---

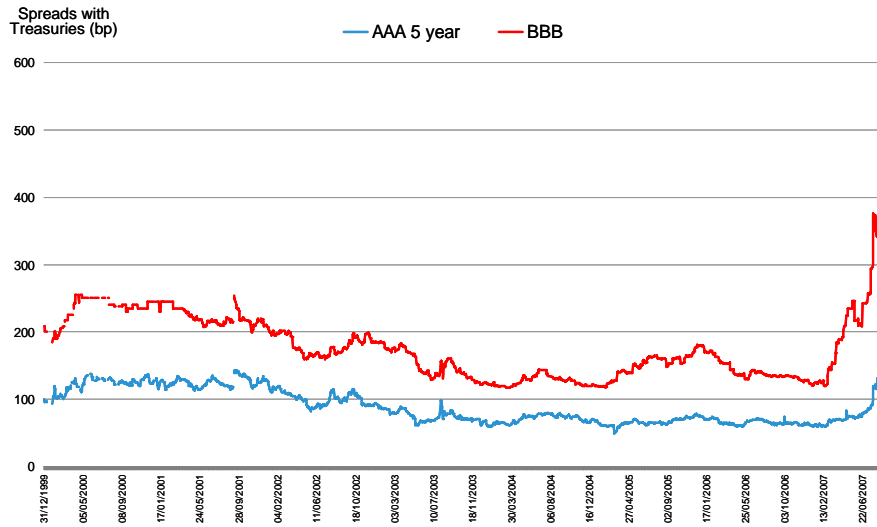
### 3. Financial market turmoil

It was within the context of a weaker but relatively positive outlook for real estate that financial markets experienced considerable turmoil from mid-July onwards. Over the preceding months there had been rising concerns over the effect of increased liquidity leading to the mis-pricing of risk across most asset markets. The initial catalyst to the recent turmoil was the troubles facing the US sub-prime market that started to develop from the end of 2006.

The US sub-prime market is relatively small, at less than 15% of the \$10 trillion US mortgage market (and the even larger \$13 trillion US economy, the \$17.7 trillion equity market capitalization and \$56 trillion household net worth), and it is focused on the residential rather than the commercial real estate market. Despite this, the rise in delinquency rates to around 15%, has had a wider impact on the broader lending market. Initially, there was a general widening of spreads in other asset markets, including corporate bond markets, government bonds and the CMBS/CLO markets. In May/June, there was, for instance, a sharp rise in government bonds, with the US 10 year bond rising from around 4.6% to 5.5%, in Japan from 1.7% to over 2% and in the Eurozone from 4.3% to 4.7%.

Since this time, long bond yields have declined as investors have sought less risky assets, but corporate and commercial real estate spreads have widened significantly – by August 31<sup>st</sup>, the BBB CMBS spread had widened to 420bp, down on the 570bp of the previous peak, but still considerably higher than the previous peak in the late-1990s (Chart 4). Although spreads haven't widened in nominal terms as significantly in UK and the rest of Europe, in many cases they are twice as wide as they were at the end of June.

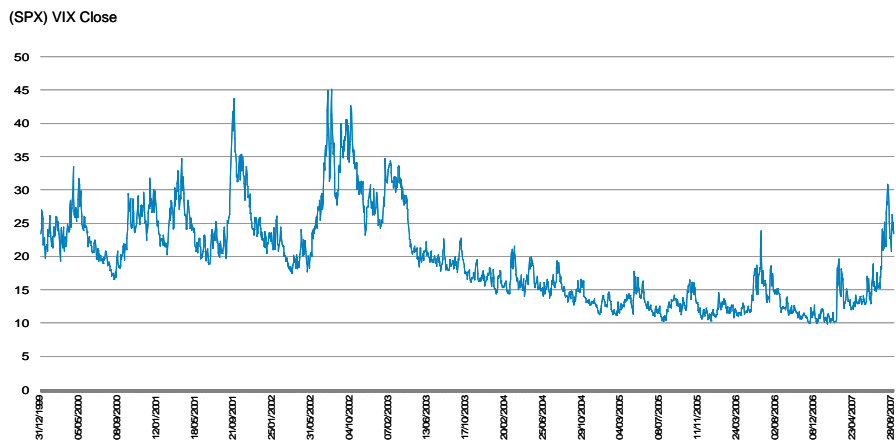
**Chart 4: US Conduit Spreads Over Treasuries, 1999-2007 (to August 31)**



Source: Deutsche Bank

The increasing concerns over the debt markets (most particularly related to heightened interbank credit risk and uncertainty over the distribution of contingent liabilities) led to the greater reluctance for banks to issue loans. This “credit crunch” led to concerns on the world’s equity markets, with market volatility surging to its highest levels since the start of the Iraq war (Chart 5) and significant declines being experienced across global equity markets. The latter half of August saw a recovery in many equity markets but, by the end of the month, most developed markets were broadly flat or only slightly up year to date. Although emerging markets, and others such as Germany, Hong Kong and Singapore were generally up by around 10-15% on the year, they all experienced significant volatility during July/August<sup>2</sup>.

**Chart 5: VIX Index, 1999-2007 (to August 31)**



Source: CBOE; VIX

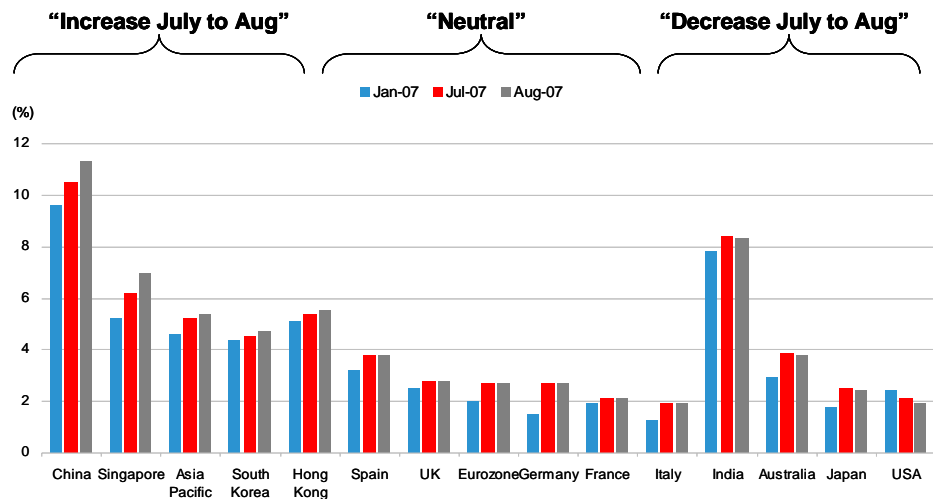
<sup>2</sup> The Hong Kong market appears to have bucked the trend due to specific local factors. The Hang Seng Index was down 10% in early August but, by the end of the month, had fully recovered to the previous record high due to the strong A-shares market and the Chinese government allowing individual retail investors to invest directly in the HKSE.

In the face of the credit crunch, the European Central Bank, the Fed and other central banks have intervened to provide liquidity, and this was capped in mid-August by the Fed reducing its primary discount rate by 50 bp. The action by the Fed was greeted positively by the market but, there remain serious concerns over the impact the credit crunch will have on the broader economy.

#### 4. Economic impacts

It remains too early to draw firm conclusions on the economic implications of the financial turmoil. Consensus Economics forecasts released in the middle of August did not reflect the full implications of the recent turmoil in financial markets, but some indications of likely future change were apparent. Within these forecasts, expectations for the US economy continue to be reduced (to 1.9% for 2007, down from 2.4% in January) due to retrenchment in housing and financial markets, as well as reduced expectations for corporate profits. Although Japan expectations were reduced slightly, there were signs that domestic demand was holding up, supporting the prospect of stronger growth through into 2008. It is also clear that other Asian economies are continuing to grow strongly, most particularly China that experienced very strong Q2 growth. The most recent forecasts for the European economies continue to remain robust with the European Union's 2007 GDP growth expected to achieve 2.8% compared with 2.3% at the start of the year.

**Chart 6: 2007 GDP Growth Expectations at January, July and August**



Source: Consensus Economics 2007 – January, July and August

As economists struggle to make sense of the changed financial market outlook, the general consensus seems to be for a relatively mild impact on the broader economy<sup>3</sup>. Within this perspective, the recent turmoil in financial markets might come to be seen as temporary disruption associated with the re-pricing of risk to more appropriate levels. In this sense, it could be similar to 1987 when the Fed restored confidence in financial markets such that credit extension resumed, the stock market recovered and the economic expansion continued<sup>4</sup>. Within this scenario, there could be a short term, temporary, pricing adjustment,

<sup>3</sup> EIU “Heading for the rocks: will financial turmoil sink the world economy?”, August 2007

<sup>4</sup> Deutsche Bank “Special Edition: The Hour of the Central Banks”, 17 August 2007

following which the strong economic fundamentals reassert themselves. Short term rates might peak over the near term, and long bond yields might rise only slightly from current levels.

Although broadly positive, there are important regional variations, as summarised below:

### **North America**

Given the challenges facing the housing market (where even low-risk buyers are finding difficulties obtaining mortgages, and housing starts have fallen to very low levels), GDP growth will be weaker than had been expected late 2007/early 2008, at below 2%<sup>5</sup>. The Fed will likely lower rates sooner than had been expected, and they could fall sharply during 2008. Despite the current financial turmoil, the economy could start to regain momentum during the latter half of 2008, supported by falling rates and the still robust corporate sector.

### **Europe**

One of the major risks to the continued strength of the European economy has been a sharp slowdown in the US, and it is clear that weaker growth in the US will impact Europe over the coming 12 to 18 months. Despite this, the European economy has experienced more robust domestic growth over the past two years, and this momentum will continue into 2008. This stronger growth has been driven by the turnaround in Germany but has been supported by more robust growth in a range of other countries such as those to the North (Finland, Norway and Sweden), South (Spain and Greece) and East (including Poland, Russia, Ukraine). Although growth is set to slow over the coming months<sup>6</sup>, this is set to be relatively modest, with Western European growth likely to hover around 2% in 2008, and Eastern Europe to continue to grow above 6%.

### **Asia Pacific**

Economic fundamentals remain strong with highest 2007 rates of growth in China, India and Singapore, and good performance in other countries including Hong Kong, South Korea and Australia. Perhaps a greater risk to a number of countries is that of overheating, although those most at risk (China and India) have taken an increasingly broad range of measures to slow the pace of growth:

- In China, for instance, there have been a series of interest rate and saving deposit rate increases which, coupled with the approval for individuals to invest in HKSE directly, is geared to reducing domestic liquidity and cooling the stock market. The momentum behind the growth of the Chinese economy means that even if the US slows sharply, China is set to experience double digit GDP growth in H2 2007<sup>7</sup>.
- In India, the RBI has steadily increased rates, introduced restrictions on FDI on real estate, and tightened domestic lending.
- Although the pace of growth in Japan is far lower than China or India, the economy has gained considerable momentum over the past two years. Domestic demand has improved, and exports are now geared more to Asia (with China, South Korea, Taiwan, and Hong Kong accounting for 35% of exports) than the US (23%). Despite this robustness, there is a risk of credit contagion to the Japanese market in two main

---

<sup>5</sup> RREEF Research "Prospects for the US Economy: The Return of Risk Aversion ... At Last!", September 2007.

<sup>6</sup> Deutsche Bank "Focus Europe: beware the long-term effects of the sub-prime shakeout", 24 August

<sup>7</sup> Deutsche Bank "How subprime affects China", 30 August.

areas<sup>8</sup>. First, in terms of exports should there be a slowdown in US consumer spending and, second, if Japanese banks and individuals suffer losses on their investment in US securitised product. Data released in early September point to some slowing of the economy<sup>9</sup> but, due to the relative insulation from a slowdown in the US, Japan should maintain robust growth over the medium term.

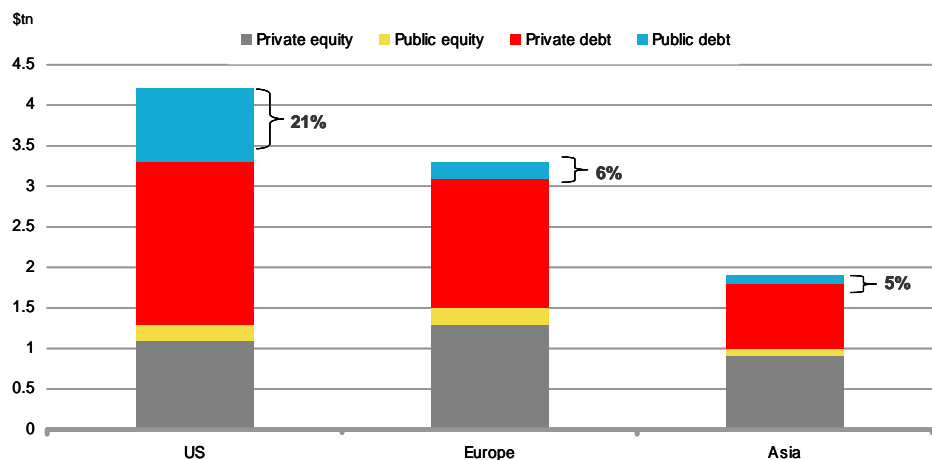
The relative strength of these core Asian countries, means the smaller and more emergent economies are likely continue to perform well, particularly given the improvements in their financial markets over the past decade.

## 5. Implications for global real estate markets

If it is too early to gauge the economic implications of the financial turmoil, it is certainly the case for real estate markets that tend to take longer to adjust to external events. If, however, the economic implications are relatively muted, then the greatest impact is likely to be on the financing of real estate rather than on real estate fundamentals. In certain countries and sectors, real estate fundamentals will be impacted with, for instance, the job losses in mortgage and finance related companies reducing the pressure of net absorption. But if economic growth remains robust, this should ensure that rental growth continues, albeit slightly weaker than had been expected.

The more profound impact, certainly in the short term, relates to the financing of real estate. In a number of markets, the availability of finance for high risk loans has all but dried up and, where they are proceeding, lenders have significantly tightened credit controls making it harder for transactions to progress. This is the case across global markets, but most particularly in the US where securitised debt has come to play an increasingly important role in the financing of real estate over recent years. This is clearly illustrated in Chart 7 that shows public (CMBS) debt accounting for over 20% of the US market compared with 5-6% in both Europe and Asia. Given the increasing dominance of the US market by conduit lenders and the reduced credibility of the rating agencies, it is the US real estate lending market that has been particularly affected by the current credit crunch. Lending conditions have tightened elsewhere but, given the importance of balance-sheet lenders in Europe and many countries in Asia, such as Japan, this has been less marked than in the US.

**Chart 7: Global Real Estate Market Size, by 4-quadrants, 2006**



Source: RREEF Research; DTZ; ULI

<sup>8</sup> Deutsche Bank "Risk of sub-prime contagion to the Japanese economy", 24 August.

<sup>9</sup> Deutsche Bank "Data Flash Japan: DB Leading Indicators", 4 September.

The tightening of credit markets is set to squeeze out leveraged buyers and this will likely persist for a number of months before lenders and rating agencies become more comfortable with the pricing of more risky loans. Despite this, the continued strong demand for real estate from relatively low leveraged investors means that cap rates are set to rise in line with previous expectations, although earlier than originally expected. Real estate continues to be supported by strong demand and limited speculative supply in most markets. The continued growth of rent and NOIs are likely to hold cap rates from rising further and, with greater stability returning to real estate finance, 2008-10 returns are set to be broadly similar to those anticipated before the financial turmoil. There are, however, marked variations around global markets, as summarised below:

### **North America**

The seizing up of credit markets is probably most acute in the US. Conduit originations are set to fall-off sharply, by an estimated 75% for the second half of 2007, and credit standards have tightened significantly<sup>10</sup>. This tightening of credit is starting to impact the physical markets, with an increasing number of highly leveraged transactions failing to complete or be postponed<sup>11</sup>. Although cash buyers remain active it is clear that competition has eased significantly over recent weeks.

The tightening of credit markets is likely to slow construction and, while this will help rent growth in the medium term, the weaker absorption will likely reduce short term rent growth. This is particularly the case in metros impacted by housing/credit markets<sup>12</sup>. Given the reduced competition from highly leveraged buyers, cap rates might rise 50bp by end 2007 and a further 25-50bp in 2008, and then could hold stable. Returns are likely to be weaker in 2007 than had been expected and, although they should fall back in 2008/9, will likely exceed 7% a year over this period.

### **Europe**

In Europe there appears to be a marked difference in the impact of the financial turmoil on the UK and the rest of Europe. The UK market was already softening due the prospect of weaker rent growth and rising interest rates. Returns had started to fall off during the first half of 2007 and, by July, IPD reported the lowest monthly returns in (0.2%) for unlevered real estate for 12 years, with retail and industrial being particularly weak.

The financial turmoil has exacerbated the slowdown in the market, and seems set to lead to an earlier correction than had been expected. Leveraged buyers are being squeezed out of the market, with a number of take-privates and major transactions being put on hold, and this is impacting the wider real estate market. Cap rates are set to rise further and faster than had been expected, and returns could fall close to zero in 2008 before starting to recover by the end of the decade.

Credit controls are being tightened across the rest of Europe, and there are signs that certain take-privates and major portfolio transactions are being put on hold due to financing concerns<sup>13</sup>. Despite this, the weight of capital remains strong such that there is little

---

<sup>10</sup> Wachovia "The impact of recent financial market volatility on CRE Property Markets and CMBS Defaults", August 2007.

<sup>11</sup> Real Capital Analytics "Capital Trends Monthly", August 2007.

<sup>12</sup> For a more detailed assessment of the impact of the financial turmoil on the US, see RREEF Research "Prospects for the US Economy: The Return of Risk Aversion ... At Last!", September 2007.

<sup>13</sup> Europroperty, "Securitized debt market hit by credit crisis", 3 September 2007; DTZ "Unwinding financial leverage part II: impact on property," 3 September 2007

difference in the expected gradual rise of cap rates. This is particularly the case in Central and Eastern Europe where fundamentals remain strong, particularly in more emergent and consumer oriented sectors such as residential and retail.

### Asia Pacific

Within Asia Pacific, lenders have become more cautious about property loans and this is set to continue over the coming months. Despite this, the impact of the financial turmoil is far less significant than in Europe or the US. On the one hand, the public debt markets are less well-developed with generally lower levels of finance being used in most transactions, and balance sheet lenders continuing to be active. On the other hand, the fundamentals remain strong across many markets, particularly in the two largest markets of Japan and China. In Japan, demand remains robust and good quality supply continues to remain limited so the outlook for rent growth is good, across most property types<sup>14</sup>. It is the pace and depth of growth in China that continues to fuel demand for all forms of real estate across top, second and third tier cities. There are signs of weakness, but these are not yet widespread. For instance, although rents are starting to soften in decentralised locations in Hong Kong, demand continues to outpace supply in Central leading to ongoing rent growth. Although signs of weakness will increase in specific markets facing spikes in supply, strong fundamentals and investor sentiment means unlevered returns for the region as a whole are set to hold up at high single digits to the end of the decade.

## 6. Downside Risks

Although the relatively benign outlook outlined above is the most likely scenario, there is a possibility of a more widespread and fundamental re-pricing of risk across a number of markets including real estate. Within such a scenario, the consumer slowdown in the US could spiral into wider economic weakness and, even, recession that could spread across global markets. This would represent a prolonged downturn as excess liquidity is wiped off asset markets. Within such a scenario, short term interest rates would likely fall faster and stronger than had been expected but it would take time for confidence to recover. Although this is a less likely scenario, the uncertainty facing global markets and the profoundness of such a scenario means it needs to be given careful consideration across global real estate markets.

## 7. Implications for Investment Strategy

The uncertainty facing the financial markets means it is difficult to draw firm conclusions for investment strategy, especially as there will be significant variations from fund to fund, and market to market. Within this context, investors should continue to track market movements and explore their implications for investment strategy, within both downside and more upbeat scenarios.

If investors believe that the recessionary scenario is likely to unfold, they need to consider the option of liquidating real estate holdings in markets that are most exposed, such as those with weak fundamentals and/or assets, but they should only do so ahead of the downturn. If this window is missed, fire sales should be avoided, and assets should be held through the downturn. On the flip side, a recessionary scenario would generate attractive, distressed, investment opportunities but only when capital had retreated from real estate.

---

<sup>14</sup> RREEF Research "The Outlook for Real Estate Markets in Japan", September 2007.

As such, believers in such a scenario might want to develop strategies to harvest gains and redeploy capital when there is more widespread capital aversion.

As this recessionary scenario remains a relatively low probability, most investors will focus on the more likely, relatively upbeat, outlook. Within such a scenario, real estate returns are set to hold up but be weaker than in recent years. In this respect, investors should consider the long term and enduring strengths of real estate investing, including:

- Attractive long term absolute and relative performance
- Relatively high income yield and low volatility
- Strong diversification potential against other asset classes.

Given these fundamental strengths, and the relatively high transaction costs of real estate, investors might want to maintain and develop their real estate investment strategies. Real estate returns will be lower than over recent years, but will likely continue to add value to a multi-asset portfolio, particularly over the medium and longer term.

Within the more upbeat scenario, investors should continue to actively manage their existing real estate assets. This should include repositioning their exposure to harvest gains from weaker assets/markets and focus their portfolios on the strongest markets with good assets that are set to benefit from NOI gains.

Beyond the active management of existing assets, a temporary downturn would also generate opportunities for investors seeking to increase their real estate exposure. This would particularly be the case for relatively low-leveraged (cash) buyers given that leveraged buyers will likely be on the side-lines over the coming months. Lending to commercial real estate in many parts of the world has been significantly impacted by the current turmoil, but this is part of the broader contagion from the sub-prime market which is disconnected to real estate market fundamentals. This disconnection could provide opportunities for the cash/equity buyers who have been outbid by leveraged buyers in the past, particularly in markets that are moving through temporary weakness. As always, underwriting should be conservative, and there would likely be a further flight to quality, so the strongest "core" markets will likely outperform.

This brief research report has sought to provide a review of a series of complex issues across a range of global markets. There are clearly huge difficulties in drawing out the implications for real estate investment, particularly given the ongoing uncertainties facing global financial markets. Despite this, the report is designed to provide a set of insights that can help understand and plan for the uncertainties facing the global real estate market, and we look forward to providing future updates as appropriate.

#### ANALYST CERTIFICATION

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst. In addition, the undersigned lead analyst has not and will not receive any compensation for providing a specific recommendation or view in this report.

(Signed) Peter Hobbs

## Important disclosure

© 2007. All rights reserved.

### **No further distribution is allowed without prior written consent of the Issuer.**

REEF is the brand name of the real estate and infrastructure division for the asset management activities of Deutsche Bank AG. In the US this relates to the asset management activities of RREEF America L.L.C.; in Australia: Deutsche Asset Management Australia Limited (ABN 63 116 232 154) Australian financial services license holder; in Hong Kong: Deutsche Asset Management (Hong Kong) Limited ("DeAMHK"); in Japan: Deutsche Securities Inc.; in Singapore, Deutsche Asset Management (Asia) Limited (Company Reg. No. 198701485N) and in the United Kingdom: RREEF Limited, RREEF Global Advisers Limited, Deutsche Asset Management (UK) Limited, and DWS Investment Trust Managers Limited; in addition to other regional entities in the Deutsche Bank Group.

Key RREEF research personnel, including Asieh Mansour, Chief Economist and Strategist and Peter Hobbs, Head of Real Estate Research are voting members of the investment committee of certain of the RREEF Alternative Investment Funds. Members of the investment committees vote with respect to underlying investments and/or transactions and certain other matters subjected to a vote of such investment committee. Additionally, research personnel receive, and may in the future receive incentive compensation based on the performance of a certain investment accounts and investment vehicles managed by RREEF and its affiliates.

This material is intended for informational purposes only and it is not intended that it be relied on to make any investment decision. It does not constitute investment advice or a recommendation or an offer or solicitation and is not the basis for any contract to purchase or sell any security or other instrument, or for Deutsche Bank AG and its affiliates to enter into or arrange any type of transaction as a consequence of any information contained herein. Neither Deutsche Bank AG nor any of its affiliates, gives any warranty as to the accuracy, reliability or completeness of information which is contained in this document. Except insofar as liability under any statute cannot be excluded, no member of the Deutsche Bank Group, the Issuer or any officer, employee or associate of them accepts any liability (whether arising in contract, in tort or negligence or otherwise) for any error or omission in this document or for any resulting loss or damage whether direct, indirect, consequential or otherwise suffered by the recipient of this document or any other person.

The views expressed in this document constitute Deutsche Bank AG or its affiliates' judgment at the time of issue and are subject to change. This document is only for professional investors. This document was prepared without regard to the specific objectives, financial situation or needs of any particular person who may receive it. No further distribution is allowed without prior written consent of the Issuer. An investment in real estate involves a high degree of risk and is suitable only for sophisticated investors who can bear substantial investment losses. The value of shares/units and their derived income may fall as well as rise. Past performance or any prediction or forecast is not indicative of future results. The forecasts provided are based upon our opinion of the market as at this date and are subject to change, dependent on future changes in the market. Any prediction, projection or forecast on the economy, stock market, bond market or the economic trends of the markets is not necessarily indicative of the future or likely performance.

#### **For Investors in the United Kingdom:**

Issued in the United Kingdom by RREEF Limited. Authorised and regulated by the Financial Services Authority. This document is directed only at persons falling within the following exemptions from s.21 of the United Kingdom Financial Services and Markets Act 2000 ("FSMA"): (i) authorized firms under FSMA and certain other investment professionals falling within article 19 of the FSMA (Financial Promotion) Order, (the "FPO"); (ii) high net worth entities (not individuals) falling within article 49 FPO; and (iii) persons who receive this document outside the United Kingdom. The distribution of this document in the United Kingdom to anyone not falling within the foregoing categories is not permitted by the Issuer and may contravene FSMA. No one in the United Kingdom who is not either a high net worth entity or person with professional experience in matters relating to investments as referred to in the foregoing should treat this document as constituting a promotion to him, or act on it for any purpose whatsoever.

#### **For Investors in Australia and Hong Kong:**

In Australia, Issued by Deutsche Asset Management (Australia) Limited, holder of an Australian Financial Services License. An investment with Deutsche Asset Management is not a deposit with or any other type of liability of Deutsche Bank AG ARBN 064 165 162, Deutsche Asset Management (Australia) Limited or Deutsche Asset Management (Hong Kong) Limited or any other member of the Deutsche Bank AG Group. The capital value of and performance of an investment with Deutsche Asset Management is not guaranteed by Deutsche Bank AG, Deutsche Asset Management (Australia) Limited or Deutsche Asset Management (Hong Kong) Limited or any other member of the Deutsche Bank Group. Investments are subject to investment risk, including possible delays in repayment and loss of income and principal invested.

## Main Offices

### Frankfurt

Mergenthalerallee 73-75  
65760 Eschborn  
Germany  
Tel: +49 69 71704 906

### Hong Kong

48/F Cheung Kong Centre  
2 Queen's Road Central  
Hong Kong  
Tel: +852 2203 8888

### London

1 Appold Street  
Broadgate  
London  
EC2A 2UU  
United Kingdom  
Tel: +44 20 7545 8000

### New York

280 Park Avenue  
23W. Floor  
New York  
NY10017-1270  
United States  
Tel: +1 212 454 3900

### San Francisco

101 California Street  
26<sup>th</sup> Floor  
San Francisco  
CA 94111  
United States  
Tel: +1 415 781 3300

### Tokyo

Floor 17  
Sanno Park Tower  
2-11-1 Nagata-cho  
Chiyoda-Ku  
Japan  
Tel: +81 3 5156 6000

## RREEF Research

**Peter Hobbs**  
Head, Global Real Estate Research  
+44 20 7547 4855

**Asieh Mansour**  
Chief Economist and Strategist  
+1 415 262 2044

### Europe

**Brenna O'Roarty**  
Director  
+44 20 7545 6099

**Maren Våth**  
Vice President  
+49 69 717 04 204

**Ermina Topintzi**  
Assistant Vice President  
+44 20 7545 6674

**Henry (Wei) Chin**  
Assistant Vice President  
+44 20 7545 6611

**Lonneke Löwik**  
Assistant Vice President  
+44 20 7545 6328

**Susannah Hunter**  
Assistant Vice President  
+44 20 7547 3305

### Asia Pacific

**Tan Yen Keng**  
Vice President  
+852 2203 8062

**Koichiro Obu**  
Vice President  
+81 3 5156 6000

### North America

**Alan Billingsley**  
Director  
+1 415 262 2017

**Brook Wells**  
Director  
+1 212 454 6437

**Hope Nadji**  
Director  
+1 415 262 2022

**Andrew Nelson**  
Vice President  
+1 415 262 1135

**Bill Hersler**  
Vice President  
+1 415 262 2075

**Stephen Newbold**  
Vice President  
+1 415 262 2040

Publication Address:

**RREEF Limited**  
**1 Appold Street**  
**Broadgate**  
**London EC2A 2UU**

Website:

[www.rreef.com](http://www.rreef.com)

Additional information is  
available upon request

Mars # 22177