

# Risk Watch

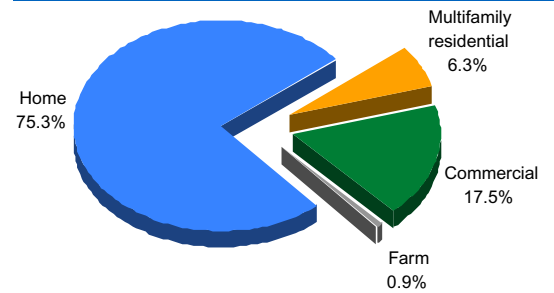
## Commercial Real Estate – Exorcising the shoe

- We conclude that while CRE-related credit losses are likely to remain high at regional and community banks, a repeat of the 2008/09 severe credit crunch is highly unlikely. This is consistent with the view that we first outlined one year ago in February 2009. We discuss nine reasons why we believe that CRE is not the "next shoe to drop".
- In terms of the direct economic impact, the drag from commercial construction on real GDP should moderate by mid-2010. However, we do not expect any positive growth contribution through 2011.
- The impact on the Financial sector varies by industry. For **banks**, we do not see rising construction and CRE loans as a systemic issue, but rather a problem with varying degrees for banks with outsized exposures. For **insurers**, losses should be manageable as companies have been more disciplined in their CRE investments this cycle. For **REITs**, the combination of recent stronger stock prices, capital issuance, alternative sources of capital and targeted debt extensions has significantly reduced the risk of a potential CRE collapse.

In this inaugural report of our *Risk Watch* series—which will focus on monitoring and assessing various potential sources of risks to financial markets—we examine the commercial real estate (CRE) market and its potential impact on the credit channel, the real economy, and the Financial sector.

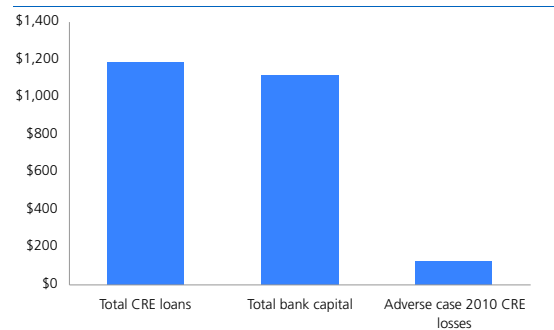
Roughly one year ago, we outlined the key issues related to the growing concerns over commercial real estate in our report, "Will the US commercial real estate market be the next shoe to drop?"

**Figure 1: US residential mortgage market is far bigger than the CRE debt market**  
Composition of US mortgage market



Source: US Federal Reserve, UBS WMR

**Figure 2: Bank losses on CRE loans, even in an adverse economic scenario, should be manageable**  
In billions



Source: US Federal Reserve, SNL Financial and UBS WMR

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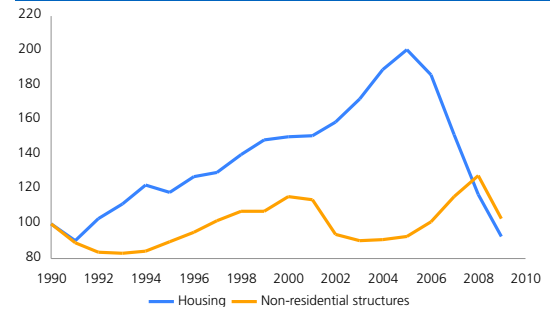
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Following one of the most tumultuous years in the history of the US financial markets, we update our views on this sector's likely impact on the US economy through its direct effect on GDP and its potential systemic impact on the credit channel. Additionally, our Financial sector analysts provide an overview of the impact of commercial real estate on their respective industry groups as well as an update of recent CRE trends.

## Nine reasons CRE losses will not cause another credit crunch

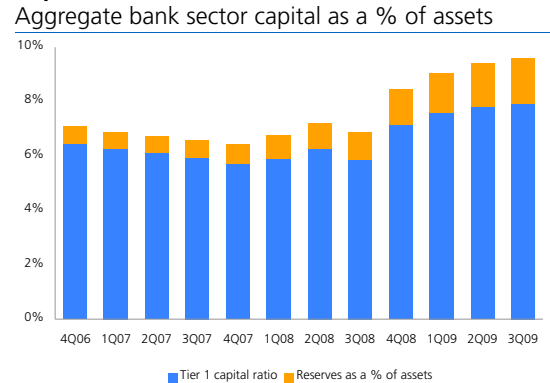
- The CRE market is much smaller than residential real estate.** As Figure 1 illustrates, the residential mortgage market is over three times the size of the commercial and multi-family residential (condos, co-ops) markets combined. The sheer size of the loans outstanding means that the likelihood that losses would be so great that it would materially impact bank capital is small. Additionally, the smaller size of the CRE market makes it less likely that investors would significantly worry about counterparty risk, a concern that exacerbated the financial crisis in 2008 and early 2009.
- Banks have stronger capital positions** than before the residential mortgage meltdown and are more adequately provisioned for further CRE losses (Figures 2 and 4). Even in a worst-case scenario where losses are at the high end of the Fed's stress test assumptions (even though the economy is performing better than the Fed's "more adverse" scenario assumptions), the banking system has more than enough capital to absorb potential losses (Figure 2). While some of this capital cushion will be needed to buffer losses on other types of loans (residential mortgages, credit cards, etc.) our main point is that CRE losses should be manageable and are unlikely to raise systemic risks.
- Underwriting standards are higher for CRE.** This is not to imply that standards did not weaken for both categories of mortgages during the prior economic expansion, but generally, commercial mortgage loan-to-value (LTV) ratios are between 55% and 70%, while LTVs for residential mortgages typically begin at 80%.
- What bubble?** The CRE market did not experience nearly the same increase in capacity over the past 20 years compared to the residential real estate market (see Figure 3). While high unemployment continues to weigh on demand for commercial property, supply growth never materially outstripped demand.
- Loan modification programs scoffed as "extend and pretend" or "delay and pray" often are a net positive.** A key difference between residential and commercial mortgages is that many commercial properties are income-producing and often have a diversified tenant base which buffers the losses incurred from individual defaults. Loan workouts for delinquent commercial properties that are still generating cash flow, albeit at a reduced level, are common in the industry (in this and other real estate cycles) and can make economic sense for both the lender and the borrower.
- Interest rates are at historically low levels.** Not only does a low interest rate support the valuation of real estate, but it also lowers the interest burden on borrowers, allowing more time for economic

**Figure 3: The bubble was in housing, not CRE**  
Residential and non-residential spending on structures, indexed to 1990 levels



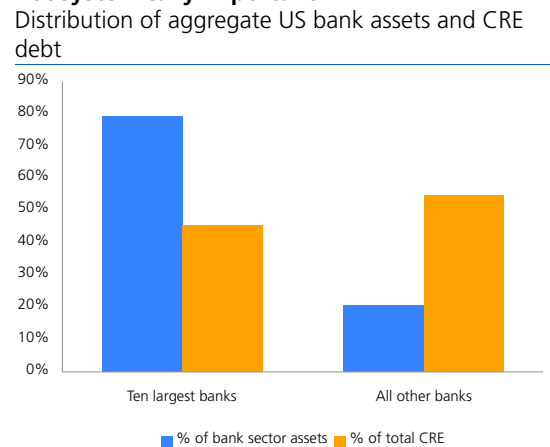
Source: US Bureau of Economic Analysis and UBS WMR

**Figure 4: Bank capital positions continue to improve**  
Aggregate bank sector capital as a % of assets



Source: SNL Financial and UBS WMR

**Figure 5: Banks with outsized CRE exposure are not systemically important**  
Distribution of aggregate US bank assets and CRE debt



Source: SNL Financial and UBS WMR

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conditions to improve to avoid a payment default or property foreclosure.

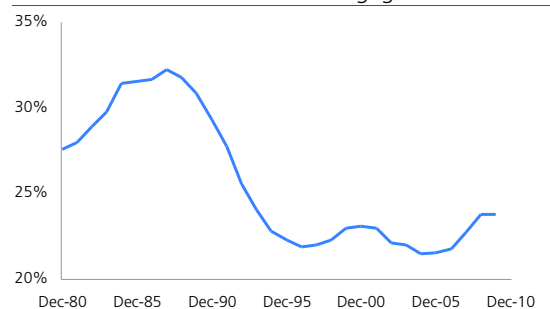
7. **The economy is improving!** Real GDP has been positive for two consecutive quarters and labor market trends – a key driver of vacancy rates and commercial property pricing – appear to be stabilizing. While CRE will likely weaken further as it typically lags an economic recovery by 12-18 months, an improving economy is consistent with lower risk premiums and an increased availability of capital – supportive of CRE values. The recent uptick in the National Association of Realtor (NAR) Commercial Leading Indicator also supports our view that the CRE market is stabilizing.
8. Unlike residential mortgages and securitized assets that are mostly held by larger financial institutions, **commercial mortgages are disproportionately held at smaller, regional banks**. By definition, these smaller banks are not systemically important (Figure 5). (We discuss this further on page 5). Also, there is a well-defined, FDIC-managed process to wind down smaller commercial banks, which should avoid a Lehman Brothers-like disorderly collapse that led to a substantial increase in risk aversion.
9. **Significant CMBS losses have already been incurred.** 20% of commercial mortgages outstanding, or roughly \$700 billion, are in the form of CMBS (commercial mortgage-backed securities). An economic downturn more severe than our baseline (and the CMBS market) assumptions would likely cause greater near-term loss recognition for CMBS holders as these securities would fall in value and are required to be marked to market. However, current market pricing already reflects high default rates on the underlying mortgages and significant CMBS "marks" have already been taken by CMBS holders (largely insurance companies and investment banks). Additionally, roughly \$350 billion of CMBS loan maturities occur between 2015-2017 while "only" about \$150 billion mature over the next three years, minimizing the risks of an abundance of supply hitting the market. These nearer term maturities tend to be of higher quality (lower LTVs, higher debt service coverage), while the longer-dated loan pool that has a higher proportion of loans originated during the peak 2005-2007 period will likely see higher loss rates.

In summary, while we recognize that CRE loan losses will likely remain at high levels over the next two years, a rebound in the broader economy should lead to improvements in other segments of banks' loan portfolios, mitigating the damage from CRE. The nine factors listed above provide the basis for why we do not believe that pending CRE losses will create a repeat of last year's financial panic.

However, the prospect for a strong CRE recovery is unlikely given the sector's sensitivity to the labor market and our expectation for the unemployment rate to remain elevated (above 9.5%) through the end of 2011. We continue to underweight small-cap stocks and the REIT industry – two market segments that have significant CRE exposure and high relative valuations.

**-Jeremy Zirin and David Lefkowitz**

**Figure 6: CRE is much smaller relative to levels prevailing during the late 1980s S&L crisis**  
CRE debt as a % of total US mortgage debt



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### Economics

#### CRE construction bust is past the worst

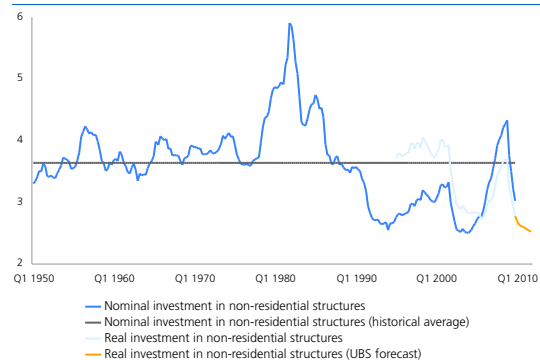
CRE construction started to contract in 3Q08, when the US economic recession deepened. It then plummeted by an annual rate of almost 45% in 1Q09, as credit financing froze and aggregate demand collapsed. This was the worst contraction in the cycle, but the correction has continued through 4Q09, the last quarter for which data has been reported.

Two reasons form the basis of our view for further moderation in the contraction of CRE construction. First, the level of non-residential investment relative to GDP was not much higher than its long-term average before the bust (see Figure 7). Moreover, since then, this ratio has already clearly fallen below its long-term mean. While excess capacity in the CRE space is still high and rising, the fact that the investment-to-GDP ratio is historically low and falling suggests that the rate of construction retrenchment should further moderate. Second, the NAR Commercial Leading Indicator (CLI) edged up in 3Q09, after falling since 3Q07.

The CLI is a composite of 13 indicators that lead the CRE cycle as measured by a composite of net absorption and construction of private commercial buildings. Leading indicators include nationwide statistics to gauge the business cycle like industrial production or employment, but also CRE-specific indicators like the REIT Price Index. The CLI leads CRE activity by about three quarters. If the rebound in 3Q09 is confirmed – and we think it will be – it suggests that non-residential construction should cease contracting by 3Q10. We currently forecast further CRE construction retrenchment through 2Q10 and then expect a stabilization throughout 2011. So while we are pretty sanguine about a foreseeable end to the CRE construction slump, we think a recovery will be absent. An only-moderate real GDP growth recovery, bogged down by lackluster consumer demand, implies that CRE construction will probably not turn positive for quite some time.

**-Thomas Berner**

**Figure 7: No CRE investment bubble evident**  
Non-residential investment as a % of GDP



Source: US Bureau of Economic Analysis and UBS WMR

**Figure 8: CRE leading indicators are stabilizing**  
National Association of Realtors Commercial Leading Indicator



Source: National Association of Realtors and UBS WMR

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## Banking Sector

Our current view on the bank sector has been cautious with respect to banks with significant CRE (income producing properties) and construction exposure. While we do not think that CRE, in particular, will result in a systemic problem for the sector, we do expect increasing losses in 2010 and beyond. We also think construction losses, which have been very high in 2009, will remain at a high level, but show indications of moderating. Therefore, we continue to believe that banks with especially high levels of CRE and construction exposure are likely to face an extended period of losses and take longer than other banks to reach “normalized” earnings.

Overall, we have no banks with heavy CRE exposure on our Outperform list. Two of them, Zions and M&T, are on our Underperform list. As we have noted in the past and in Figure 5, CRE and construction lending is a more significant factor at the regional and community banks than it is for large banks. Figure 9 shows the 25 banks with the highest exposure to construction lending as measured as a percent of tangible common equity. Figure 10 shows the same for CRE. Notice that regional banks make up the entirety of both lists. The large, universal banks such as Bank of America, Citigroup and JP Morgan have minimal construction and CRE exposure (relative to tangible common equity). Even Wells Fargo does not make these lists.

### Banking sector exposure updated

As of September 30, 2009, income producing CRE represented 15% of outstanding loans, or just under USD 1 trillion. Surprisingly, income producing CRE exposure has grown modestly since 2008. In contrast, construction lending comprised only 7% of total loans and has contracted significantly during 2009 due to charge-offs, pay downs, and a combination of lack of demand by potential borrowers and unwillingness by banks to lend in this area. In our February 2009 report, we observed that the economic indicators were weak and that CRE and construction portfolios would experience increasing loan losses in 2009. We also noted that we did not think CRE would be the biggest problem for banks during the year. Our assessment has proven to be fairly accurate based on a review of asset quality trends. This is demonstrated in Figure 11, in which we detail the change in non-performing CRE, construction and multi-family loans between 4Q 2008 and 3Q 2009.

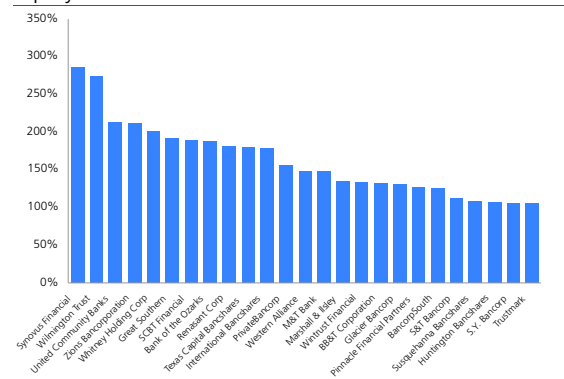
### Non-performing loans and net charge-offs increase

The chart shows that non-performing loans in all three categories increased significantly over the year, with construction non-performers increasing from 7.6% to 13.2% in that time period, by far the highest of any loan category. The levels are lower for CRE and multi-family, but non-performers in those categories have been increasing as well. Net charge-offs have followed a similar path, as detailed in Figure 12.

Clearly, construction has been the biggest problem so far. While construction loans represented only 7% of all loans, they accounted for 14% of total net charge-offs. Through 3Q 2009, CRE and multi-family have not been a major problem. Going forward, we think CRE losses will increase. But two years into the cycle, CRE, construction and multi-family

**Figure 9: Banks with excessive exposure to construction loans...**

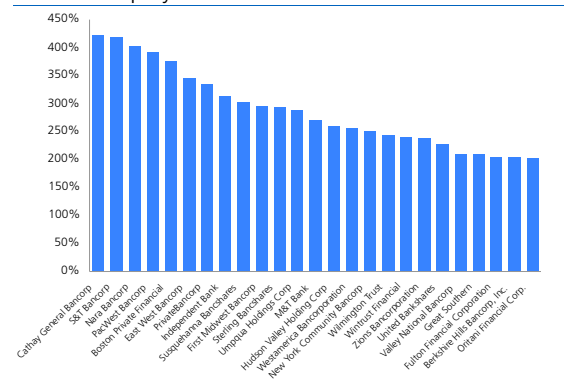
Construction loans as a % of tangible common equity



Source: SNL Financial and UBS WMR

**Figure 10: ...and CRE**

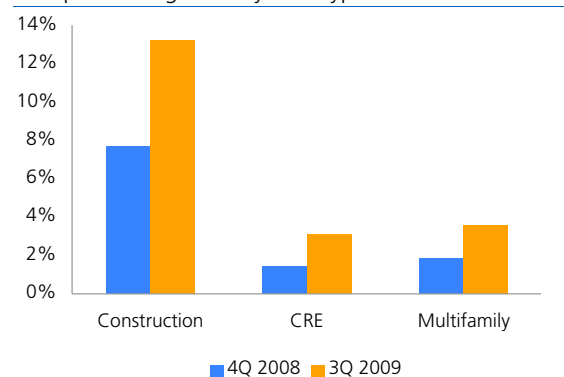
CRE income producing loans as a % of tangible common equity



Source: SNL Financial and UBS WMR

**Figure 11: Problem loans continue to grow**

Non-performing rates by loan type



Source: FDIC and UBS WMR

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losses have tracked better than expectations, which we believe will continue.

### Performing better than Stress Test scenarios

Last May, as most readers will recall, the Federal Reserve performed stress tests on the 19 largest banks, known as the Supervisory Capital Assessment Program (SCAP). As part of that process, the regulator's estimated 2 year loss rates (for 2009 and 2010) in baseline and more adverse scenarios. In Figure 13 we show the regulators loss estimates along with our estimation of cumulative losses so far. The main take away is that thus far, loss rates for construction, CRE and multi-family loan segments all are performing better than the baseline loss rates outlined in the government's stress test.

This SCAP projected loss rates were based on the baseline and adverse economic forecasts shown in Figure 14. Currently, WMR is projecting GDP of -2.5% in 2009 and 3.0% in 2010. Unemployment is currently 9.7% and WMR forecasts that it remain at, or near, its current level through 2011. It seems that actual economic results are falling somewhere between the baseline and adverse scenarios.

### Construction losses past peak, CRE and multi-family losses still rising

Loan losses in construction, CRE and multi-family are tracking below even the baseline estimates thus far through the cycle. But our review of new problem loan formation trends indicates that losses may accelerate in 2010. 2009 CRE problem loan formation through 3Q 2009 was USD 24bn compared to USD 11bn in all of 2008. For multi-family loans, problem loan formation increased from USD 2.9bn to USD 5.0bn in the same period. In contrast, construction problem loan formation seems to have flattened out going from USD 54bn in 2008 to USD 51bn through the first three quarters of 2009.

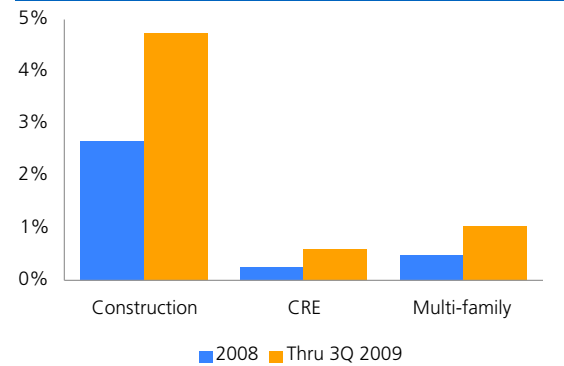
The relative slowdown in construction problem loan formation is an encouraging sign. However, the level of problem formation remains high, suggesting to us that losses over the next five quarters (through the end of 2010) could approach the 10-12% range as outlined in the Federal Reserve's baseline scenario, which would be consistent with lower losses in 2010.

Based on our analysis, we believe that CRE and multi-family losses are likely to increase in 2010, perhaps even double from the low levels seen so far. However, we think cumulative losses will remain below the low end of the Fed's baseline range. We see some mitigating factors that should help constrain CRE and multi-family losses from reaching the Fed's range. First, the low level of interest rates benefits borrowers as it lowers debt servicing costs, which has helped offset lower income from increased vacancies and lower rents. Second, the regulators have given the green light to banks to renew loans even in cases in which the loan-to-value might be higher than typical standards, as long as payments are being made. Third, anecdotal information suggests that property valuations are stabilizing.

### Sizing the problem - CRE is not that big

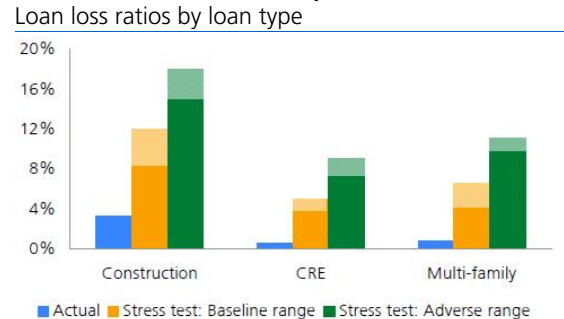
We reiterate that we do not see construction and CRE as a systemic problem, but rather a problem of varying degrees for banks with outsized

**Figure 12: Construction has been hit hardest**  
Net charge-off rate by loan type



Source: FDIC and UBS WMR

**Figure 13: Actual losses have been better than the Fed's stress test assumptions**



Note: Actual losses reflect cumulative losses for the first 3 quarters of 2009; whereas the stress test losses are estimates of cumulative losses for full year 2009 and 2010 combined. We expect cumulative losses over the 2009/10 time period to be lower than the midpoint of the Fed's Baseline assumptions. Source: US Federal Reserve, SNL Financial and UBS WMR.

**Figure 14: Economy is performing roughly between Fed's Baseline and Adverse scenarios**

	Baseline		Adverse		Actual / UBS Fcast	
	2009	2010	2009	2010	2009	2010
<b>GDP</b>	-2.0%	2.1%	-3.3%	0.5%	-2.4%	3.0%
<b>Unemploymt</b>	8.4%	8.8%	8.9%	10.3%	10.0%	10.0%
<b>Home prices</b>	-14.0%	-4.0%	-22.0%	-7.0%	-4.0%	0.0%

Source: US Federal Reserve and UBS WMR

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exposures. Figure 15 shows net charge-offs by major loan category since 2006, which compares losses for the two years leading up to the recession and the seven quarters since the recession began.

Figure 15 clearly shows the devastating impact that recession-related losses had upon bank earnings. Loan losses since the recession began in December 2007, total to USD 213bn compared to USD 62bn in the two years before the recession. As a result, bank earnings declined by almost 90% during this period.

However, as Figure 15 demonstrates, CRE and construction are small components of the total. Even if CRE losses double or triple, the impact on overall losses would be manageable. And, as noted above, we believe that construction losses are likely to level off in 2010. Furthermore, if the economy improves, continuing problems in CRE are likely to be offset by improvement in other areas, including residential mortgage.

-Dean Ungar

## Insurance Sector

### Why do insurance companies have CRE exposure?

Insurance companies invest their incoming insurance premium cash flow in various investments to earn a satisfactory return, including various fixed-income securitized instruments like CMBS and – in the case of some life and multi-line insurers or the generally non-property and casualty insurance companies, which need to stay reasonably liquid – direct commercial mortgage loans (CML) and physical real estate. Insurers tend to have fairly well-diversified, conservative investment portfolios in part because of strict regulatory requirements and credit rating agency and investor scrutiny. These companies attempt to match their assets (investments) with their liabilities (claims payouts). Life insurers have long-duration liabilities (life insurance policies, annuities) and tend to invest a portion of their premiums into longer-duration instruments like CMBS and direct mortgage loans, and to a much lesser extent, physical real estate to generate a higher return and to diversify their investments.

### How much CRE exposure do insurers have, and what is it?

In 3Q09, US life insurers had USD 4.8 trillion in assets. CRE exposure represented approximately 16% of invested assets (see Figure 16; note: bonds include CMBS). This is down significantly from 20 years ago at the depths of the last downcycle when insurers held 30% of invested assets in CRE, with weaker capital ratios, earnings and cash flow to cushion significant asset deterioration. Direct exposure to physical real estate is small at less than 1%. Of this amount, roughly 30% is used by the companies in the course of their operations, while the other 70% is largely comprised of investments originated several years ago that have sizeable levels of unrealized gains.

CML comprises the largest insurer CRE exposure. However, insurers are fairly diversified geographically (see Figure 17) as well as by property type (see Figure 18). Life insurers also have limited exposure to properties that are undeveloped, underdeveloped or in the tenant lease-up phase. These

**Figure 15: Consumer-related losses have dominated**

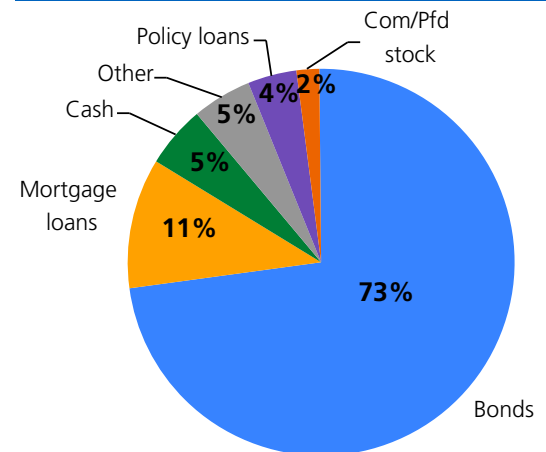
Bank net charge-offs and net income in billions of USD

	Great Recession			Pre-Recession		
	YTD 2009	2008	Total	2007	2006	Total
Residential mortgage	34	22	56	5	2	7
Construction	17	15	32	2	0	2
CRE	4	2	7	1	0	1
Multi-family	1	1	2	0	0	0
<b>Total Real Estate</b>	<b>57</b>	<b>39</b>	<b>97</b>	<b>8</b>	<b>3</b>	<b>11</b>
Other	61	46	108	29	20	49
<b>Total</b>	<b>124</b>	<b>89</b>	<b>213</b>	<b>38</b>	<b>23</b>	<b>62</b>
<b>Net income</b>	<b>8</b>	<b>15</b>	<b>24</b>	<b>98</b>	<b>128</b>	<b>226</b>

Source: SNL Financial and UBS WMR, 2009 data through 3Q09

**Figure 16: US life insurance industry asset mix**

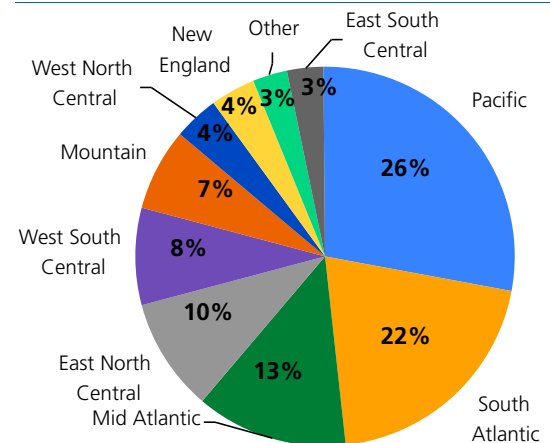
Aggregate US life insurance investments



Source: SNL Financial and UBS WMR

**Figure 17: Life insurance loans are reasonably diversified by geography...**

Aggregate US life insurance loan portfolios



Source: American Council of Life Insurers and UBS WMR

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properties have generated some of the biggest losses so far for banks and CRE investors. Insurers have generally underwritten better than during the previous cycle, as evidenced by the typical loan having a solid LTV of 65%-75% and a debt service coverage (DSC) ratio of 1.5-1.7 times. Additionally, insurers have a relatively small portion of loans (20%-25% of the CML portfolio) maturing over the next two years, and most of these loans were originated 6-8 years ago based on the typical 10-year loan duration (see Figure 19). Loans maturing over the next two years are being refinanced at currently more-attractive interest and discount rates, assuming the underlying properties are performing. However, if CRE deteriorates more than expected, insurers will likely report higher losses as extensions, restructurings and foreclosures rise. Currently, insurer delinquency rates are around 0.25% of total CML, versus over 3% for banks and CMBS.

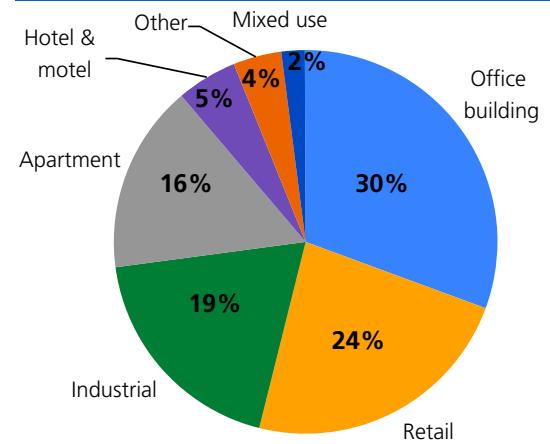
Insurers have increased their CMBS exposures as CMLs have declined over the last 20 years. However, insurers tended to invest in the highest tranches, especially during 2006-2008 when underwriting criteria weakened (see Figure 20). Insurers typically purchased 'Aaa' rated CMBS at the top of the capital structure. These super senior and mezzanine tranches have as much as 30% subordination below them to absorb losses on the underlying mortgages. With more than 60% of CMBS holdings in 2005 and prior vintages and more than 75% in 'Aaa' rated tranches (see Figure 21), expected losses should be moderate. The majority of insurer CMBS have LTVs of 50%-60%, with DSC ratios of 1.5-2 times, much better than the typical CMBS asset.

### Why do we believe CRE will not be a big issue for insurers?

We believe for the following reasons that insurers have been fairly disciplined in their CRE investments this cycle and their ultimate losses should be manageable:

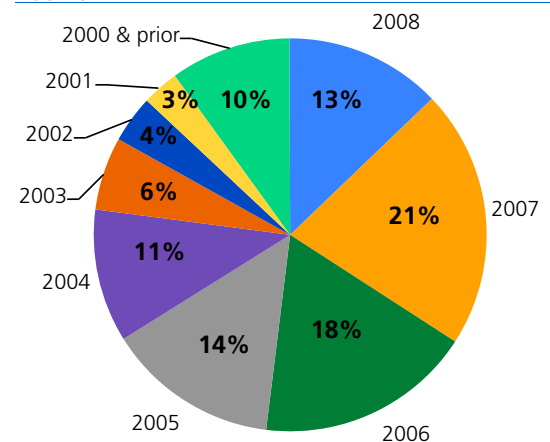
- Insurers have been reducing their exposure to CRE over the last 18-20 years from over 30% of invested assets during the last cycle to around 16% at present. Additionally, insurer capital bases, earnings, and cash flow positions are more robust today.
- Given the long duration of insurers' investment portfolios and the fact that it is difficult to have a "run" on an insurance company, insurers have flexibility to hold CRE investments to maturity or until they get back to par. This should minimize any realized investment losses and charges to earnings.
- Potential CML losses are mitigated by insurers' long investment time horizon due to their ability to work with troubled borrowers to extend or refinance loans.
- The limited amount of insurers' CMLs maturing over the next two years (roughly 10% of the portfolio annually) at the likely trough of the CRE market should mitigate large losses. Sizeable CML losses for insurers should be mitigated due to well-diversified loan portfolios based on property type and geography that tend to be well underwritten on more attractive, fully stabilized and leased properties.

**Figure 18: ...property type...**  
Aggregate US life insurance loan portfolios



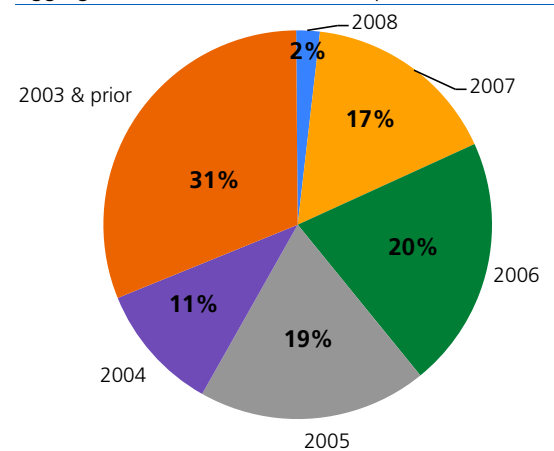
Source: American Council of Life Insurers and UBS WMR

**Figure 19: ...and vintage**  
Aggregate US life insurance loan portfolios



Source: American Council of Life Insurers and UBS WMR

**Figure 20: CMBS exposures are also diversified by vintage...**  
Aggregate US life insurance CMBS portfolios



Source: American Council of Life Insurers and UBS WMR

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- Insurers' investment standards have been typically higher than the average implied by indices like the CMBX. CMBS exposures are generally super senior and higher rated vintages tend to be pre-2006, before the most aggressive relaxation of lending standards occurred. LTV ratios tend to be lower and DSC ratios higher than market averages.

### Capital and timing are key to understanding exposures and potential risks

We believe life insurer exposure to CRE and other credit-related investments, along with guaranteed benefits associated with variable annuities, both of which impact insurer capital levels, are the biggest issues facing these companies today. However, we believe these companies can largely withstand the unrealized and realized writedowns and losses related to both issues. This is due to the fact that life insurers have raised significant amounts of capital over the last nine months; unrealized investment losses have dramatically declined with the recoveries in both equity and credit markets; and insurers likely earned roughly USD 15bn in net income for 2009. While this is down from peak earnings levels of USD 39bn (2007), depressed 2009 estimated earnings alone are enough to offset expected CRE total losses of USD 10bn-15bn (2%-3% of CRE assets) spread over the course of the next several years, making the CRE issue an earnings event for insurers, not a capital event.

-Mike Dion

## REIT Sector

Implicit in 2009's conventional wisdom that CRE would be the next shoe to drop was the belief that the capital markets would remain closed. This implied REITs would be unable to refinance or issue debt and would be unwilling to raise equity at extremely depressed prices. In fact, 2009 proved to be anything but conventional – it was truly a tale of two markets. As can be seen in Figure 22, the MSCI US REIT index declined in excess of 40% between 1 January and 15 March 2009. However, between 16 March and 31 December 2009, the index registered a total return in excess of 110% (see Figure 23).

### The capital markets open up

REITs began their strong run coinciding with the sector's USD 2bn capital raising in March 2009. As questions surrounding REITs' viability and survivability began to recede, both equity and debt capital became readily available on increasingly attractive terms. For all of 2009, REITs raised almost USD 33bn in capital (see Figure 24). Adding to this figure, the USD 30bn REITs have in cash and line-of-credit capacity, the USD 40bn raised by private equity for CRE investments, the several billion USD raised by opportunity and special purpose acquisition funds and the foreign capital that continues to be active in US CRE, we believe there is well in excess of USD 100bn available to invest in distressed CRE.

### "Delay and pray" to the rescue

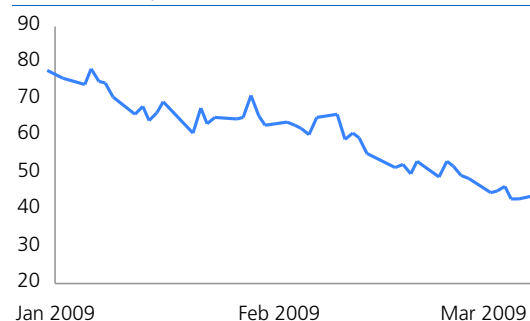
In January 2009, we began discussing with clients the concept of lenders renegotiating and extending performing loans that were set to mature. Often derided as "pretend and extend" or "delay and pray", we believed

**Figure 21: ...and are generally rated highly**  
Aggregate US life insurance CMBS portfolios

Vintage	Rating					
	Sup Senior	Aaa	Aa	A	Baa	Ba & below
2008	54%	28%	8%	5%	4%	1%
2007	43%	37%	9%	6%	3%	1%
2006	51%	26%	8%	7%	5%	2%

Source: American Council of Life Insurers and UBS WMR

**Figure 22: REIT shares were hurt in early 2009...**  
US REIT index, total return



Source: Bloomberg and UBS WMR

**Figure 23: ...but then bounced strongly**  
US REIT index, total return



Source: Bloomberg and UBS WMR

## Risk Watch

then, and continue to believe now, that prudent extension of performing loans backed by strong, creditworthy sponsors and properties is intelligent business for the banks, the borrowers and the economy.

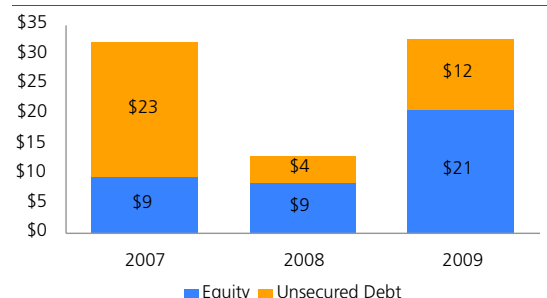
The combination of strong stock price performance, capital issuance, alternative sources of investment and targeted debt extensions has dramatically altered the calculus of a potential CRE collapse. Although a certain amount of distress is inevitable owing to the aggressive underwriting standards of 2005-2007, particularly in the construction loan and CMBS markets, we believe REITs and other liquidity-rich vehicles are increasingly viewed as buffers against a systemic collapse of the CRE market.

As we mentioned earlier in the report, there are several important distinctions between residential real estate (RRE) and CRE: 1) the RRE mortgage market is significantly larger than the CRE debt market (USD 11 trillion vs. USD 3.5 trillion); 2) RRE is a non-income-producing asset while the vast majority of CRE is income-producing; and 3) it is estimated that more than 25% of the residential mortgages in the US have significant negative equity. Conversely, the compression in cap rates over the past six months has substantially bolstered REIT and CRE equity values. We believe a number of the CRE naysayers are extrapolating the problems of the RRE market to CRE and REITs without appreciating the significant relative differences.

**-Jon Woloshin**

**Figure 24: The capital markets opened for REITs in 2009**

In billions



Source: UBS WMR

## Risk Watch

# Appendix

### Analyst certification

Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

### Stock recommendation system

Analysts provide a relative rating, which is based on the stock's total return potential against the total estimated return of the appropriate sector benchmark over the next 12 months.

### Industry sector relative stock view system

Outperform (OUT)	Expected to outperform the sector benchmark over the next 12 months.
Marketperform (MKT)	Expected to perform in line with the sector benchmark over the next 12 months.
Underperform (UND)	Expected to underperform the sector benchmark over the next 12 months.

### Under review

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### Terms and Abbreviations

Term / Abbreviation	Description / Definition	Term / Abbreviation	Description / Definition
1H, 2H, etc. or 1H07, 2H07, etc.	First half, second half, etc. or first half 2007, second half 2007, etc.	1Q, 2Q, etc. or 1Q07, 2Q07, etc.	First quarter, second quarter, etc. or first quarter 2007, second quarter 2007, etc.
2007E, 2008E, etc.	2007 estimate, 2008 estimate, etc.	ADR	American depository receipt
AUM	Assets under management = total value of own and third-party assets managed	bn	Billion
bp or bps	Basis point or basis points (100 bps = 1 percentage point)	BVPS	Book value per share = shareholders' equity divided by the number of shares
CAGR	Compound annual growth rate	Cant Inc/Capita	Cantonal income per capita (Switzerland only)
Capex	Capital expenditures	CFO	1) Cash flow from operations, 2) Chief financial officer
Cost/Inc Ratio (%)	Costs as a percentage of income	CPI	Consumer price index
CR	Combined ratio = ratio of claims and expenses as a percentage of premiums (for insurance companies)	CY	Calendar year
DCF	Discounted cash flow	DDM	Dividend discount model
Dividend Yield (%)	Dividend per share divided by price per share	DPS	Dividend per share
EBIT	Earnings before interest and taxes	EBIT Margin (%)	EBIT divided by revenues
EBIT (D)A	Earnings before interest, taxes, (depreciation) and amortization	EBITDA Margin (%)	EBITDA divided by revenues
EBITDA/Net Interest	EBITDA divided by net interest expense	EBITDAR	Earnings before interest, taxes, depreciation, amortization and rental expense
EFVR	Estimated fair value range	EmV	Embedded value = net asset value + present value of forecasted future profits (for life insurers)
EPS	Earnings per share	Equity Ratio (%)	Shareholders' equity divided by total assets
EV	Enterprise value = market value of equity, preferred equity, outstanding net debt and minorities	FCF	Free cash flow = cash a company generates above outlays required to maintain/expand its asset base
FCF Yield (%)	Free cash flow divided by market capitalization	FFO	Funds from operations

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Term / Abbreviation	Description / Definition	Term / Abbreviation	Description / Definition
FY	Fiscal year / financial year	GDP	Gross domestic product
Gross Margin (%)	Gross profit divided by revenues	h/h	Half-year over half-year; half on half
Interbank Ratio	Interbank deposits due from banks divided by interbank deposits due to banks	Interest Coverage	Ratio that expresses the number of times interest expenses are covered by earnings
Interest exp	Interest expense	ISIN	International securities identification number
LLP/Net Int Inc (%)	Loan loss provisions divided by net interest income	LLR/Gross Loans (%)	Loan loss reserves divided by gross loans
Market cap	Number of all shares of a company (at the end of the quarter) times closing price	m/m	Month-over-month; month on month
mn	Million	n.a.	Not available or not applicable
NAV	Net asset value	Net Debt	Short- and long-term interest-bearing debt minus cash and cash equivalents
Net Int Margin (%)	Net interest income divided by average interest-bearing assets	Net Margin (%)	Net income divided by revenues
n.m. or NM	Not meaningful	NPL	Non-performing loans
Op Margin (%)	Operating income divided by revenues	p.a.	Per annum (per year)
P/BV	Price to book value	P/E	Price to earnings
P/E Relative	P/E relative to the market	P/EmV	Price to embedded value
PEG Ratio	P/E ratio divided by earnings growth	PPI	Producer price index
Prim Bal/Cur Rev (%)	Primary balance divided by current revenue (total revenue minus capital revenue)	Profit Margin (%)	Net income divided by revenues
ROA (%)	Return on assets	ROCE (%)	Return on capital employed = EBIT divided by difference between total assets & current liabilities
ROE (%)	Return on equity	ROAE (%)	Return on average equity
ROIC (%)	Return on invested capital	Solvency Ratio (%)	Ratio of shareholders' equity to net premiums written (for insurance companies)
Tax Burden Index	Swiss tax index; 100 = average tax burden of all cantons	Tier 1 Ratio (%)	Tier 1 capital divided by risk-weighted assets; describes a bank's capital adequacy
tn	Trillion	Valor	Swiss company identifier
WACC	Weighted average cost of capital	UBS WMR	UBS Wealth Management Research
y/y	Year-over-year; year on year	YTD	Year-to-date

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# Appendix

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