May 2009

Global Real Estate Investment and Performance 2008 and 2009

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Introduction

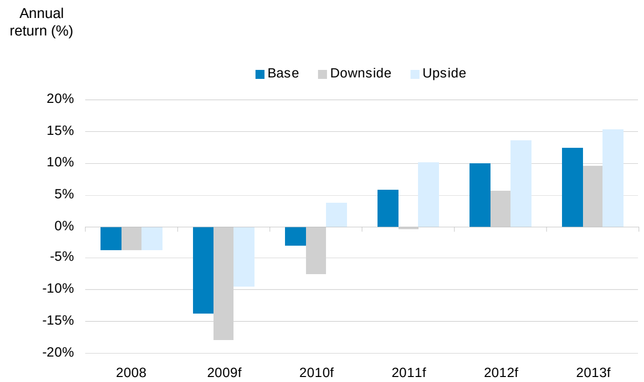
The financial market crisis coupled with the dramatic slowing of the global economy led to a sharp turnaround across global real estate markets during the course of 2008. After generating positive returns of 13% during 2007, the direct market posted -4% in 2008, the first year of negative global performance since the series began back in the early-1990s. While real estate securities markets had started to deteriorate in 2007, this accelerated during 2008 with overall performance down more than 40% for the year as a whole. There continue to be marked variations with, for instance, the UK suffering direct market value declines of over 20% and REIT returns of negative 43%, compared with still positive performance across a range of direct markets, including Australia and Korea in the Asia Pacific region, as well as Germany, Netherlands and Italy in Europe. Although direct returns remained positive across many markets, each of these markets has turned, with the prospects for negative returns across all direct markets during 2009. It is clear that the global real estate market is in the process of a deep and widespread correction, with the key question being the length and severity of the downturn.

It is within this context that, as for previous years, this research paper focuses on real estate investment activity and performance over a two year period, 2008 and 2009. With most of the direct market measures of 2008 performance now released, the paper commences by summarising the trends in activity and in reporting performance for the major real estate markets for the past year.

There is far less clarity over the outlook for the remainder of 2009 and beyond. The huge economic and financial market uncertainty makes it even more difficult than usual to forecast market performance. For this reason the paper provides an outlook within three distinct scenarios. First, the Base case, in which economic growth is exceptionally weak during 2009 but, given the concerted action by Central Banks and Governments, the recovery towards the end of the year gathers momentum during 2010. In the second, Downside scenario, real estate fundamentals are impacted dramatically by the economic slowdown, with rental declines until 2013 across most markets. Within the third, Upside scenario, rents decline across most markets in 2009 but turn marginally positive in 2010, gathering momentum over the following three years.

The development of these three scenarios provides a useful framework for considering appropriate investment strategies during this period of uncertainty. Within the most likely Base case Scenario, there are a number of implications for investors. On the one hand, for existing investors, the focus should be on maintaining existing portfolios rather than seeking to dispose of assets at what could come to be close to the bottom of the cycle. On the other, for new investors, 2009/10 should represent an excellent vintage for investing, given the ability to acquire good quality assets at very attractive prices, and the prospects of a recovery over the following three to five years. The final section draws out these and other implications of the different scenarios for investing across global real estate markets.

Figure 1: Global real estate returns, 2006-2013f



Note: These are unlevered direct real estate returns based on the weighted averages of Western Europe (France, Germany, Italy, Netherlands, Sweden, Spain and the UK), the US and Asia (Australia, China, Japan, Hong Kong, Korea, Singapore). "f" : forecast
Source: RREEF Research; IPD; NCREIF, May 2009

2008: The year the property world turned upside down

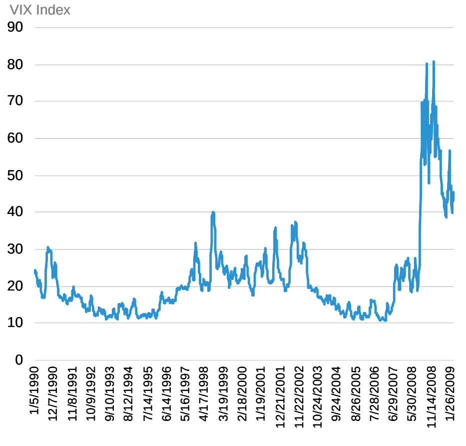
Global economy

After a remarkable five-year run averaging 4.5% annual growth, the global economy closed 2008 with a startling implosion. Indeed, the year 2008 had begun with the anticipation of an economic slowdown, but by early summer the outlook had become guardedly optimistic that the downturn could be milder than initially expected. The course of global events, however, was to shift dramatically by early autumn. The pivotal events erupted on Wall Street on 15 September when Lehman Brothers suddenly filed for bankruptcy. That same day, Bank of America announced its purchase of Merrill Lynch. One day later the Federal Reserve Bank of New York took the unprecedented step of lending US$85 billion to AIG.[1] A crisis was in the making that by year-end would weaken both developed and emerging economies as reduced demand for exports, falling commodity prices, and financial market instability sharply reduced growth.

As the crisis unfolded in late 2008, economic growth fell sharply across the European markets. Within Western Europe, the most significant shocks came first in those areas with inflated housing markets, including Spain, Ireland, and the UK, but by year-end, weakness had spread further across the region. As export demand for manufacturing goods fell, economies then began to weaken in Germany and even more dramatically in Central and Eastern Europe, which suffered disproportionately from falling commodity prices, large fiscal deficits, and sharp currency depreciation.

Weaker demand from developed economies had a swift impact on international trade and industrial production in Asian markets. Many Asian economies that had been growing briskly through mid 2008 were suddenly posting GDP declines by the fourth quarter. Japan, Singapore, Thailand, Hong Kong, and South Korea were among the Asian countries taking the worst hits. Though it was in no way immune to the crisis, China was buoyed somewhat by a significant fiscal stimulus and looser monetary policy.

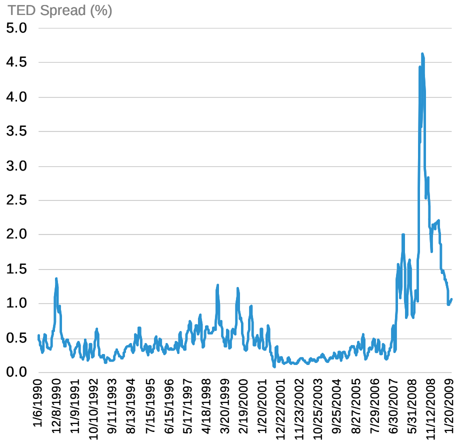
Figure 2 : VIX index since 1990



Source: VIX, RREEF Research, April 2009

Note: The VIX is a weighted blend of option prices used to estimate the expected volatility of the S&P 500 index over the next 30 days.

Figure 3: TED spread since 1990



Source: Bloomberg, April 2009

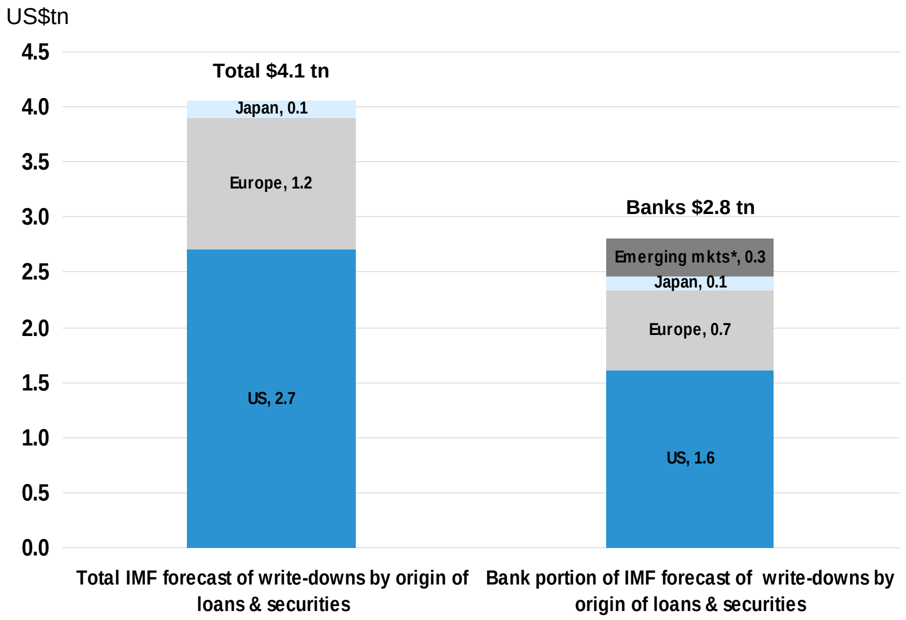
Note: The TED spread is the difference between the Fed rate and Libor. This is an indicator of the cost of short term borrowing for banks

[1] 2009, Federal Reserve Bank of St. Louis, *The Financial Crisis: A Timeline of Events and Policy Actions*.

The severity of the global crisis in financial markets that emerged in late 2008 stemmed from the accumulation of unsustainable levels of lending. As confidence evaporated, it became a crisis of liquidity – a lack of confidence in bank lending – that could be seen in both the TED spread and the Chicago Board Options Exchange Volatility Index (VIX).

The VIX soared above 70 percentage points in the last quarter of 2008, reflecting a heightened sense of uncertainty in the equity markets. No previous political or economic crisis of recent years had impacted the VIX to this degree. Volatility in the financial markets was accompanied by a credit crisis as well. Under normal economic conditions, the TED spread typically floats at levels below 50 basis points, but during past crises it has shot up to levels of 100 to 150 basis points. The liquidity crisis that emerged in late 2008 was unique because it temporarily sent the TED spread soaring above 400 basis points. Although it had improved by early 2009, the TED spread remained relatively wide, reflecting the expectation that the availability of finance would remain tight, at least in the short term. In January, the IMF estimated that write-downs in the financial sector could reach $2.2 trillion. By April, the IMF forecast for write-offs had been raised to $2.7 trillion. These figures, however, are based narrowly on U.S.-originated assets, so in April, the IMF broadened its estimates to consider European- and Japanese-originated assets as well. Using this broader methodology, the IMF concluded that write-downs had the potential to reach $4.1 trillion worldwide. Bank write-downs alone could run about $2.8 trillion. [2]

Figure 4 : IMF estimates of financial sector write-downs, April 2009



**Note: The IMF estimates total bank write-downs to be $2.5 trillion out of $4.1 trillion. In order to get total potential write-downs for mature market banks, however, the IMF adds in the expected write-downs of mature market banks on emerging market assets, or about $340 billion.*

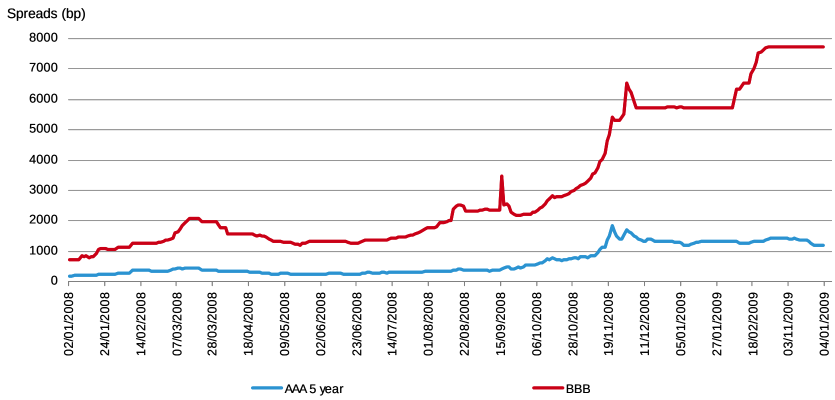
Source: IMF forecast as of April 2009, pp.28 & 49

More structuring became necessary as leverage ratios fell, thus lengthening the execution time for deals and sometimes even leading to cancellation. The credit crisis also changed expectations for returns – not just because of economics and financing issues but also because of the increased numbers of distressed sellers in the market. Finally, the number and size of deals fell as the lack of capital and debt put downward pressure on asking prices.

[2] International Monetary Fund, *Global Financial Stability Report: Responding to the Financial Crisis and Measuring Systemic Risks: Summary Version*, April 2009, p. 27-28.

The fallout of the credit crisis impacted property investment in several ways. Financing costs rose as debt became more expensive and its general availability grew much tighter. The CMBS market all but closed down and spreads rose dramatically as illustrated in Figure 5. The seizing up of the banking sector has had such a profound impact on real estate markets due to the importance of "debt" to the capital structure of the real estate sector. As documented in previous annual GREI reports, debt represents 50-60% of the capital structure of most real estate markets. Given the importance of debt to the real estate capital structure, it is inevitable that the banking crisis would have a significant impact on the performance of the real estate market. So as the credit crisis took hold in late 2008, it swept quickly through the real estate sector with wide-ranging implications for both market fundamentals and performance.

Figure 5 : US CMBS spreads, 2008-2009 (end March)

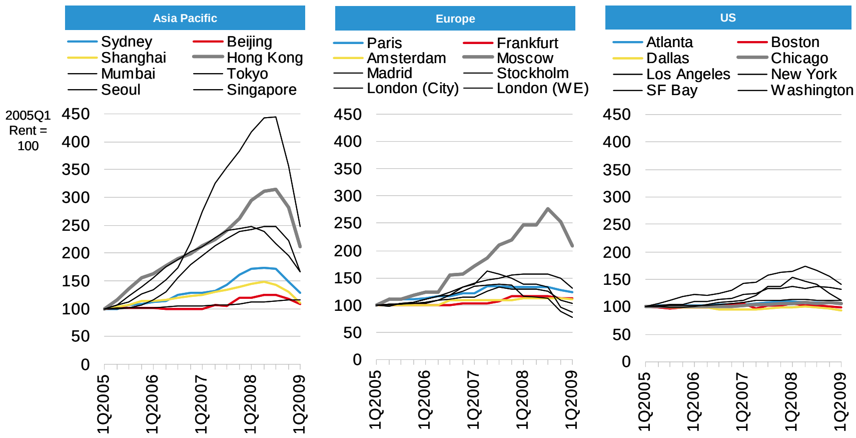


Source: Deutsche Bank, April 2009

Global property fundamentals

As the global economy began shedding jobs in 2008, it led to a significant impact on office market fundamentals. Leasing activity slowed, forcing landlords to reduce rents and offer incentives in order to attract tenants. By year-end, office vacancy rates had begun rising across most regions, a trend that continued into the first quarter of 2009. While office market performance during 2008 was initially impacted by the liquidity squeeze and upward pressure on cap rates, it was the onslaught of economic recession that weakened market fundamentals in most markets.

Figure 6 : Rental change across major office markets worldwide



Source: RREEF Research; JLL REIS; CBRE; RCA, May 2009

Office rents in Asia, by most measures were the last of the world's major regions to peak in late 2008, and have been among the fastest and hardest to fall. Singapore in particular has reversed significant rental momentum, erasing nearly all of the gains accrued since the beginning of 2007 in just the past two quarters. Hong Kong's rents have fallen dramatically as well, with levels also pushed back to early 2007 levels.

Moscow has been unique among Europe's office markets to experience rental gains on par with many Asian cities in recent years, and the market's reversal has been no less dramatic. Elsewhere in Europe, London was among the first of the world's major office markets to reach its cyclical peak. This came in late 2007. By the end of 2008, office rents in both the City and West End had lost all of the gains accrued since 2005, and in the first quarter of 2009, rents in both markets continued the downward slide. Within Western Europe, the German economy was later to weaken, so its office markets held up relatively well through year-end and into 2009, with solid leasing activity and some marginal upward rental pressure. Weak office rental growth in Frankfurt and elsewhere in Germany in the previous five years also left less room for sharp declines.

Rents in most major US office markets began peaking in early to mid-2008. The region's cyclical timing lagged behind London, but moved in line with other parts of Europe and was well ahead of the peak in Asia. The big coastal office markets of San Francisco, New York, and Los Angeles produced some of the region's biggest rental gains of this cycle and thus they were among the markets with the most to lose. Of the three, New York's office rents have fallen sharply, while San Francisco's decline has been more moderate so far. Los Angeles, in contrast, was experiencing the mildest rental declines of the three markets as of the first quarter of 2009.

Other property sectors have been affected as well. The sharp deterioration in the housing markets in the mature economies curtailed consumer spending and cut into retail sales. By the end of 2008, this had pushed many retailers into or near the brink of bankruptcy and had set retail vacancies on an upward trajectory. Reduced levels of discretionary spending not only filtered through to the hospitality and leisure markets, but as the recession in the major Western economies worsened, it sharply reduced demand for exports from the world's emerging markets, adversely affecting industrial production and logistics markets across the world.

Consumer confidence in Europe was undermined in late 2008 by falling household wealth and rising unemployment levels. Even as Europe's retail sector suffered from tremendous demand-side pressure, oversupply remained a concern in Central and Eastern Europe as well as in Southern Europe and the UK. While industrial rents held up relatively well during 2008, demand-side fundamentals were left poorly positioned for the coming year, particularly in areas such as the Northern and the Midlands regions of the UK.

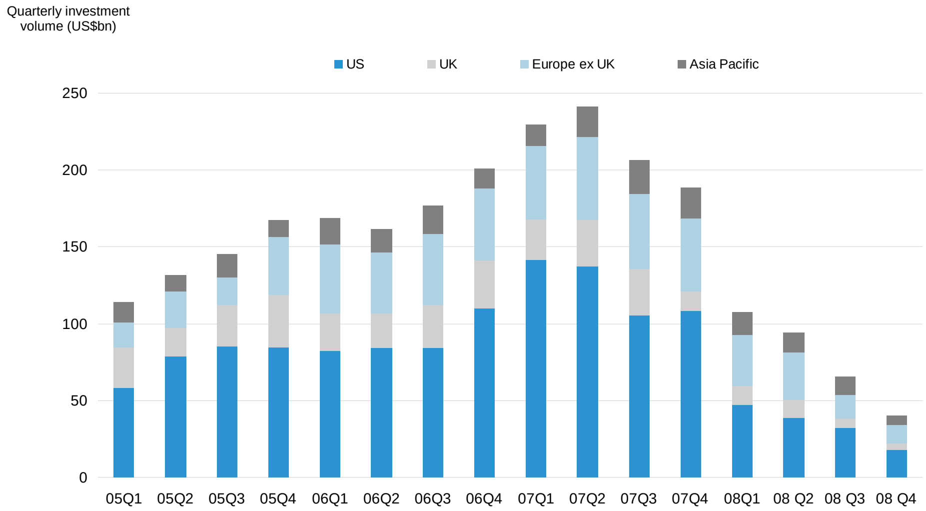
In the US, the retail market was hard hit in 2008, as a result of the collapse of the consumer spending bubble. As in Europe, a number of retailers came under extreme pressure, with vacancy rates soon rising close to 10%, up from the cyclical low of 6.5% achieved in 2005. Vacancy rates of apartments rose less than other sectors, with most of this sector's distress centred in markets where the oversupply of single-family home construction had begun to compete with dedicated rental stock.

The dramatic slowdown in exports across most Asian markets in late 2008 left industrial production activity poised for significant decline in 2009. In China, industrial production growth fell below 6% by end 2008 compared with an average 17% over the previous three years. This deterioration in export and production activity had near-term implications for the logistics markets. Consumer sentiment indicators weakened sharply across the Asian markets, and retail rents turned negative in many markets, particularly those with large supply pipelines such as India, parts of China, and Singapore.

Global transaction volumes

Deteriorating conditions for financing and the general lack of capital availability led to stark changes in the worldwide deal activity in 2008. Global transaction volumes in 2008 fell to US$ 343 billion, down 62% from 2007. The trend was evident across all regions, with the US down by 72%, Europe down by 54%, and the Asia Pacific region down by 31%.

Figure 7 : Real estate investment activity across global regions



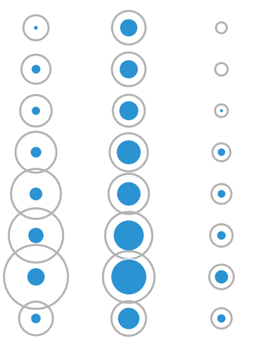
Note: UK and European investment volumes converted to US$ based on constant exchange rates, € to US$= 1.471

Source: RREEF Research based on DTZ; REIS; RCA, May 2009

The particularly sharp decline in US transaction volumes actually pushed Europe and Asia up in their relative global share of total activity. Europe accounted for 43% of the 2008 global total and Asia took 15%.

Figure 8 : Origins of global real estate investment, 2001-2008 (US$ billions)

Origins of Global RE Investment (US, Europe, Asia Pacific)



	Total by Origin			Cross-Border by Origin		
	US	Europe	Asia Pacific	US	Europe	Asia Pacific
2001	$78.7	$139.7	$15.0	$3.3	$42.2	..
2002	$105.4	$143.1	$20.0	$12.3	$47.1	..
2003	$123.2	$127.6	$21.0	$11.1	$50.5	$2.4
2004	$207.4	$181.7	$40.8	$17.6	$78.5	$9.5
2005	$307.3	$201.1	$50.2	$24.2	$76.0	$10.0
2006	$364.2	$277.2	$63.1	$34.5	$120.6	$11.9
2007	$505.3	$329.3	$75.6	$43.5	$163.1	$25.8
2008	$141.9	$149.8	$51.7	$14.9	$63.4	$11.5

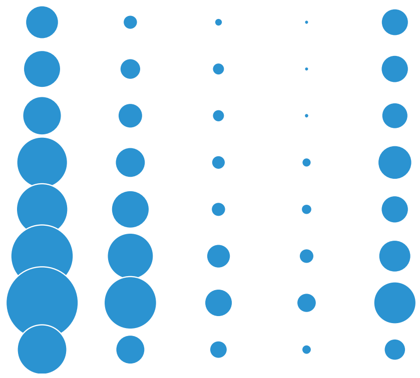
Source: RREEF Research based on DTZ; REIS; RCA, April 2009

For the first time since 2004, cross-border investment did not exceed US$ 100 billion. Cross-border investment in the US fell 65% to US$ 14 billion, only US$ 3 billion higher than the Asia Pacific region. Investors from the Middle East and Germany were the most active foreign buyers in the US in 2008, accounting for 63% of cross-border purchases. This was a notable change from 2007 when Australian capital made up 32% of cross-border real estate investment in the U.S. In 2008, Australia accounted for just 2% of the US total.

In Europe, German, British and US capital accounted for 53% of the total cross-border transactions. Most inward investments in Europe were targeted for the larger economies of the UK, France, and Germany. In the Asia Pacific region, cross-border investment fell by 40% in 2008. The US and Germany were the major acquirers of real estate.

Figure 9 : Global cross-border acquisitions by sector, 2001-2008 (US$ billions)

Relative Cross-Border Purchases (Off, Ret, Ind, Res, Mix/Other)



Cross-Border Investment Totals

	Off	Ret	Ind	Res	Mix/Other
2001	$23.4	$4.5	$1.4	$0.5	$15.7
2002	$29.7	$9.6	$3.4	$0.5	$16.2
2003	$32.1	$13.3	$3.4	$0.5	$14.8
2004	$55.1	$19.6	$4.1	$2.0	$24.8
2005	$56.5	$30.8	$4.4	$2.4	$16.0
2006	$82.4	$45.1	$12.4	$4.7	$22.4
2007	$110.9	$58.8	$16.5	$8.1	$38.1
2008	$52.6	$18.3	$6.9	$2.1	$10.0

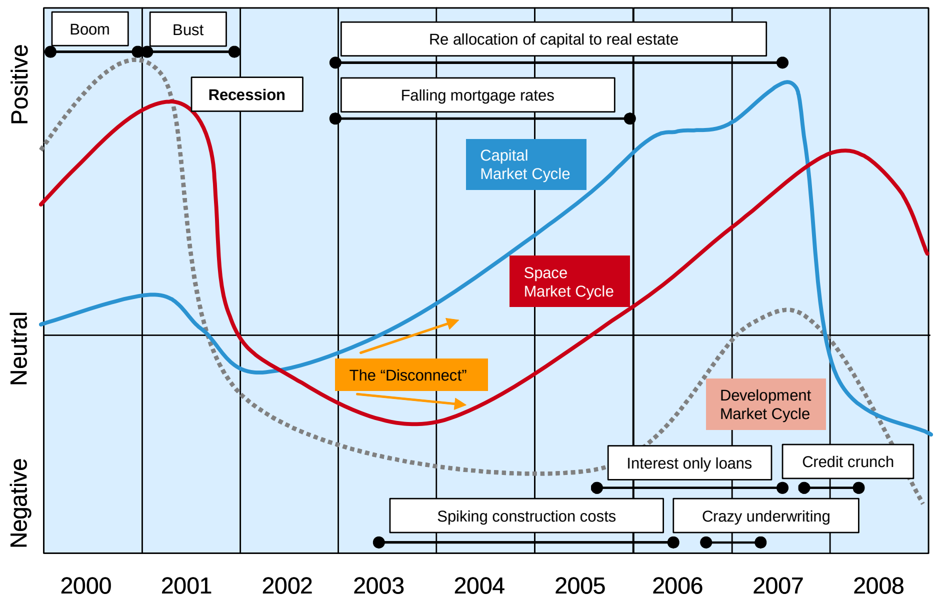
Source: RREEF Research based on DTZ; REIS; RCA, April 2009

The office sector continued to be the preferred property type of cross-border investors, though transaction volumes fell by more than half between 2007 and 2008. Retail ranked second again in 2008, but with deal volumes at less than one-third of 2007 levels.

Global pricing and performance

The financial market crisis coupled with the dramatic slowing of the global economy led to a sharp turnaround across global real estate markets during the course of 2008. This is illustrated in Figure 10 that shows the performance of the two main dimensions of the real estate market, the "space" and the "capital" markets. The space markets, illustrated by the red line, suffered in the early years of the decade due to the economic recession and the surge of new supply. The shortage of new supply combined with strong economic growth meant there was upward pressure on rental growth well into 2008. The capital market cycle was also strong over the period 2003-07, driven by strong investor appetite and the ready availability and low cost of debt. The credit crisis of 2007 led to a sharp reduction in the appetite for real estate, as nicely described in the chart. The combination of the slowing of rental growth and the upward pressure on cap rates means that real estate performance during 2008 was weaker than over recent years.

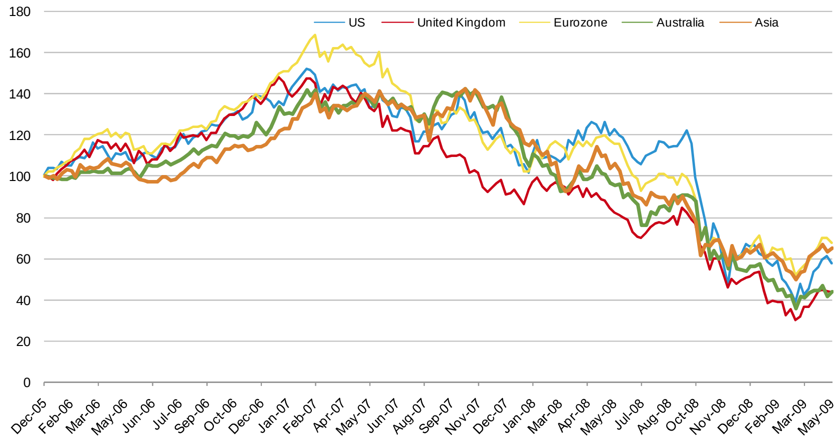
Figure 10 : Schematic representation of the US real estate cycle, 2000-08



Source: RCA, October 2008

The transparency and liquidity of REITs meant that it was this segment of the real estate market that experienced the greatest and most visible correction in pricing during the course of 2008. For the year as a whole, the global REIT market declined by 45%, with all major regions sharply down by the end of the year. Although there was a strong rally during March and April 2009, the global market was still marginally down during the first four months of the year, with the US being down by over 10%. Europe and Asia performed slightly better, with performance around 2% over the same period. Despite this, the sharp correction in the UK market during the first half of May demonstrated the continuing volatility of the market.

Figure 11 : Real estate securities performance across major global markets to end April 2009

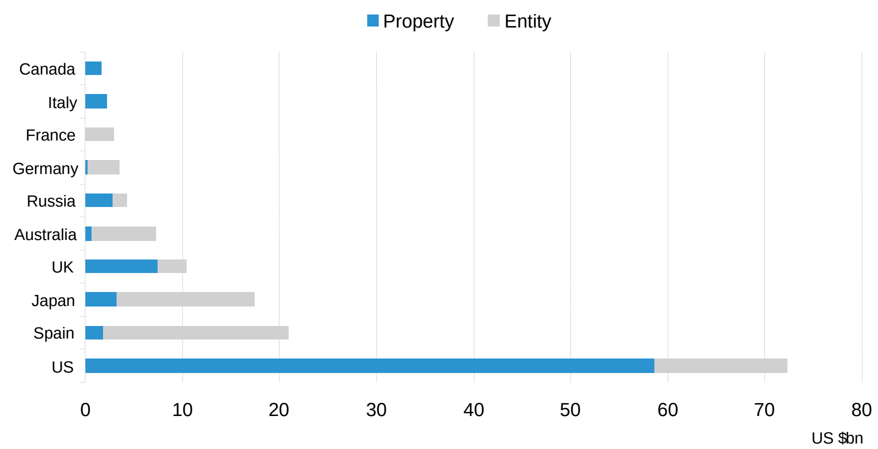


Note: Indexed to end 2005 = 100. Local currency performance to end April 2009

Source: EPRA/NAREIT, May 2009

By the end of 2008, the rising pressures on REITs and other holders of real estate led to an increasing incidence of distressed sales. These pressures continued to rise during the early months of 2009, with RCA estimating that distressed assets grew 56% over the course of the first quarter, from a total of US$97.8 billion at year-end to US$152.9 billion by the end of Q1 2009. RCA further estimated that 85% of the distress at the end of the first quarter was localised in just five countries: the US, Japan, Spain, the UK, and Australia.[3]

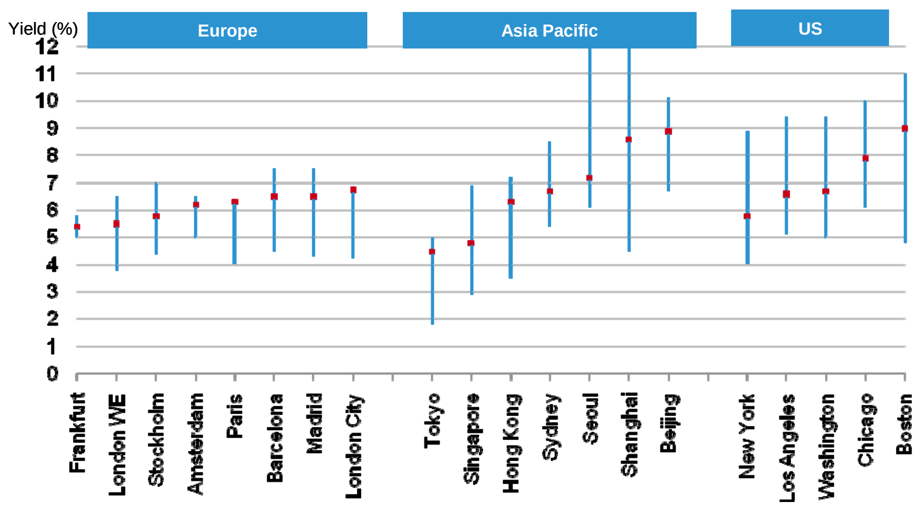
Figure 12 : Value of distressed real estate by type and country (2008 - Q1 2009)



Source: Real Capital Analytics, April 2009

Cap rates shot up across most markets in the latter part of 2008 and this trend continued into the first quarter of 2009. Countries such as the UK, Spain, France, and Ireland have experienced sharp increases. Cap rates in many of these markets not only passed their historical averages but also pushed close the top of their historical ranges.

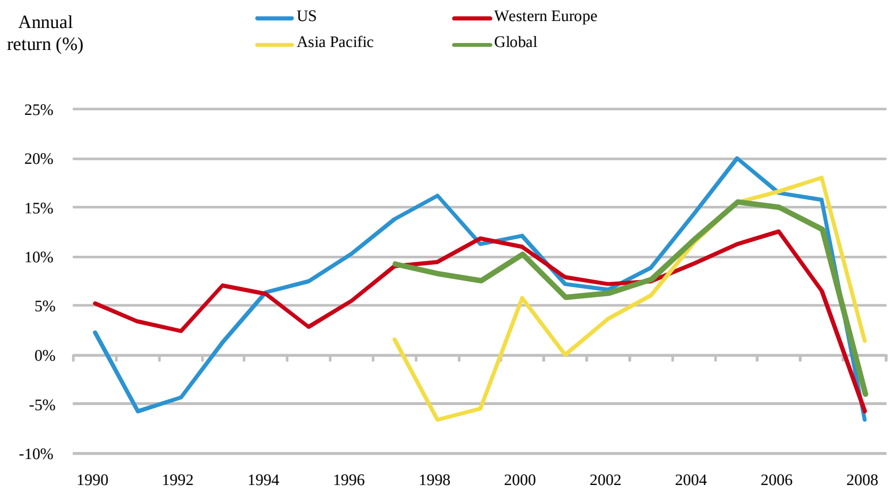
Figure 13 : Office cap rate as of Q1 09 within their historical range



Note: Data series starts in 1990 for all cities except Shanghai (1995), Beijing (1997), and Seoul (1999). Data series ends 2009Q1 in all cities except Los Angeles (2008Q4). Seoul's office cap rates peaked near 12% during the period examined, but Shanghai's were closer to 20%.
Source: RREEF Research; CBRE; RCA; JLL; DTZ; PMA; GRA/NREI, May 2009

[3] Real Capital Analytics, *Global Capital Trends*, April 2009, p. 10.

Figure 14 : Global unlevered real estate returns (1990-2008f)



Note: Regional Returns are weighted averages of all property returns for Western Europe (France, Spain, Germany, Italy, Netherlands and Sweden), the US and Asia (Australia, Japan, China, Hong Kong, Korea, Singapore).

Source: RREEF Research; IPD; NCREIF, May 2009

Property returns in 2008 reflected the sudden weakening of the global real estate market. After four consecutive years of double-digit growth, global all-property returns fell more than 4% in 2008, according to RREEF estimates. It was the first year that property returns had turned negative at a global level since the series began back in the early-1990s. During the real estate recession of the early-1990s, there were significant variations in the timing of the downturn from market to market with, for instance, the UK and the US experiencing negative returns between 1990-92 while in Germany and France the downturn occurred during the middle of the decade (France between 1993-97 and Germany between 1995-98). The greater convergence of the downturn through the current cycle meant that global returns had, for the first time, turned negative in 2008 (see Figure 14 above).

Among major countries, returns in the UK led the way downward. As previously noted, the UK was one of the few countries not to lag the broader markets, with negative IPD returns in 2007. This weakness in the UK accelerated during 2008 such that returns declined by over 20% during the year, ahead of all markets with the exception of Ireland (-34%). A combination of more robust real estate markets and greater appraisal lag meant that a number of countries generated positive returns through the year. This included Australia and Korea in the Asia Pacific region, as well as Germany, Netherlands and Italy in Europe.

Figure 15 : All-property total returns by region, 2002-2008

	Europe							Pan- Europe	North America		Asia		Global
	France	Germany	Spain	Italy	Netherlands	Sweden	United Kingdom	IPD	USA	Canada	Australia	Japan	RREEF estimate
2002	8.6%	3.9%	8.3%	9.3%	8.8%	2.4%	9.6%	7.1%	6.7%	8.8%	9.5%		6.5%
2003	8.0%	2.9%	8.4%	11.0%	7.1%	0.9%	10.9%	7.1%	9.0%	8.4%	12.0%	4.0%	7.7%
2004	10.1%	1.1%	11.4%	8.9%	7.8%	5.8%	18.3%	9.6%	14.5%	13.0%	13.1%	6.3%	11.2%
2005	15.2%	0.5%	17.2%	9.0%	10.2%	12.7%	19.1%	11.8%	20.1%	18.7%	12.7%	11.7%	15.7%
2006	21.7%	1.3%	17.4%	8.0%	12.5%	16.2%	18.1%	13.3%	16.6%	18.6%	17.3%	13.8%	15.7%
2007	17.8%	4.5%	12.5%	9.2%	11.3%	14.9%	-3.4%	5.9%	15.8%	16.1%	18.1%	12.0%	12.8%
2008	-0.9%	3.5%	-2.8%	2.0%	3.3%	-3.3%	-22.1%	-4.0%	-6.5%	3.7%	1.8%	-3.0%	-4.3%

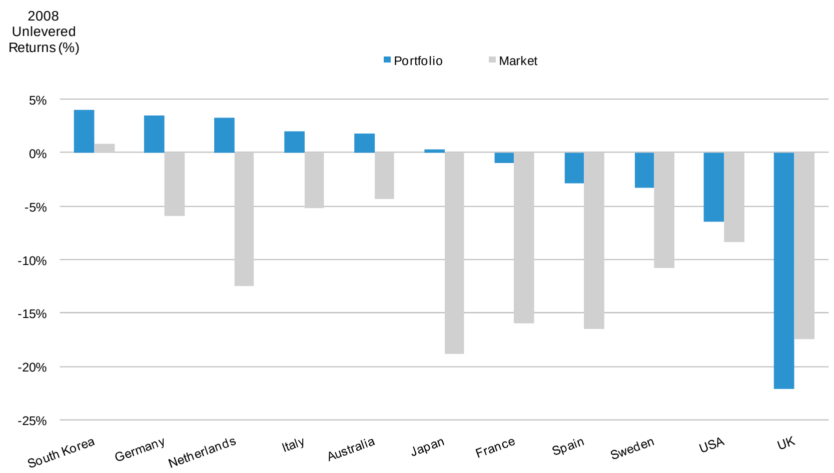
Source: RREEF Research, IPD, NCREIF, PCA, May 2009

Note 1: 2008 figures for Japan are RREEF estimates.

Note 2: The "Europe" series are IPD's figures and differ slightly to RREEF's estimates elsewhere in the report due to market inclusion and weight factors. Global aggregate is calculated by RREEF Research. For more information, please refer to the Appendix

It is important to recognise that the returns summarised in Figures 14 and 15 relate to unlevered portfolio performance, as measured by IPD or NCREIF. As such, they likely understate the severity of the decline in two important dimensions. First, there tends to be significant smoothing and lags in the appraisal of real estate assets such that "portfolio" returns are less volatile than more marginal or "market" based returns. This discrepancy is less significant in markets such as the UK where the appraisal profession has a tradition of tending to mark to market, but is particularly acute in other markets such as Germany where there is a tradition of "Verkaufswert" or long term sustainable valuation. This is demonstrated in Figure 16 (below) that shows the IPD or NCREIF returns alongside the "market" returns based on movements in rents and cap rates during the year. The lagged effect of the appraisal process means that while market movements were not fully captured in the performance series of IPD and NCREIF for 2008, they are likely to be reflected in the performance for 2009 and beyond, as we shall see later.

Figure 16 : Portfolio and market returns for 2008



Note: "Portfolio" returns based on published IPD or NCREIF index returns for 2008. "Market" returns based on movements in market rents and cap rates during 2008.

Source: RREEF Research; IPD; NCREIF; CBRE; REIS; RCA; PMA, May 2009

The second reason for the unlevered returns being higher than many will experience in practise is that, by definition, they do not take into account the impact of leverage. In a declining market, levered assets will suffer weaker performance than the unlevered market in line with the degree of leverage. For instance, the negative 22% performance for 2008 in the UK would likely represent a negative -33% for a portfolio levered by 30%, or -62% for a portfolio levered by 60%. This impact of leverage is a matter of maths, depending on the level and cost of finance, but many leveraged assets will face more significant challenges given the difficulties in gaining refinancing (with lower levels and higher costs of debt), and in maintaining cash flows.

2009: A challenging year ahead

During this period of continuing economic financial market uncertainty, it remains exceptionally difficult to forecast real estate performance. Real estate markets have corrected significantly over the past two years and in certain markets they appear to have been “oversold” and are starting to appear attractive in value. Despite this, there remains considerable broader market volatility, with significant uncertainty facing the prospects for both real estate fundamentals and real estate capital markets. Within this context, there is a clear case for exploring different scenarios for real estate market performance.

As for last year’s report, the first of these scenarios is a Base, which represents the most likely case, around which there is a Downside as well as an Upside. In the Base case, economic growth is expected to be exceptionally weak during 2009 but, given the concerted action by Central Banks and Governments, there should be a recovery towards the end of the year that gathers momentum during 2010. Global growth contracts by close to 3% in 2009 and recovers only to around 1% in 2010 before reaching close to 3% a year in 2011-13, averaging around 1.5% over the five years. Within this scenario, real estate fundamentals and capital markets remain weak in 2010, but by 2011 there should be signs of recovery that becomes more widespread during 2012/13.

The second, Downside scenario, involves a severe and prolonged economic slowdown in which Government policy measures are unable to prevent a contraction of output by close to 4% in 2009 and still negative growth in 2010. There is some recovery in 2011-13, but growth rates fail to achieve 2%, giving an average economic growth of just over 0% for the five years. Within this scenario, real estate fundamentals are impacted dramatically by the economic slowdown. Although completions are very low in 2011/12, the weakness of the economic recovery means that robust rental growth does not resume until 2013 across most markets. Real estate capital markets are also significantly impacted, generating far weaker returns particularly during 2009/10.

Last year’s report focused on a Base and a Downside scenario given the momentum behind the deceleration of the economy and real estate markets. Although the short term outlook remains bleak, this year’s report also includes an Upside scenario in which economic growth returns more strongly and more quickly than expected by most commentators. Within this scenario, predicated on the stabilisation of the banking sector, the global economy contracts during 2009 but by around 100bp less than in the Base case. Unemployment stabilises in most markets by early 2010, there is a resumption of global trade, and confidence returns to financial markets. Economic growth is stronger throughout the period 2009-13 with global GDP averaging close to 3%, driven by close to 5% growth in the outer years.

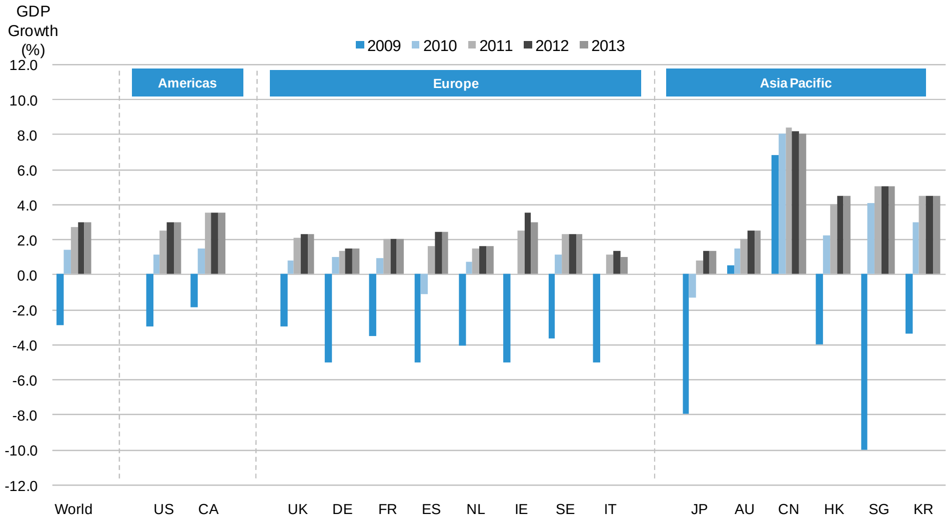
Although the Base case remains the most likely scenario, the huge uncertainty facing markets means there are real benefits in considering scenarios around this forecast. The next section focuses on the assumptions behind the Base case outlook, with the other scenarios being summarised later in the paper.

Base case scenario

Economic outlook

The weakness of the global economy outlined in the previous section suggests that global GDP will decline by close to 3% during 2009, across developed and emerging economies. For the developed markets, growth will likely be weakest in Japan with a contraction of circa 8% during 2009. Across most other countries, this is expected to be around negative 3-4%. The reduced demand for exports, coupled with falling commodity prices and financial market instability is leading to sharply reduced growth in emerging markets. Russia's economy is set to contract by over 2% during 2009. The scale of China's domestic economy and its large financial reserves means the growth rate is set to hold up at around 7%, albeit lower than in recent years.

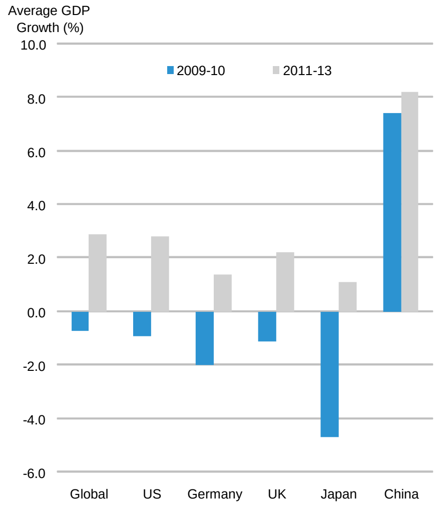
Figure 17: GDP growth forecast, 2009-13



Source: Deutsche Bank Research; RREEF Research, April 2009

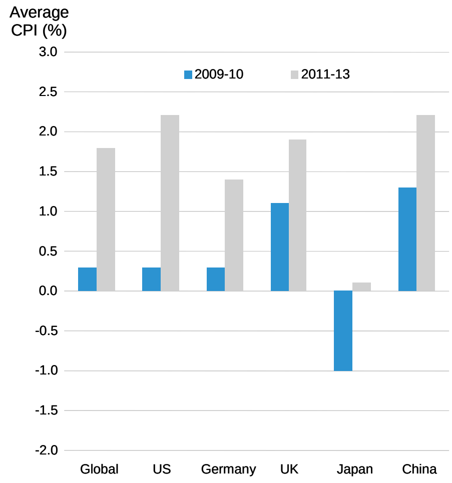
The ongoing challenges facing the credit markets pose significant risks for the global economy. Government and Central Bank efforts are focused on stabilizing financial and credit markets and on stimulating the economy. The combination of these efforts, coupled with a sharp fall in commodity prices and inflation, could lead to a bottoming of the economic cycle during the second half of 2009. A mild recovery is likely during 2010, when global growth could pick up to around 2%. Within this scenario, the recession could come to be seen as just that, a deep and significant cyclical recession, with resumption to robust levels of low inflationary growth in 2011 and beyond (Figures 18 and 19).

Figure 18: GDP Growth across major economies, 2009-10 and 2011-13



Source: Deutsche Bank Research; RREEF, April 2009

Figure 19: Inflation across major economies, 2009-10 and 2011-13

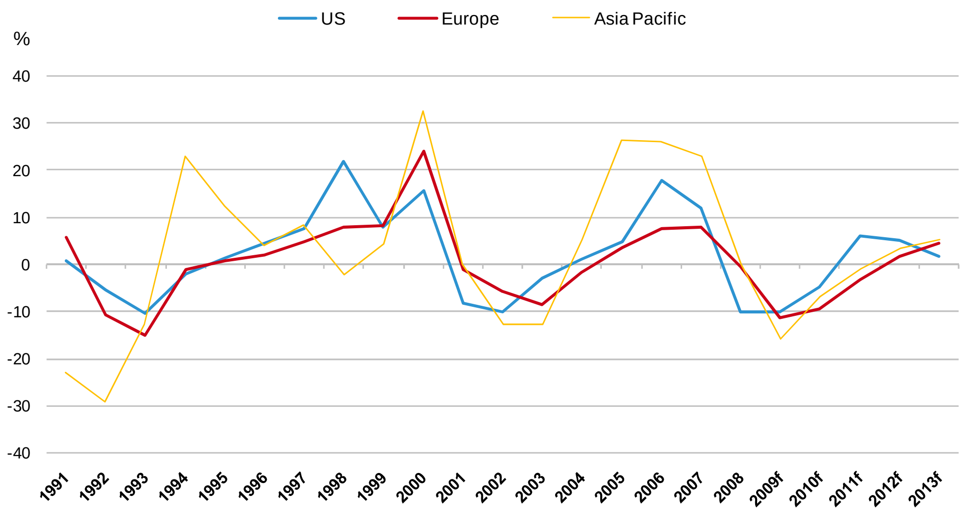


Source: Deutsche Bank Research; RREEF, April 2009

Property fundamentals

The global economic recession continues to have a significant impact on market fundamentals. Leasing activity is slowing and landlords are having to reduce rents and increase incentives in order to attract tenants. Vacancy rates will continue to rise during the remainder of 2009 and into 2010, and weak fundamentals will be a major driver of weaker performance during 2009. Although the near term outlook for fundamentals remains bleak, it is this bleakness that will provide the basis for the next cycle of rental growth. With the lack of development finance, new starts have dried up, and levels of completions are set to fall off sharply, particularly during 2010 -12.

Figure 20: Office rental growth by region, 1991-13 – Base case scenario



Note: Weighted aggregate performance based on 7 countries in Europe and 6 in Asia. "f" : forecast

Source: RREEF Research, May 2009.

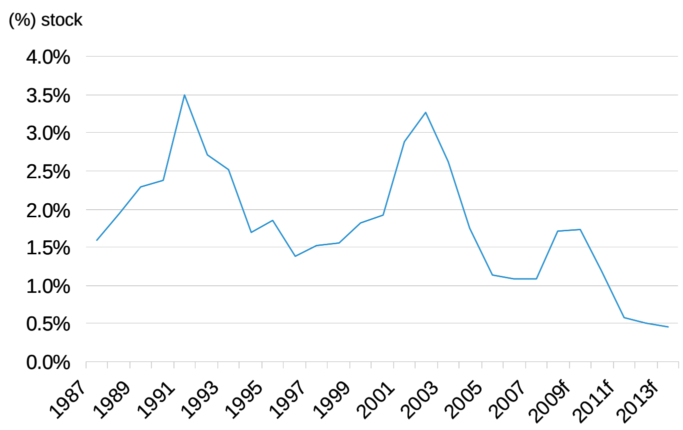
Levels of new supply created during this cycle in the US are far lower than in previous cycles. Despite this, the scale of job losses and resultant negative net absorption mean that vacancies are rising sharply and will remain elevated in 2010/11. Few metros will be able to escape substantial rent declines over the next two years, with office rents set to fall around 20% for the major US markets through the cycle. The declines will likely reach around 30% in specific markets such as New York that have high exposure to the financial sector or in Orange County whose economy has been impacted by the collapse of the housing market. Other markets, such as Washington DC, will perform relatively well given its government base and the benefit of the recently enacted stimulus package. Other markets that will decline less than the overall US market include the tech-oriented economies of Austin, Boston, Los Angeles, San Francisco, San Jose, and Seattle, most of which suffered significant downturns in the previous cycle as the dot-com bubble burst and were slower to recover in the recent expansion.

As explained earlier, the sharp deterioration in economic growth across Asian markets dramatically impacted rent levels during the final quarter of 2008 and the first quarter of 2009. Negative absorption is set to continue during 2009 and remain weak in 2010. This weakening of demand will coincide with a surge of supply in a number of markets during 2010/11, most particularly in China, India and Singapore. Vacancy rates will rise sharply and rents will contract dramatically through the cycle, by around 20% across the Asia Pacific markets as a whole. The most significant rental declines will likely be in Singapore due to the sharp contraction of the economy and the high levels of development, with rents set to fall around 75% through the cycle. Hong Kong rents will also fall sharply but, even though this decline should exceed 50%. Although Seoul was due to face a surge of supply at the turn of the decade, a large proportin of the pipeline has been delayed. These delays, coupled with low levels of vacancy means the market is set to suffer only a modest rental decline through the cycle. There are wide variations in the outlook for the Tokyo market, with rents set to fall sharply for high quality new space in specific submarkets that have significant vacancy, such as Roppongi Hills. Although there will be pockets of significant decline, the nature of leasing practices[4] means the market as a whole should fall by less than 20%.

Rents are also declining across the European office markets, and these declines will continue through 2010 for most markets. The greatest declines are likely to occur in the Spanish, UK and Irish markets, as well as in a number of the overbuilt Central and Eastern European markets. In both Spain and the UK, rents are set to decline for the next three years, with close to 60% declines likely to be experienced across the major Spanish markets. As usual, the more stable markets of Germany and Netherlands will experience milder declines, of around 20% or less through the cycle. As for other markets, Europe is experiencing a dramatic shutting down of new supply with PMA projecting that European office completions will reach 0.5% of total stock in 2012. This reduction in supply coupled with an economic recovery will lead to a resumption of rental growth in the later years of the forecast, although this growth will only be in line with inflation in 2012.

[4] RREEF Real Estate Research, *Making sense of the rental market*, Japan Quarterly 2Q 2008 (June), pp. 12-14.

Figure 21: Office net additions as a percentage of total stock across key European markets, 1987-2013



Source: PMA, April 2009. "f" : forecast

As usual, office rents are set to decline by the most through the current cycle, with the less volatile retail, industrial and apartment markets tending to experience less of a correction. For instance, while office rents across the US markets will fall by around 20%, retail and industrial rents are unlikely to decline by more than 10% through the cycle. A similar pattern will be experienced in Asia (offices down by around 25%, while retail and industrial contracting by 15-20%) and in Europe (office also down by around 25%, while retail and industrial contracting by around 10%). This differential in rental performance has important implications for overall returns given the relative importance of non-office sectors in a number of markets.

Real estate capital markets

Debt environment. Although real estate fundamentals are weakening, the more significant challenge for real estate markets through this cycle relates to the capital markets and, more particularly, the debt environment[5]. In this respect, there are some signs of greater confidence in the broader lending market, as signalled by the narrowing of TED spreads, and the return of some of the German balance sheet lenders to the market. The TALF and P-PIP programmes[6] have increased confidence in the bank market, and this is being reflected in the tightening of credit spreads since early April 2009. Since these announcements, spreads have narrowed by around 400bp for AAA CMBS, and there has been an uptick in trading activity. Although spreads remain wide (at around 840bp (basis points) by end April) and there has been little narrowing in lower grade CMBS, there has been a marked improvement in the pricing of this market that bodes well for the broader CRE lending market.

Despite these positive signs, credit markets remain exceptionally challenged, with the IMF now estimating that bank losses will exceed US$4 trillion through the cycle, and a dramatic reduction of non-domestic lending across all markets. The severity of the challenges facing the banking sector has three interrelated implications for real estate markets. First, and most fundamentally, most lenders are seeking to reduce their overall loan-books, including their exposure to real estate[7]. During the early stages of the credit crisis, most

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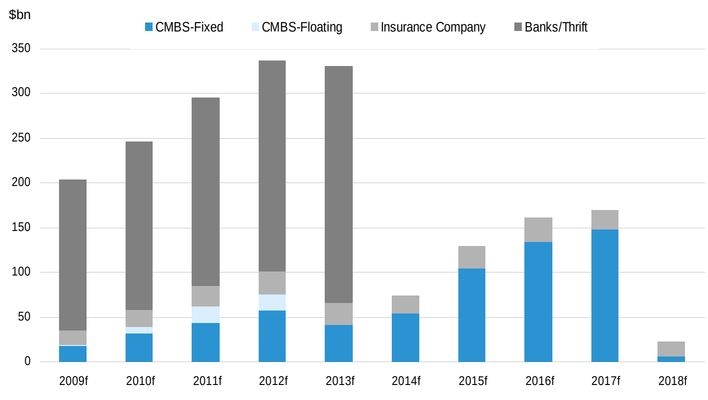
[5] RREEF Research, *Global Commercial Real Estate Debt: Deleveraging into Distress*, May 2009
[6] The Term Asset-Backed Securities Loan Facility (TALF) is an initiative of the US Federal Reserve announced in November 2008 to support the issuance of asset-backed securities (ABS) collateralised by new consumer and small business lending. The Public-Private Investment Programme (P-PIP) followed in March 2009 as part of the US plan to purchase "toxic" bank assets.
[7] IMF, *Global Financial Stability Report*, April 2009; Bank for International Settlements.

banks were keen to avoid foreclosure given the challenges associated with managing physical assets. At this stage, most banks focused on reducing exposure through, for instance, reducing credit lines. As real estate values fell more dramatically there has, as explained in Section 1, been an increase in the willingness of banks for foreclose on assets, with a pipeline now of over US$150 billion of distressed assets. The foreclosure on these assets will start to reduce the exposure of banks to real estate, but it will also represent a catalyst for the re-pricing of markets, as already experienced in a series of transactions across global markets[8].

The second impact for real estate markets is the shortage of new loan finance. The CMBS market is now all but closed, with RCA reporting that this source of finance only accounted for 2% of acquisitions between September 2008 and March 2009, down from the 60% that it represented at the market peak between Q4 2006 and Q3 2007[9]. A small number of banks, such as some of the German banks, and a number of insurance companies, are continuing to provide finance, and some governments, such as those in China, are starting to relax lending conditions. Despite these improvements, there remains a dramatic shortage of new finance and this is leading many purchasers to assume existing loan finance or to obtain finance from sellers. It is also leading to a sharp increase in the cost of finance, often only at low LTVs.

The third, increasingly significant, concern relates to the raft of refinancing that will come to the market over the next two to three years. The surge of lending during the years of the real estate boom (2005-07) comprised a range of different types of loan, including balance sheet banks and insurance companies and, particularly in the US and the UK, the CMBS market. For the US, it has been estimated that a total of $685 billion CMBS will mature between 2009-18, with banks and insurance companies having an additional $1.97 trillion maturing over the same period[10]. The real challenge will face those loans maturing over the near term (2009-11), given the deterioration in market performance and the shutting down of the credit markets. This is also the case in the UK where £43bn of loans are due for repayment in 2009[11]. Many of these loans will be extended, but often there are limits to the amount of time over which this can be done and this will, ultimately, lead to the need for greater equity injections, fuelling the downward pressure on real estate prices.

Figure 22: Estimated maturity profile of commercial mortgages in CMBS, bank and life company portfolios



Source: Deutsche Bank, Intex, Trepp, Mortgage Bankers Association, Federal Reserve, April 2009. "f" : forecast

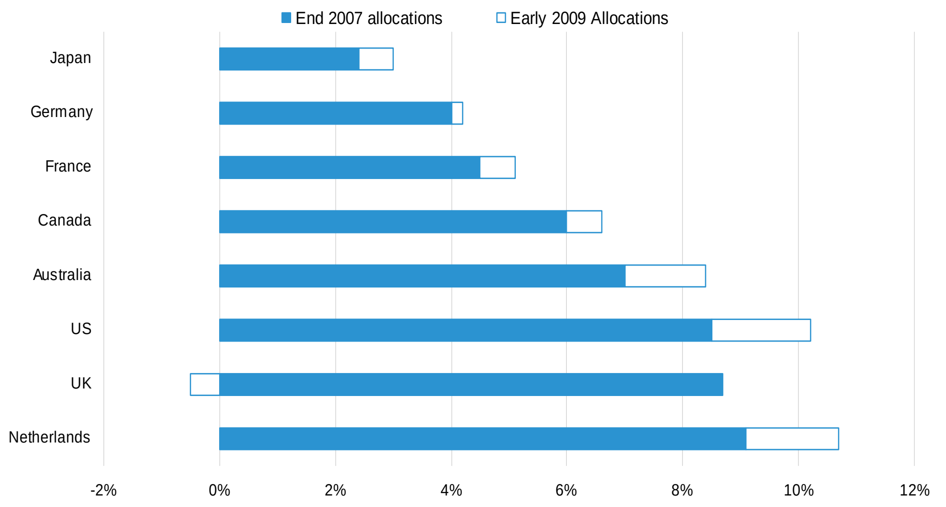
[8] RCA, *Global Capital Trends*, April 2009.
[9] RCA, *Capital Market Trends*, April 2009.
[10] Deutsche Bank, *Potential Refinancing Crisis in Commercial Real Estate*, April 2009.
[11] De Montfort 2009 *Banking Survey*, reported in the Financial Times, May 14 2009.

In response to this tightening of credit availability, there has been an increase in the number of debt funds but the majority are focused on working out existing "distressed" loans rather than providing new finance. Given the challenges facing the banking industry, it will take many quarters before the real estate debt markets stabilise, and this will have profound implications for the pricing of real estate at least during 2009 and 2010.

Investor trends. The tightness of the credit markets and the broader financial uncertainty will continue to overshadow the attitude of investors towards real estate during 2009 and beyond. This is the case for each of the main groups of real estate investors, whether pension funds/insurance companies, publicly listed companies or REITs, SWFs and retail investors, although the impact will vary between the different groups.

The significance of the denominator effect means that most pension funds are over-allocated to real estate. Although global stock markets recovered somewhat during March and April of 2009, they remain 40% down on the recent peak achieved in mid-2007. Given that direct real estate markets had only contracted by -4**%** by end 2008, the denominator effect means that most funds became over-allocated to real estate, as shown in Figure 23. This denominator effect is exacerbated by the unfunded commitments that many have to real estate funds. These unfunded commitments mean many investors have had to continue to allocate to the sector at a time when other asset classes are suffering value declines. Beyond this, many pension funds have become exceptionally cautious in their appetite for new investments, seeking to retain liquidity wherever possible.

Figure 23: Estimated pension fund real estate allocations, end 2007 and early 2009



Note: Based on estimated allocations to real estate and other asset classes at end 2007, and performance of asset classes over the period end 2007 to April 2009
Source: Watson Wyatt; EPRA/NAREIT; MSCI; IPD; NCREIF; RREEF Research, May 2009

A further specific issue for many institutional investors relates to the increased concerns over investing in commingled real estate funds that have gathered momentum over recent months. The strong growth of investment in real estate over the five years to 2008 was associated with a dramatic surge in the number of commingled funds as these provided a relatively efficient way for investors to gain access to different types of real estate across markets[12]. The majority of commingled funds were closed-ended, and the downturn in the

[12] INREV records that there were 350 European-focused real estate funds launched between 2003 and 2008 (INREV Vehicle Database Analysis, April 2009)

market has raised significant concerns over the limited liquidity of such vehicles. These concerns, coupled with the weak performance of often highly leveraged funds, have led many investors to question the benefits of the commingled fund approach to investing[13]. Although commingled funds will likely remain the main vehicle for most real estate investors, there is likely to be increased caution in their approach to allocations to the asset class.

The increased caution of investors, coupled with the pressures on the asset base of pension funds and the weak outlook for real estate performance, means that most institutional investors will not be seeking to increase their real estate exposure during the course of 2009 and 2010. The expected recovery in equity markets and attractive pricing of real estate should encourage pension funds to return to the market such that allocations should increase in 2011 and beyond.

Over the past six months, a number of REIT's have taken significant steps to bolster their capital and prevent covenant breaches in their portfolio. This has been achieved through a combination of rights issues, further asset sales and in some cases re-negotiation of debt covenants. These improvements, coupled with the better sentiment towards financial stocks as a whole, led to very strong performance of the global REIT market during March and April when the global index rose by around 25%. While the sector as a whole has made significant progress in shoring up its balance sheet, the sector remains volatile. The majority of REITs will remain defensive until stabilisation of capital values eliminates the near term risk of covenant breaches on their existing portfolios. At this point, if their fundraising activity has been sufficient, a number may be well positioned to re-enter the market.

Despite the sharp fall in oil prices, Sovereign Wealth Funds (SWFs) remain an important force in institutional and real estate investment across global markets. Their overall assets under management were estimated to represent US$3.9 trillion by end 2008, and this is projected to rise to US$8 trillion by 2015[14]. Real estate remains an attractive asset class for most SWFs, with International Financial Services, London (IFSL) estimating that this asset class accounted for around 9% of SWF cross border investment between 1995 and 2008.

Although a series of SWFs are seeking to build their exposure to real estate, it will take a number of years before these investors have achieved their target allocations to real estate. Of the current US$4 trillion, it could be argued that around half of their overall real estate allocation has been made to real estate, with an additional US$200 billion or so (assuming a 5% target allocation) to be allocated by SWFs entering the sector or seeking to build their exposure. Over the coming five years, as overall assets under management (AUM) grow by around US$2.5 billion, there could be an additional US$125 billion allocated to real estate, or a total of around US$325 billion or US$65 billion a year. This is a significant amount of capital, but it represents less than 10% of the total flows to real estate over the five years to 2008, and cannot, in itself, compensate for the shortage of debt and equity capital that is impacting the sector.

Retail investors have tended to retreat from the real estate market given the weak performance over the past 18 months. This is particularly the case for retail investors in listed real estate and for retail investors in the German Open Ended Funds. Retail investors tend to be highly pro-cyclical so it is unlikely that they will return to the market in significant volumes until the real estate market has started to recover. High net worth investors have tended to be more counter-cyclical, and are showing signs of returning to markets that have been badly impacted by the downturn, although they represent a

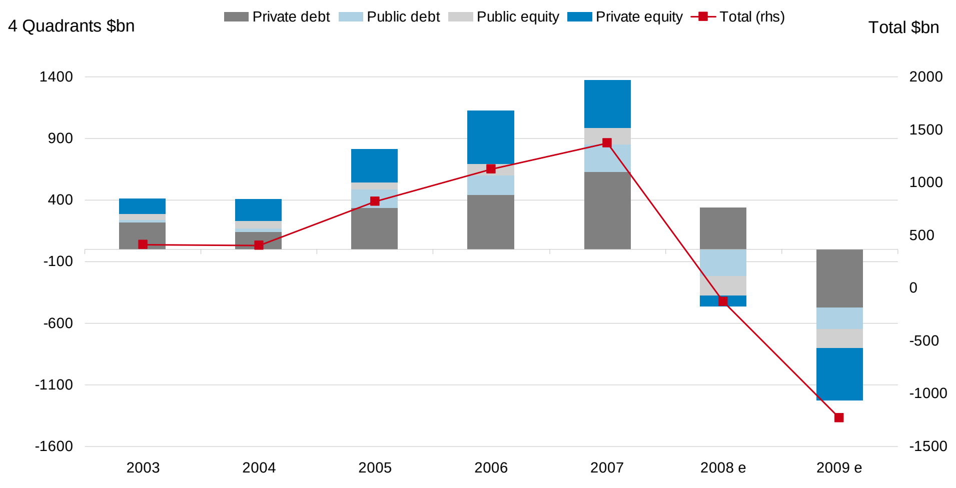
[13] Peterson, J. *Funds Apply the Brakes*, IPE January/February 2009
[14] IFSL Research, *Sovereign Wealth Funds* 2009.

relatively small share of the institutional market[15]. As for all investors, they face liquidity challenges, but are set to increase their allocations to real estate over the coming two to three years.

Weight of capital. It is difficult to generalise across different investor groups and different countries, as pressures of liquidity and regulation vary significantly from market to market and from investor to investor. There is a series of investors that are seeking to ramp up their exposure to real estate, taking advantage of the correction in pricing that will overshadow markets during 2009/10. Good examples of these are a series of German insurance companies who held back from significant allocations to real estate during the boom years, some SWFs and a number of US plan sponsors who have been significantly underweight the asset class for much of the decade.

Despite this, the overwhelming trend for 2009 and 2010 will be for reduced weight of capital towards real estate. This is particularly the case for the public debt market that averaged around US$150bn of new flows to real estate over the four years to end 2008. There will also be a significant reduction in the flow of private debt to real estate given the desire for banks to rebuild their balance sheet and reduce their real estate exposure. Public equity investors are on a different cycle, having suffered significantly in 2007 and 2008, and being likely to become more active during 2009/10. Private equity investors are also likely to be positive investors in real estate, supported by the SWFs and HNWs, albeit at reduced levels compared with recent years. On this basis, it is likely that the flows of capital to real estate will fall sharply in 2009/10 and this will contribute to the upward pressure on cap rates across most markets over this period.

Figure 24: Global capital flows to real estate across the four quadrants



Note: History based on DTZ, Estimates and Forecast from RREEF Research, "f" : forecast , "e" : estimate
Source: DTZ Money into Property; RREEF Research, May 2009

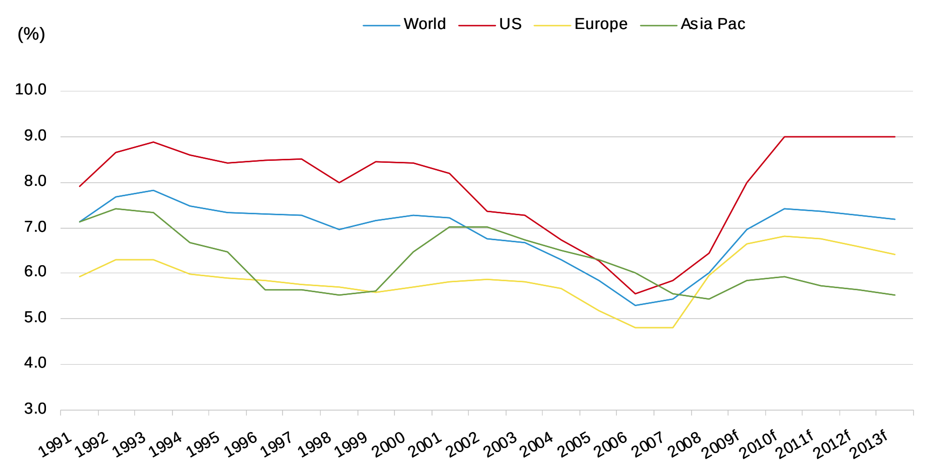
Pricing and performance

The combination of the weak outlook for real estate fundamentals, the tight credit markets and weak investor appetite mean that cap rates are set to continue to rise during the remainder of 2009 and into 2010 across most markets and property types. This correction in cap rates will be dramatic, taking rates back to levels last seen in 1993 in the US, in the early 1980s in Europe and 2004 in Asia.

[15] Carpenter, A. *Capital Raising: Foot on the Brake*?, INREV Annual Conference, April 2009.

Through the cycle, it is likely that cap rates will have risen by over 300 bp (basis points) in the US, 170bp in Europe and 140bp in Asia, although there are marked variations around these averages. In Europe, for instance, the UK office market will experience a rise of around 320bp, compared with the more modest rise of 90bp in Germany. Similar variations exist in Asia, with a 220bp rise in Australian offices comparing with a 170bp rise in Japan. As explained in last year's report, US markets have been in uncharted territory, with cap rates never being as low as the 5.5% recorded for CBD offices by RCA in mid-2007. Cap rates did rise in the early-1990s, but this was relatively modest (rising from 7.9% in 1989 to 9.3% in 1992) given that they had not significantly compressed during the development boom of the late-1980s. During the current cycle, cap rates are rising fast due to the severity of the liquidity crisis and the importance of the debt to the US real estate markets. The capital market pressures are now combining with weakening fundamentals such that office cap rates are expected to rise from a low of 5.5% in mid-2007 to 9% during the course of 2010.

Figure 25: Office cap rates by region, 1991-13 – Base case scenario

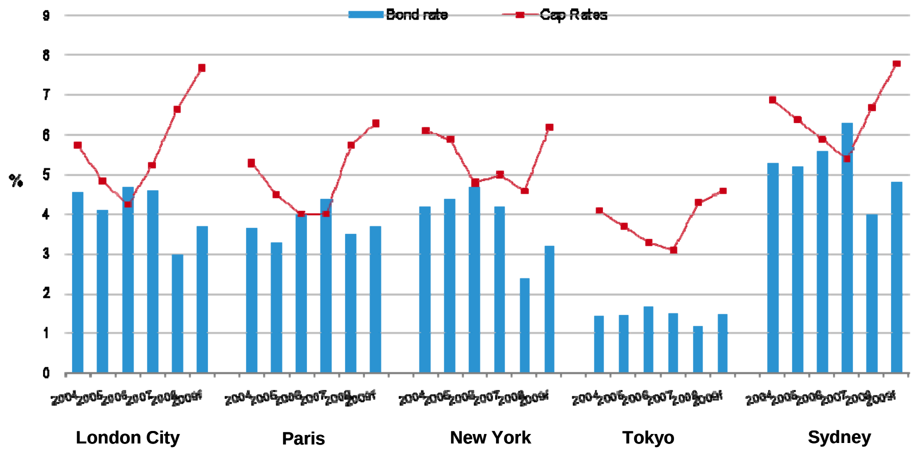


Note: Weighted aggregate performance based on 7 countries in Europe and 6 in Asia. "f" : forecast , "e" :estimate

Source: RREEF Research, May 2009

Although this sharp rise in cap rates is associated with significant declines in capital values, it is also leading to a re-pricing of the market that will come to present compelling investment opportunities. The market will become attractively priced on two broadly distinct dimensions. First, the high cap rates means that real estate will come to generate very high income returns that will be attractive to many investors. While income returns fell to a low of 5.6% in the US and 4.6% in the UK during the peak of the recent boom, it is likely that they will revert to 8 to 9% by the end of 2010. Second, real estate will come to be seen as attractively priced compared with other asset classes, as indicated by the very wide spreads with bond yields. This re-pricing of real estate will coincide with the prospect of better rental performance and renewed investor appetite such that cap rates should start to edge downwards during 2011-13.

Figure 26: Cap rate/bond rate spreads for key global markets (%)



Note: Year end data points except Bond Yield forecast which is for May 2010. "f" : forecast

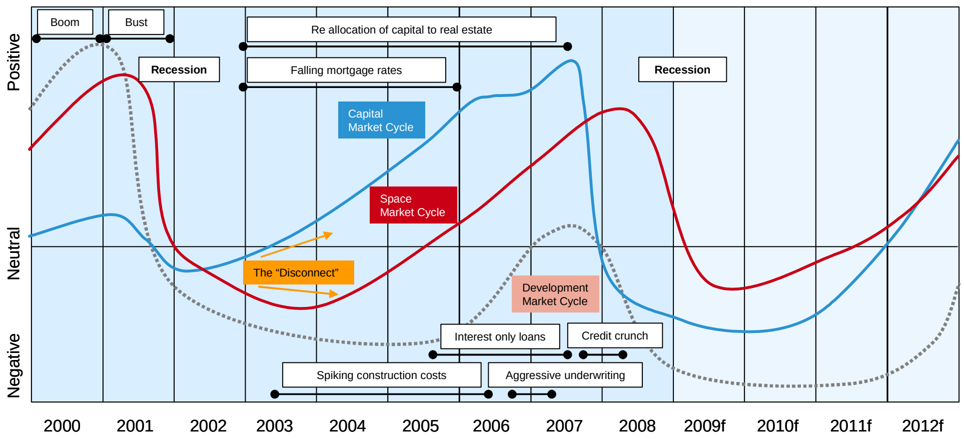
Source: RREEF; CB Richard Ellis; JLL; Consensus Forecasts, May 2009

The weak performance in 2008 is set to gather momentum during 2009, with most markets suffering from continued cap rate increases and sharp falls in rents and income returns. At a global level, unlevered returns are set to decline by around 14%, representing a value decline of close to 20% during the year. At these levels, 2009's performance will be the weakest on record, exacerbated by the synchronised nature of the downturn. In previous cycles, there have been significant variations between markets in the timing of the downturn but the global nature of the financial crisis and economic recession means that 2009 is likely to represent the worst year of performance for most markets.

As stated earlier, it is important to recognise that this performance relates to unlevered portfolio performance, as measured by IPD or NCREIF, so is smoothed and lagged compared with market returns. Given the lags in the appraisal process, it is likely that returns will also be negative in 2010, although only marginally so. For most markets, the year of weakest performance will be in 2009 with more modest declines in rents and increases in cap rates expected for 2010. A number of markets, most particularly the UK, will, by the end of 2009, be a long way through the correction in their pricing such that stronger performance will reduce the weakness of global market performance.

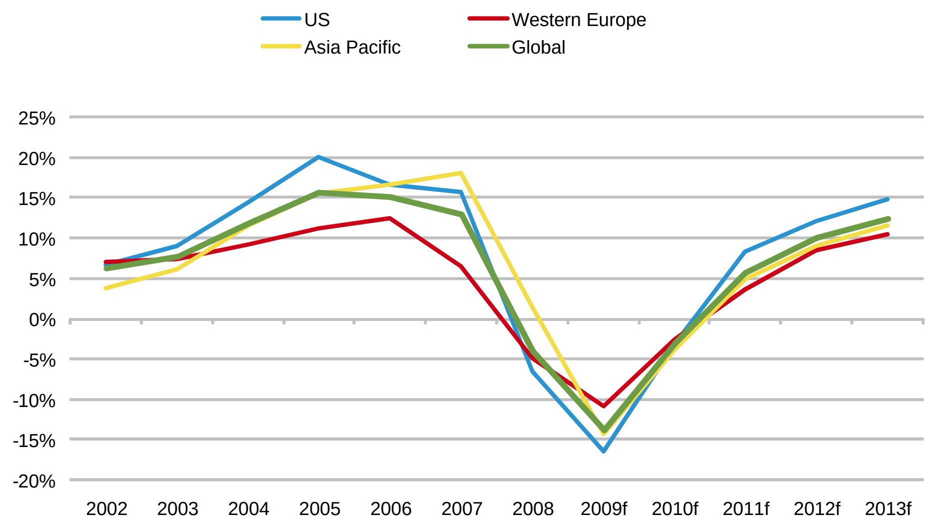
With cap rates reaching their peaks across most markets during 2010, and the resumption of economic growth leading to a slower pace of rental decline, 2011 is set to represent a year of transition for the global real estate markets. Cap rates will likely remain stable or decline marginally, and rents will start to turn positive in most markets. This turnaround in the market coupled with high income yields means that overall market returns should be positive by around 6% during the year, with the bulk of this coming from income. Following this year of transition, 2012 and 13 should represent a period of strong performance for real estate. Cap rates should continue to decline and rental growth should gather momentum such that returns should reach double digits in both years.

Figure 27: Schematic representation of the global real estate cycle, 2000-12



Source: Real Capital Analytics (history); RREEF Research, April 2009. "f" : forecast

Figure 28: Global unlevered real estate returns (2002-2013f)



Note: Regional Returns are weighted averages of all property returns for Western Europe (France, Spain, Germany, Italy, Netherlands and Sweden), the US and Asia (Australia, Japan, China, Hong Kong, Korea, Singapore). "f" : forecast

Source: RREEF Research; IPD; NCREIF, May 2009

Although all markets are set to follow a similar shape through the cycle, there will be significant variations in the severity of the cycle, and in the timing. The most volatile markets will experience a significant downturn during 2009/10, but they are likely to bounce back most strongly in the outer years of the forecast. This is particularly the case for the UK that, by March 2009, had already experienced a significant value decline since the market peak in mid-2007. The volatility of this market suggests that returns could recover strongly in 2011 and might average around 15% a year in 2012/13. Other volatile markets include Hong Kong, Singapore and Spain, each of which will experience significant declines over the next two years, but should have strong performance in the early years of the next decade.

At the other extreme is a series of more stable markets, often due to the nature of their economies and real estate markets but also, importantly, due to their appraisal practices. The most notable of these is Germany that should experience only a modest decline in its IPD index but which will also experience only a mild recovery. Other relatively stable markets include Netherlands and Italy in Europe, and South Korea in Asia. Despite the economy falling into recession and cap rates being likely to rise 200bp from their historic lows of 5.5%, the Korean market is likely to post the strongest of all global direct market returns over the period 2009-13. The rise in cap rates means income returns will support higher levels of performance and, importantly, a number of major development projects have been delayed such that vacancies will remain low until 2013 or beyond.

Other markets have a more mixed outlook, including Japan, Australia, China and US. If Korea is set to have the strongest performance 2009-13, then Japan's performance will be rather weak, dragged down by the recession of 2009/10, albeit more muted than the volatile markets of Hong Kong and Singapore. China, in contrast, will perform relatively well over the five years, despite values falling by 30% or so during 2009/10. The strength of the economy, the shortage of quality accommodation and slowing of new development should support strong performance during the period 2011-13.

Australia's real estate market is suffering severely through the current downturn, with office cap rates set to rise 300bp (basis points) to close to 8%. This correction is heavily front loaded in 2009 and early 2010, with the prospect of a return to average double digit performance over the period 2011-13. This strong performance in the outer years is likely due to the resilience of the Australian economy coupled with the low levels of supply, particularly for the retail sector, and the high yielding nature of the market. Although the US market is suffering in a similar way to Australia's, there is a significant lag in the reporting of this deterioration in NPI. This lag suggests that performance will be negative in both 2009 and 2010 before the market starts to post stronger performance. As for Australia, the relatively contained supply, the robust economy and the high yields should lead to average double digit returns between 2011 and 2013.

Within the Base case scenario, all markets follow a similar cycle over the coming five years. As explained above, there are marked variations in the timing and the magnitude of the cycle, with important implications for investors. But, just as significant, are the risks to the assumptions that underlie the forecasts and, for this reason, the next section focuses on two alternative scenarios, a Downside and an Upside, for the global real estate market.

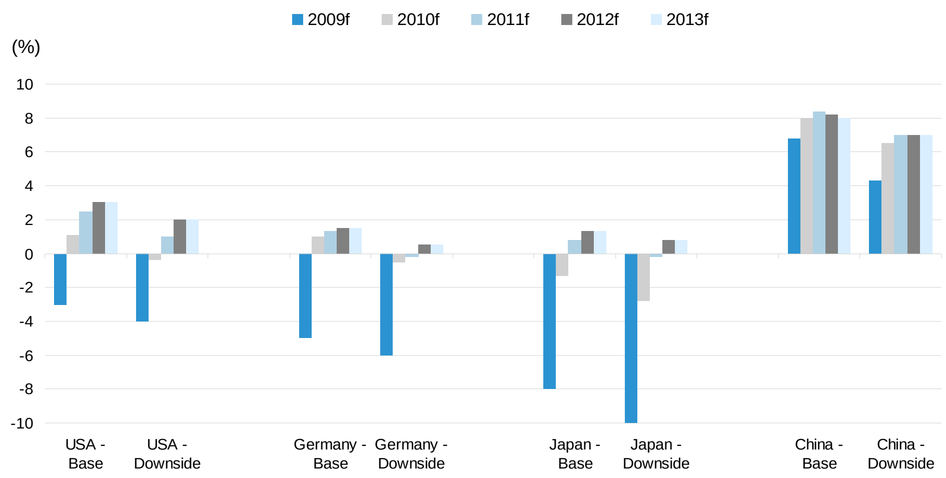
Scenarios: Preparing for quick and unexpected change

Downside scenario

Economic outlook

Given the severity of the liquidity crisis there is a risk that the global economy falls into a deeper recession than outlined in the Base case scenario. The crisis of confidence in financial markets, the huge potential exposure of banks to the liquidity crisis, and the sharp slowing of the real economy creates the possibility of a deeper and more prolonged recession. Within this scenario Government policy measures are unable to prevent a contraction of output by close to 4% in 2009 and still negative growth in 2010. There is some recovery in 2011-13, but growth rates fail to achieve 2%, giving an average economic growth of just over 0% for the five years.

Figure 29: Downside economic scenario across major countries



Source: Deutsche Bank Research, April 2009. "f" : forecast

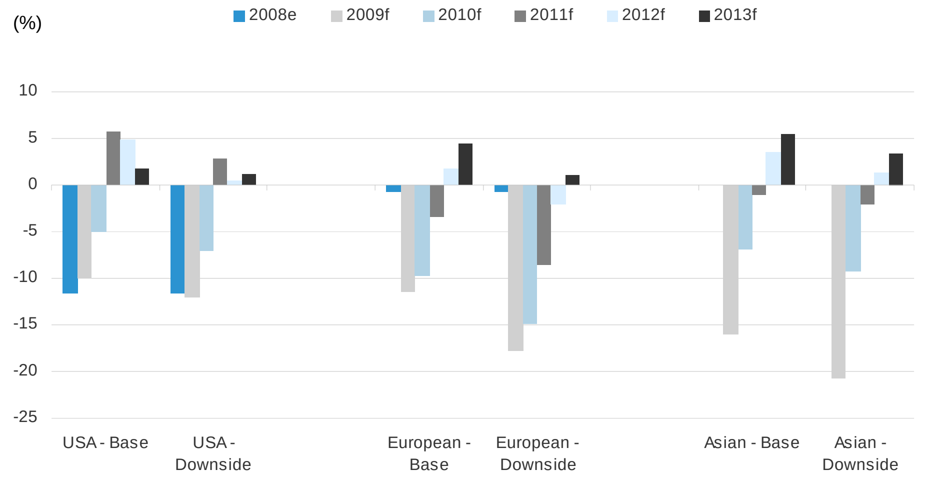
An important aspect of this Downside scenario is the interrelated and spiralling nature of the deterioration. Falling activity, confidence and prices are associated with massive cutbacks in corporate investment, sharp rises in unemployment rates and significant falls in equity markets. This downturn in activity will exacerbate the financial crisis, with further bank failures and bail outs, leading to additional fiscal stimulus packages and higher government debt. These higher levels of government debt would, in the outer years of the forecast, lead to higher bond yields and relatively weak levels of economic growth.

Given the slowing of global trade, export-led countries would be most impacted by the Downside scenario, with Singapore and Hong Kong experiencing significant downgrades in growth over the five years, particularly during 2009/10. The European, Japanese and Korean economies would also suffer from reduced global demand, with both regions set to experience average annual GDP growth around 1% lower than in the Base case. Despite the scale of its domestic economy, the US would suffer from further weakness in the housing market as well as deeper stress in the financial industry. China's economic growth would also fall in the Downside scenario (by an average of around 1.5% a year), but the economy would perform relatively well given the large government surpluses and the increasing dynamism of its domestic economy.

Property fundamentals

Within this scenario, real estate fundamentals are impacted dramatically by the economic slowdown. At a global level, rents decline by around 23% over the period 2008-13 compared with 16% for the Base case. Although completions are very low in 2011/12, the weakness of the economic recovery means that robust rental growth does not resume until 2013 across most markets.

Figure 30: Office rental growth by region, 2008-13 – Base and Downside scenarios



Note: Weighted aggregate performance based on 7 countries in Europe and 6 in Asia. "f" : forecast
Source: RREEF Research, May 2009

There are important variations in the way the downside scenario impacts different markets. Europe would experience a particularly sharp deterioration in rent growth, with an office rent decline of over 40% compared with 25% or so in the Base case. Rent growth would remain negative for the next three years, only turning marginally positive in 2013. This deterioration would be particularly marked in those markets such as Spain that are experiencing a large wave of new construction. But it would also occur in the generally more stable core European markets of France, Italy and Germany. Although rents in these countries would become very cheap by historic standards, the large rise in unemployment and weakening of business confidence would lead to significant negative absorption that would act as a catalyst for further rent reductions.

The generally more volatile Asian markets would also be severely affected in the Downside scenario. Office rental decline in Hong Kong and Singapore would be around 10% higher than in the Base case, and the recovery would be later and more muted. In the Base case, Australia's rental market holds up relatively well given the robustness of the economy and low levels of supply but, in the Downside there is a wave of negative absorption such that office rents fall by 45%, far higher than the 30% or so in the Base case. The remaining Asian markets perform relatively well in the Downside scenario, but for very different reasons. The robustness of economic growth in China means office rents decline by around 40% compared with 30% in the Base case and, importantly, turn positive in 2010, the same year as for the Base case. In Japan, although the economy deteriorates sharply, the continuing shortage of good quality accommodation and the drive to take advantage of the correction in rents means the market is less impacted than, say, the core Eurozone countries. Korea has similar structural space shortages but also benefits from relatively strong economic growth leading to office rental decline through the Downside (-15%) being close to the Base case (-9%).

The severity of the Downside recession in the US pushes rents lower, particularly during 2010, with a far weaker bounce-back in the outer years (2011-13). But the Downside rental scenario is less severe than in Europe and in parts of Asia for a combination of reasons. First, the market had, by the end of 2008 experienced a 10% rental decline, well ahead of most other markets. Second, given the greater availability of land and scope to develop new space, rental levels are lower and more affordable than many other countries. Third, the relative robustness of economic growth in the US, particularly in the outer years of the forecast, better positions it to lead the initial rental recovery.

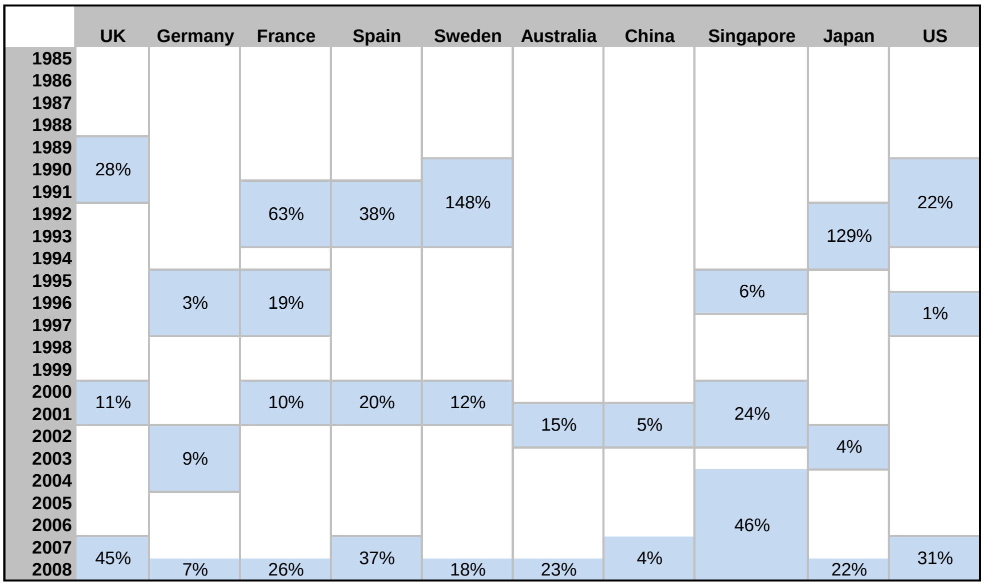
Pricing and performance

The weak rental performance of the Downside scenario coupled with the extremely difficult financial market conditions would lead to even lower levels of investment activity in 2009 and 2010 compared with the past six months or so. Equity investors would move away from the markets and, despite the wide spreads with bond yields. Although real estate might have some strengths relative to equities and bonds, equity investors would be driven more by the weakness of the real estate asset class including its poor performance and illiquidity such that they would pull back their allocations to real estate.

Beyond a shortage of equity for real estate investing, a more fundamental challenge for real estate would come from the difficulties in the broader debt markets. Within the Downside scenario, credit markets remain constrained for a number of years, exacerbating the problems of real estate lenders, of leveraged buyers such as commingled funds and REITs. In the short term, there would be increased pressure to dispose of assets, generating further upward pressure on cap rates. In the longer term (2011-13), the real estate capital markets would be held back by the high levels of refinancing, keeping cap rates elevated until the end of the forecast period.

Within the downside scenario, a key issue will be the extent to which cap rates rise and, as for last year, current rises in cap rates have been compared with previous market corrections (Figure 31). This comparison shows that Japan and Sweden were the two markets that were been most significantly affected by severe downturns over the past 30 years. During the late-1980s and early-1990s, real estate in these two countries was at the heart of major banking crises that severely impacted economic performance. Real estate experienced significant re-pricing, with cap rates rising by 148% in Sweden and 129% in Japan, and it took many years for the markets to recover.

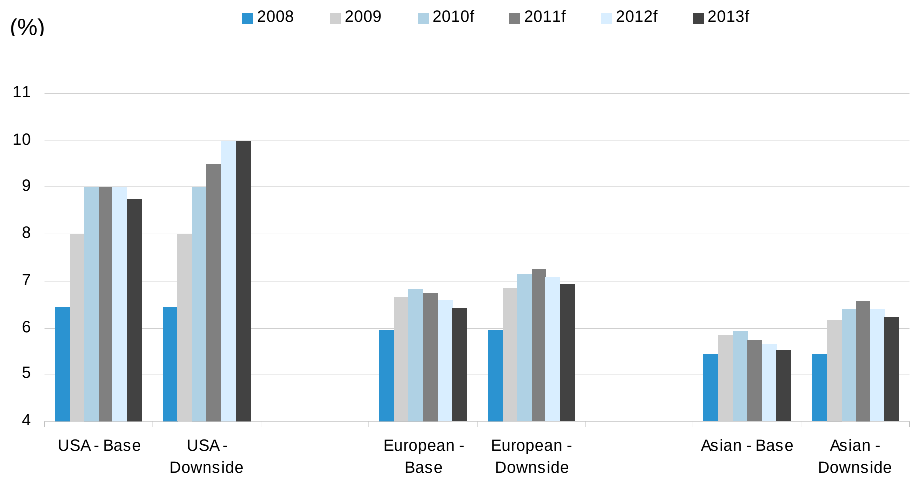
Figure 31: Historic trends in cyclical cap rate corrections



Source: RREEF Research, CBRE, JLL, RCA, May 2009

Although the Downside scenario calls for a deep and prolonged economic slowdown, it falls short of a “depression”. Cap rates would rise further than the Base case and, importantly, would remain high for considerably longer, but would not likely rise by more than 100% on the low levels achieved at the peak of the market. Those markets that would experience the lowest increase in cap rates would be those that are furthest through the cycle (such as UK, Spain, Japan and Korea where cap rates had, by end 2008, already risen by 30-50%) and those with a strong real estate capital market. There are important variations in the nature of real estate capital markets with important implications for cap rate trends in the Downside scenario. Although the UK financial markets would suffer in a Downside scenario, it benefits from being one of the largest, most liquid and transparent real estate markets. Japan, in contrast, is a relatively closed capital market, but benefits from having well-capitalised domestic investors, whether the major developers or industrial conglomerates. Many of the Core Eurozone countries also benefit from having relatively long-standing domestic investors. In each of these markets, cap rates would rise, but not as significantly as for more open and less liquid markets. Although the US benefits from a deep capital market it would suffer from the significant refinancing of real estate debt that would be required, particularly during 2011-13. Despite these differences, cap rates would continue to rise across all markets and, importantly, would remain high for considerably longer than in the Base case. While the Base case has cap rates tending to compress in 2010/11, the Downside calls for them remaining high until at least 2013.

Figure 32: Office cap rates through Base and Downside scenarios



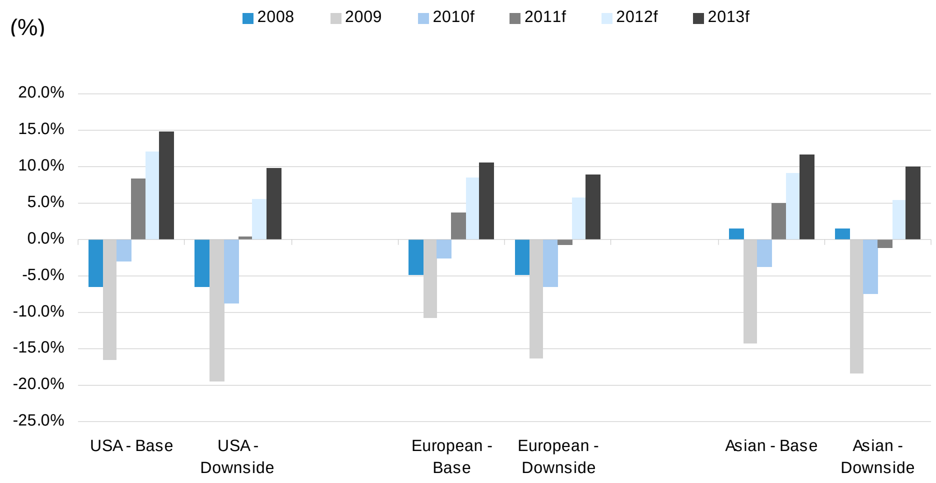
Note: Weighted aggregate performance based on 7 countries in Europe and 6 in Asia. "f" : forecast

Source: RREEF Research, May 2009

Given the poor market fundamentals and the rise in cap rates, the Downside scenario would generate very weak global property returns in 2009, at close to negative 20% compared with the 13% in the Base case scenario. Returns would remain negative in 2010 and 2011 before staging a mild recovery in 2012 before achieving double digit growth in 2013. Within the Downside scenario, returns would average negative 2% a year over the five years to 2013, compared with the positive 2% annual returns in the Base case. The weakness of these returns is very front loaded but, even in the outer years, when the Base case averages 9% (2011-13), the Downside achieves less than 5% a year (Figure 33).

It is the combination of the rental outlook and movement in cap rates, as well as the local appraisal methodology, that generates country-specific differences between the Base and Downside scenarios. In the Downside scenario, the UK and Japan are two perhaps surprising markets that fare relatively well, with average annual growth only 2-3% below the base case (compared with 4.5% at a global level). The UK benefits from being far further through the cycle than most other markets, and Japan is, to some extent, insulated by the shortage of good quality space, the well-capitalised domestic market and the appraisal methodology that smoothes the returns. Other markets that perform relatively well are those in Core Eurozone, particularly those with appraisal regimes that lead to a smoothing of returns, such as Germany and Netherlands. At the other extreme, it is the most open economies and real estate markets of Singapore and Hong Kong that suffer amongst the worse during the down turn and, importantly, the Downside scenario remains bleak for these markets even in the outer years (2011-13). Despite the robustness of their rental market, the Chinese and Korean markets suffer from small and poorly developed real estate capital markets that hold back performance. While the US performs in a similar way to the global market in 2009/10 (with returns averaging 4.4% lower than the Base case of around negative 10%), it suffers in the outer years due to the continuing increase in cap rates due to the pressures of refinancing.

Figure 33: Base and Downside returns across major regions



Note: Weighted aggregate performance based on 7 countries in Europe and 6 in Asia. "f" : forecast

Source: RREEF Research, May 2009

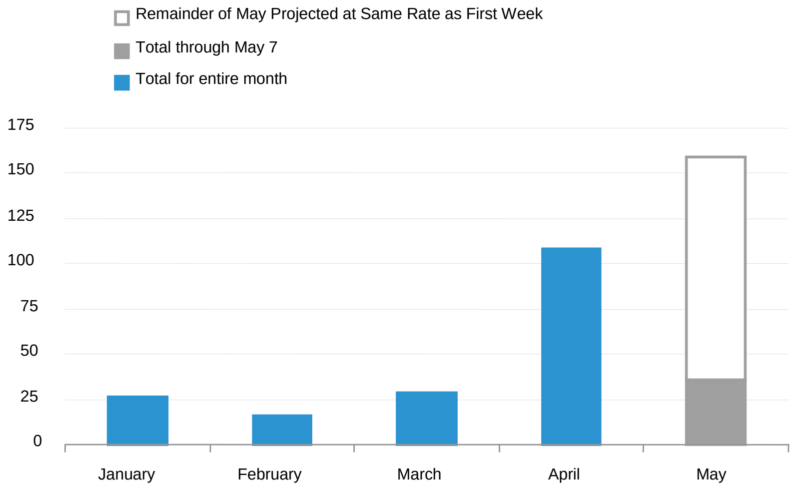
Upside scenario

Economic outlook

Over recent weeks there has been increasing amounts of good news (Figure 34). On May 5th 2009, Federal Reserve Chairman Ben Bernanke testified to the Joint Economic Committee of the US Congress, giving a cautiously optimistic assessment of economic prospects. It reflected a turn away from the more pessimistic outlook he offered at his previous appearance in February. Bernanke's testimony coincides with increasingly more optimistic economic indicators. The real estate sector, too, has begun to pick up on these "green shoots" of optimism. The April performance report from Global Property Research, for example, carried the title, "Signs of a bottoming out?" Even in the battered housing sector, recent data offer glimmers of new hope in the US and Australia.

The extent and tone of media coverage is one of the many factors influencing the confidence of consumers and businesses. The momentum of recovery, to some extent, depends on this confidence, and it can influence the spread between the Base case and the Upside scenario.

Figure 34: Use of the phrase "green shoots" in Financial Times news stories in 2009

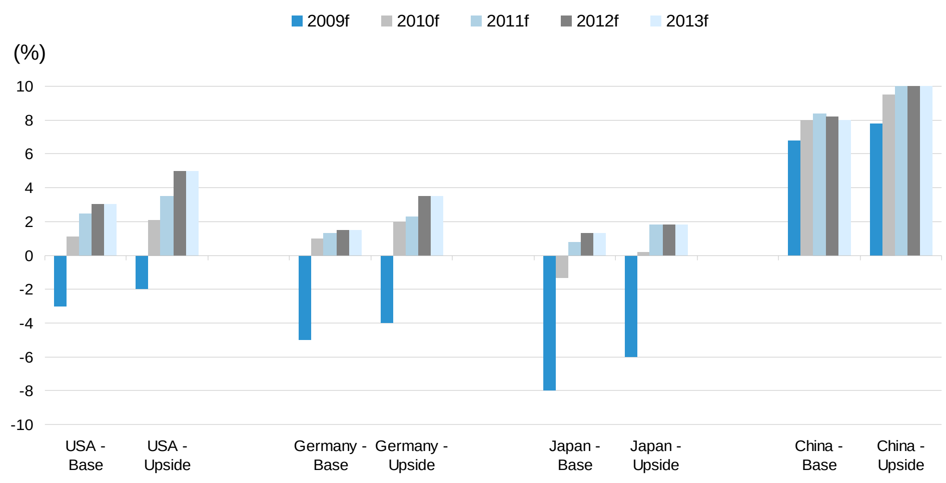


Source: Financial Times archives as of 7 May 2009

Within this scenario, predicated on the stabilisation of the banking sector, the global economy contracts during 2009 but by around 100bp (basis points) less than in the Base case. Unemployment stabilises in most markets by early 2010, there is a resumption of global trade, and confidence returns to financial markets. Economic growth is stronger throughout the period 2009-13 with global GDP averaging close to 3%, driven by 5% growth in the outer years. Important assumptions within this scenario are that the plans to stabilise the financial sector succeed fast, bank guarantees are not used and no additional fiscal stimulus packages are needed. The stabilisation of the financial markets means that uncertainty fades, spreads shrink and equity markets generate strong performance. Inflationary pressure increase, but are contained such that interest rates do not need to rise significantly throughout the forecast period.

Within the Upside scenario, it is the more export-dependent and volatile economies that recovery most strongly. This includes Hong Kong and Singapore, but also the US and China, and the more volatile countries of Europe including Spain, Sweden and the UK. Other European countries perform better than in the Downside, but the inertia of these economies means the pick up is weaker than elsewhere.

Figure 35: Upside GDP outlook

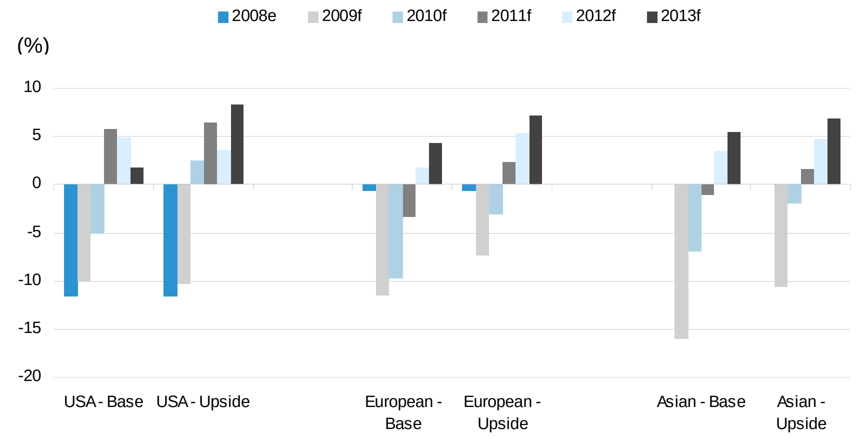


Source: DB Research, April 2009. "f" : forecast

Property fundamentals

In the Upside scenario, the improved economic outlook leads to a milder rental cycle. Rents will still decline in 2009 and 2010, but with an overall office market decline of around 10% compared with 25% for the Base case. The recovery will be earlier than the Base case (rent growth turning positive in 2011), and stronger in the outer years. The more volatile markets will perform more strongly, with office rent growth averaging 8-9% a year stronger growth than the Base case in Hong Kong and Singapore.

Figure 36x: Office rental growth by region, 2008-13 – Base and Upside scenarios

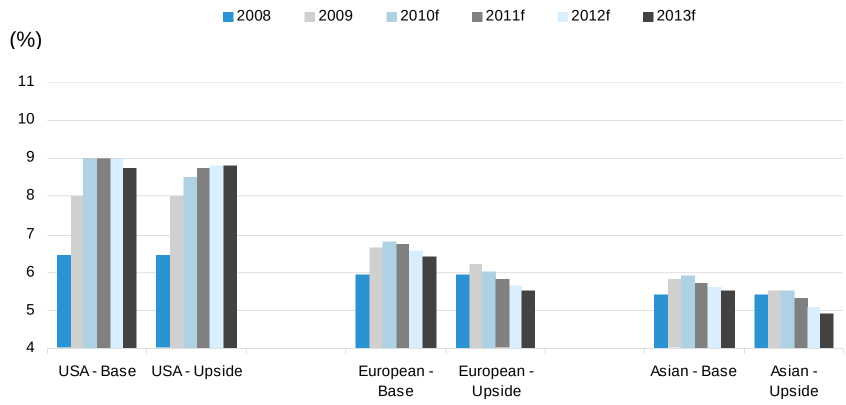


Note: Weighted aggregate performance based on 7 countries in Europe and 6 in Asia. "f" : forecast
Source: RREEF Research, May 2009

Pricing and performance

The combination of better fundamentals and a recovery in the financial market leads to a resumption of investor interest in real estate, and greater availability of debt finance. Cap rates remain elevated even in the Upside scenario such that global office cap rates are higher in 2013 than they were at the end of 2013. These global figures are heavily skewed by the US market given its scale and given the severity of the refinancing challenge, even in the Upside scenario. Within this scenario, average office cap rates are forecast to compress in the US during 2012, and again in 2013 when they should reach around 8.5%. But even this compression means that cap rates would be higher than they were at the end of 2008 (around 7%). Other markets with a strong recovery in fundamentals and a deep capital market should experience a milder rise and stronger compression in cap rates but even in these markets, cap rates in 2013 would be higher than they were at the end of 2007.

Figure 37: Office cap rates through Base and Upside scenarios

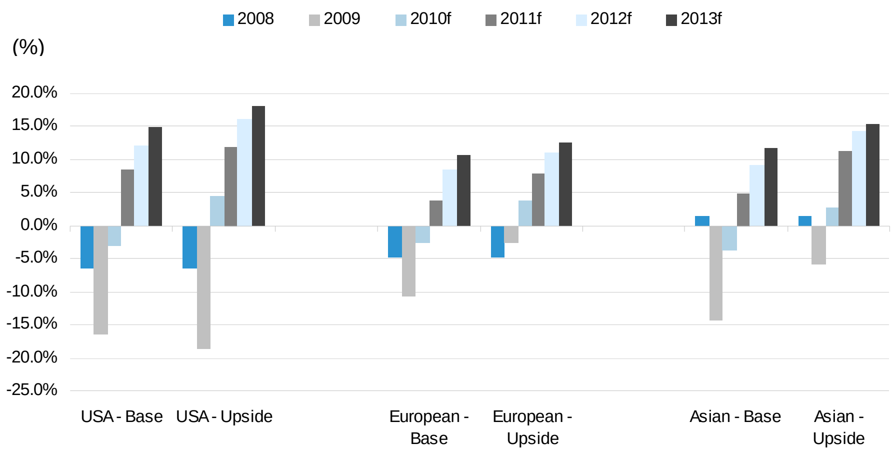


Note: Weighted aggregate performance based on 7 countries in Europe and 6 in Asia. "f" : forecast

Source: RREEF Research, May 2009

As would be expected, it is the most volatile markets that perform the strongest in the Upside scenario. Returns in Hong Kong are expected to average close to 10% a year through the cycle, driven by close to 20% average growth between 2011 and 2013. Singapore is not far behind, and would generate average returns of 15% over the three outer years, similar to the performance of Australia, the US, UK and Korea. Although cap rates remain elevated in a number of these countries, the high levels of income returns, particularly in the US and Korea, is an important factor driving strong returns in the outer years.

Figure 38: Base and Upside returns across major regions



Note: Weighted aggregate performance based on 7 countries in Europe and 6 in Asia. "f" : forecast

Source: RREEF Research, May 2009

Conclusions

The appraisal process means the reporting of direct real estate performance tends to lag the true real estate market and other asset classes. These lags are a major reason for direct performance only falling by 4% or so in 2008, compared with 45% for REITs and 40% for the broader equity market. But the correction is now well under way across real estate markets such that reported performance is likely to decline by around 14% in 2009, representing a value decline of close to 20% during the year. Returns are set to continue to be negative in 2010 with peak to trough performance through the cycle of around negative 20%, or a value decline of around 35%. Although this decline is severe and widespread, there are three important factors that need to be addressed before considering the implications for real estate investment strategies.

First, the reported declines in the real estate market are unlikely to capture the full extent of the decline. On the one hand, the returns covered in this paper relate to "portfolio" returns and these tend to be smoothed and lagged compared with "market" returns. On the other, these portfolio returns do not take into account the impact of leverage and, in a declining market, levered assets will suffer weaker performance than the unlevered market in line with the degree of leverage. On this basis, the 20% value decline that the paper estimates for 2009 is likely to considerably understate the severity of the decline faced by many investors, managers and lenders.

Second, there are marked variations in the depth and timing of the downturn across global markets. Although more synchronised than previous real estate cycles, there continues to be significant geographic variation. This is particularly the case for the UK where the correlation in returns through the worst years of the cycle (2007-10) is no higher than 60% against any other market, and lower than 30% for a range of markets including Germany, Italy, France, Korea and Japan. The UK is a peculiar case given the severity of the correction in its market, but there are other significant geographic variations. Australia, for instance, is set to be through the worst of its decline by the end of 2009, while returns are not likely to turn positive in Japan and Spain until 2011. In some markets, including the UK, Spain, Hong Kong and Singapore, value decline will exceed 50% while in others such as Australia, Germany and Korea it will be below 20%. These variations over the short term will continue in the outer years of the forecast, with the more volatile markets tending to bounce back with double digit growth between 2011 and 2013 compared with an average of around 5% a year in Germany and Japan.

Although these differences between markets will persist through the cycle, the third consideration, that of macro-economic uncertainty is probably the most important. The huge uncertainty facing the economic outlook makes it even more difficult than usual to forecast market performance. For this reason the paper provides an outlook within three distinct scenarios, a central Base case as well as a Downside and an Upside. Within the Base case, global performance is negative 20% between 2008-10 after which values hold steady in 2011 and returns bounce back to average 11% in 2011-12. Over the five year period 2009-13, unlevered returns average 2% a year. In the Downside, returns average negative 2%, with a deeper contraction in the earlier years and a more muted bounce-back. Importantly, values continue to decline in 2011 and hover around zero in 2012, at least a year after the Base case scenario. Within the Upside, returns average close to 7% over the five years, with values starting to rise as early as 2011.

These scenarios, with their different magnitude and timing of performance, are useful in considering appropriate strategies for existing owners of real estate and investors seeking to increase exposure to the asset class. The probability of the scenarios is heavily weighted towards the Base case, at around a 60% probability, with an equal weighting of 20% to both the Downside and the Upside scenarios, so greatest attention should be placed on the implications of the Base case scenario.

Within the Base case, the key implications for existing investors relate to the timing and severity of the downturn. If values are set to decline by 35% through the cycle and if appraised values lag the true market, then many markets will, by mid-2009, be a long way through the correction. For investors in such markets, the most appropriate strategy would be to hold their assets through the cycle. Any real estate exposure should be actively managed, but the focus should be on maintaining existing portfolios rather than seeking to dispose of assets at what could come to be close to the bottom of the cycle. This strategy to manage portfolios through the cycle would be exceptionally difficult, given the challenges of maintaining occupancy and concerns over performance write-downs, and these difficulties would be exacerbated for leveraged investors. Also, although the worst of the market deterioration might have occurred by mid-2009, it will be some time before the markets recover, with little prospect of stronger performance and greater liquidity until 2011 or beyond. But an alternative strategy, for the widespread disposal of assets during 2009/10, would also be exceptionally difficult given the limited liquidity in the market with little more than "fire sale" prices likely to be achieved. More fundamentally, the disposal of such assets would occur during the worst real estate downturn for decades so should be avoided where possible. If such a strategy is to be pursued, then it might be appropriate to focus on those markets least impacted by the dislocation, such as those in Germany, Netherlands, Japan and Korea.

While the Base case scenario has clear implications for existing owners of real estate (not to sell where possible), then it also has very clear implications for new investment into the market. For such investors, the 2009/10 will likely represent an excellent vintage, given the ability to acquire good quality assets, the correction in pricing, and the prospects of a recovery over the following three to five years. The market will likely be weak over the next 18 months, reducing the need to rush to invest in real estate. Despite this, the time required to execute real estate programmes means that investors do need to move quickly to develop investment strategies that will enable them to take advantage of the strong vintage for investing. Delaying this process until 2010 would likely be too late to fully benefit from the current cyclical downturn.

The implications of the Downside scenario could be quite different for both existing and new investors. Within such a scenario, the global real estate market is only in the early stages of its correction. The magnitude and timing of the Downside scenario might spur existing investors to dispose of assets before they suffer more significant write-downs with little prospect of recovery for three or more years. Conversely, potential new investors would be better placed to hold back from increasing exposure to the market until well into 2010 or even 2011 when performance would start to bottom-out.

The implications of the Upside scenario would be to reinforce the case for managing through the cycle and not being pressurised to dispose of assets, given the prospects of a recovery in 2010 across most markets. It might also generate pressure to speed up any plans to invest new real estate capital before the turn-around in market performance.

Clearly these implications vary from market to market and according to the specific considerations of individual investors. They also vary according to the style of investing, with REIT markets and the highest quality assets tending to be the earliest to recover through real estate cycles. The significant variations do, however, clearly demonstrate the need to consider the short to medium trends in market performance, and the risks (both upside and downside) to these trends. It is within this context that we hope this paper provides a useful resource for understanding the performance of the global real estate market, and their implications for different investment strategies.

Appendix: Construction of aggregate total return series for direct real estate

Direct real estate all-property total return aggregates

- Due to differences in the length of the time series for the individual countries' total returns, RREEF Research has back-cast some of them to 1990. The countries for which their series have been back-cast are: Germany, France, the Netherlands, Spain, Italy, Sweden, Japan and South Korea. RREEF has also constructed all-property return series for China, Hong Kong and Singapore.

Figure 39: Total returns back-cast period by country

Key to back-casting	
Country	Period
Germany	90 - 95
Spain	90 - 00
France	90- 97
Italy	90 - 02
Netherlands	90 - 94
Sweden	90 - 96
Japan	90 - 02

Source: RREEF Research

- Regional aggregates of total returns have been weighted by using RREEF's invested stock estimates for 2007. The latter show the size of the investable stock that has been used for investment purposes. In other words, this excludes owner-occupied properties. According to our estimates, Europe forms roughly 30% of the global market, the US 55%, and Asia 15%.
- Key European countries have been used as a proxy for Europe direct real estate returns. This has been constructed as an aggregate market performance weighted by market size for France, Germany, Italy, the Netherlands, Spain Sweden, and the UK. Analysis has shown that Western Europe's performance moves similarly to IPD's Pan-European performance index that encompasses a larger number of smaller countries.
- RREEF Asia Direct Total Returns is constructed as the aggregate market performance weighted by market size for Australia, China, Hong Kong, Japan, South Korea, and Singapore.
- RREEF Global Direct Total Returns is constructed as the aggregate market performance weighted by market size for the US, Western Europe, and Asia.

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