Deutsche Bank

12 September 2011

CRE Debt Research

The Road Ahead for CRE and the US Banking Sector

Special Report

Research Team

Harris Trifon
Research Analyst
(+1) 212 250-5893
harris.trifon@db.com

Dave Zhou
Research Analyst
(+1) 212 250-1952
david-j.zhou@db.com

The commercial real estate loans held by the US banking sector have been marked by confusion and, in some cases, paranoia since the very beginning of the credit crisis. A sampling of the headlines which made their way to the mainstream financial media at the time highlights the concern for this sector which generally has not changed.

While the prognosticators at the time were not entirely accurate, the size of the sector, as well as its importance to the banking system and CRE financing still warrant significant attention. The intent of this report is to provide some details on how the loans have performed to date; what investors can expect in the coming years; and some of the investment implications for CMBS participants.

In short, we find that while the sector has not lived up to the doomsday predictions, there is still a risk of significant losses. The timing of the losses will of course be critical and our loss projections will require liquidation/delivering activity to take place over a long period of time. Put simply, although banks have benefited from not liquidating loans in the depths of the Great Recession, the future benefit of extending the process seems to be minimal.

The time table for deleveraging will vary dramatically depending on the ability of the various institutions to take write-downs and reserve for losses. Our analysis shows that many small and some medium sized institutions remain unprepared for the harsh realities ahead. The potential for another recession and recent financial market volatility will only serve to increase the stakes for shareholders, regulators and investors of all types.

Due to the scope of the issue and the potential for further deterioration, we are increasingly convinced that the end game will entail deleveraging via inflationary channels. The over-leverage in nearly every corner of the developed world makes this the only "acceptable" resolution strategy. As a result, it is possible that some of the projections detailed in this report will not come to fruition. The road from here to there however will be long, arduous and undoubtedly interesting.

Summary

The commercial real estate loans held by the US banking sector have been marked by confusion and, in some cases, paranoia since the very beginning of the credit crisis. A sampling of the headlines which made their way to the mainstream financial media at the time highlights the concern for this sector which generally has not changed. Some of our favorites include:

Headline sample

Date	Headline	Publication
3-Oct-08	Office Space Is Emptying Out	Wall Street Journal
15-Oct-08	Plight worsens for commercial property sector	Financial Times
5-Nov-08	Economic Data Point to More Bank Pain	Barron's
23-Jun-09	Worries over systemic risk in CMBS	Financial Times
24-Jun-09	Real Estate Won't Recover Until 2017	Forbes
14-Jul-09	Commercial Property Bust Threatens U.S. Banks	Forbes
22-Jul-09	US banks warn on commercial property	Financial Times
31-Oct-09	Commercial Real Estate Portends Crisis	Wall Street Journal

Source: Deutsche Bank, Wall Street Journal, Financial Times, Barron's, Forbes

While the prognosticators at the time were not entirely accurate, the size of the sector, as well as its importance to the banking system and CRE financing still warrant significant attention. The intent of this report is to provide some details on how the loans have performed to date; what investors can expect in the coming years; and some of the investment implications for CMBS participants.

In short, we find that while the sector has not lived up to the doomsday predictions, there is still a risk of significant losses. The timing of the losses will of course be critical and our loss projections will require liquidation/delivering activity to take place over a long period of time. Put simply, although banks have benefited from not liquidating loans in the depths of the Great Recession, the future benefit of extending the process seems to be minimal.

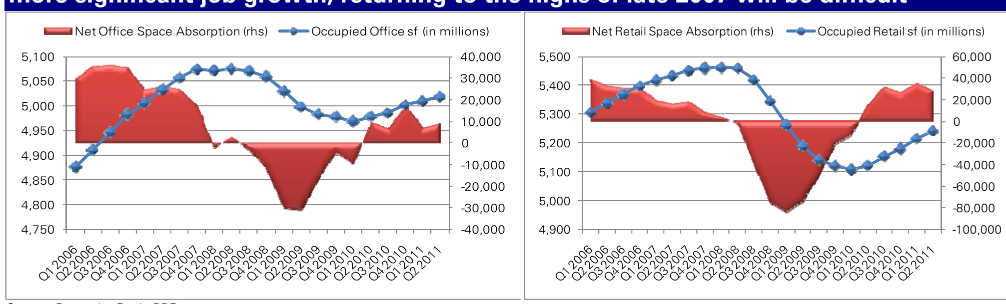
The time table for deleveraging will vary dramatically depending on the ability of the various institutions to take write-downs and reserve for losses. Our analysis shows that many small and some medium sized institutions remain unprepared for the harsh realities ahead. The potential for another recession and recent financial market volatility will only serve to increase the stakes for shareholders, regulators and investors of all types.

Today's CRE Market

Before delving into the details of current and future CRE loan performance, it is helpful to start with an update of the demand drivers for fundamentals. Over the last few years CRE fundamentals have improved from the depth of the Great Recession but still have a long way to go. As we have often argued, the biggest impediment to a stronger recovery is weak job growth. The two largest CRE sectors are office and retail and both require trend or above-trend job growth to maintain rent growth. The lackluster rate of job growth and the stubbornly high unemployment rate have stunted the recovery.

Although there are many ways to measure the strength of the recovery in the retail and office sectors, one of our favorites is to examine the absorption rate. The amount of occupied office space across the U.S. peaked near the middle of 2008 at approximately 5.08B sf and the absorption rate was negative from that time until the beginning of 2010. Although the office absorption rate has turned positive, it has been rather weak. *Consider that the amount of* *office space absorbed in the last year was roughly equivalent to the amount absorbed in the summer of 2006!* The general trend in the retail sector is similar to office, with the biggest difference being the strength of the post-2010 recovery. However, the magnitude of the declines in the retail sector was much more severe. So despite the stronger recovery, vacancy rates in both sectors remain close to all-time highs. As economic data releases become increasingly negative and the risk of another recession continues to rise, it is doubtful that a meaningful positive shift in either sector's absorption rate is imminent. A continued economic "rough patch" or another recession would pressure the positive trend in absorption rates. But we do not believe the declines observed in 2008 and 2009 will re-occur. The lack of new supply coming online in the next few years will keep vacancy rates near current levels even in light/moderate economic stress.

The demand for office and retail space has been positive for the last year. But without more significant job growth, returning to the highs of late 2007 will be difficult

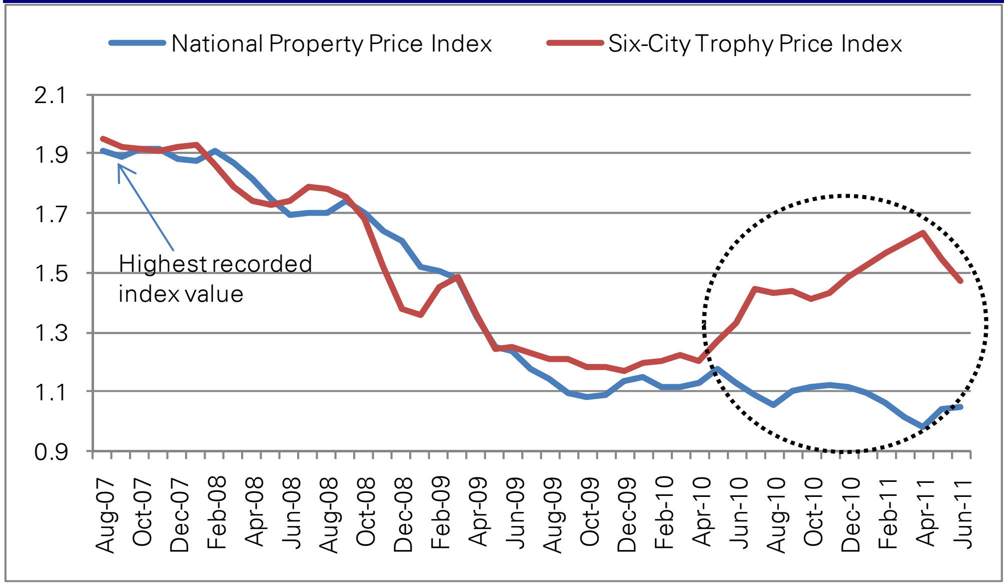


Source: Deutsche Bank, PPR

Aside from the demand and supply dynamics of the space markets, the recovery of asset values has been relatively weaker. On a national basis, values have declined by approximately 45% and have been stagnant for much of this year. Prices have been dramatically impacted by the increased pace of liquidation activity from CMBS special servicers, which has pushed down the price indices as new data points emerge. One of the problems in ascertaining property values has been the general lack of transactions - especially in secondary and tertiary markets. As the pace at which these properties are sold continues to increase, the indices will continue to decline.

The increase in distressed property sales does not however tell the entire story. The index values have been positively influenced by the consistently higher prices being paid on institutional quality properties in the gateway markets. For the scientifically inclined, deriving the value of commercial properties is analogous to using Newton's third law of motion. The law effectively states that for every action, there is an equal and opposite reaction. As detailed in the chart below, the prices of class A properties in the best markets have risen more than 25% from the recessionary lows. We attribute the rise to the low level of interest rates, the scarcity value placed on such assets and the more positive fundamental outlook in these markets relative to the rest of the country.

Prices of class A properties in gateway markets have recovered significantly while prices languish for others



Source: Deutsche Bank, Moody's, RCA, Bloomberg Finance LLP

While none of these factors are at imminent risk of reversing course, we are skeptical that investors will continue to pay ever higher prices for such properties. It could very well be that prices have peaked, especially with an increased risk of a recession. Although the index remains volatile, the recent data supports this view. Since posting a local high in the Spring, the trophy property index has declined by 10%. We do not expect prices to retrace the entire recovery but additional declines from current levels are entirely possible and perhaps even likely. In combination with the continued liquidation of impaired CRE loans, we expect the national price index will drop in the months ahead and will break the psychologically important 50% decline (from peak) barrier.

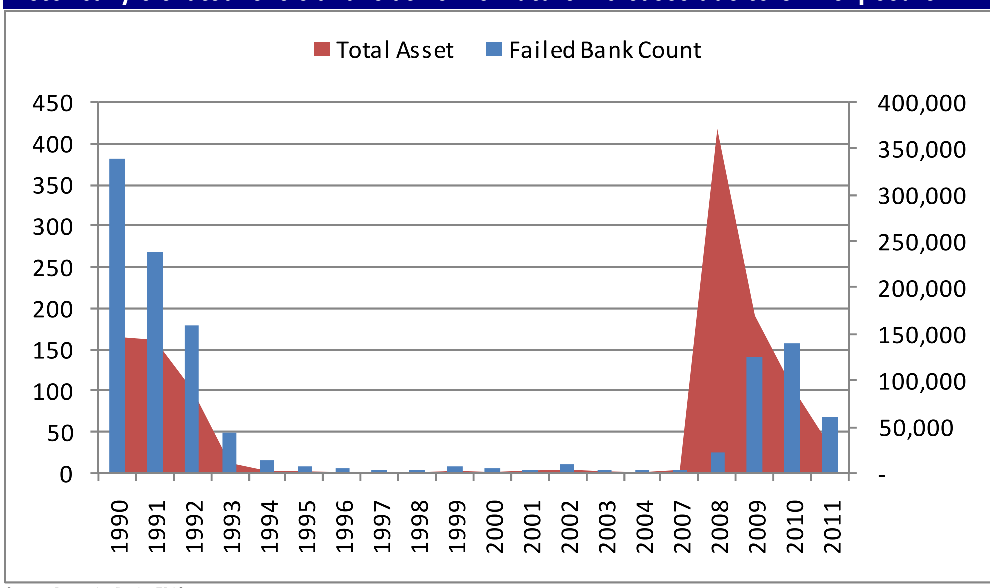
The pace of economic growth will determine the extent of the fall in property values. In a low-growth or even a slightly negative GDP environment, as outlined above, we expect prices to decline some but not more than 5-10%. Further declines would require a severe recession and a significant increase in the unemployment rate. The analysis of CRE loans held by US banks which follows is predicated on this outlook.

Bank CRE Loan Performance

In this section, we delve into the performance of balance sheet CRE loans and the behavior of the institutions dealing with them. We begin with one of the clearest implications of bad CRE loans – failed banks. Impaired CRE loans have been one of the biggest contributors to the recent failed-bank endemic and will continue to be.

Although in the last few years the pace of bank failures has increased tremendously, the actual number remains well below the S&L crisis of 20 years ago. Between 1990 and 1992 828 banks failed compared to the 390 that have failed since 2008. One differentiating factor has been the size of the failed institutions. Using the same time frames as a basis of comparison, the banks which have failed in the current cycle have had an additional $283B in assets than the banks in the prior cycle. We expect the pace of bank failures will continue to slow but will remain at historically elevated levels throughout the decade.

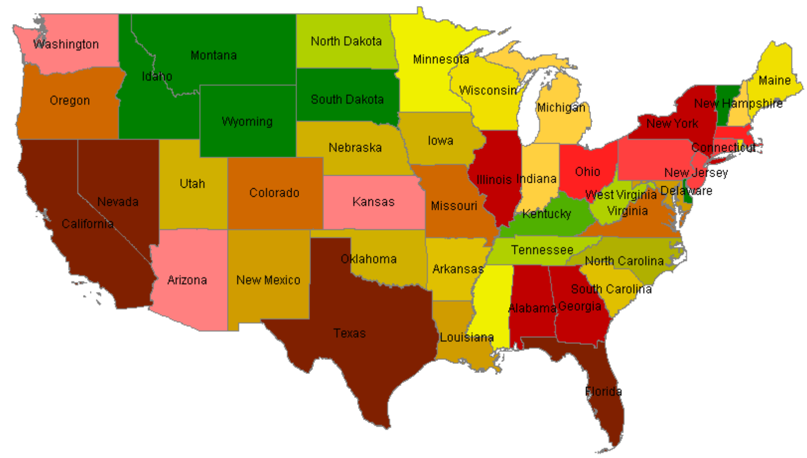
The pace of bank failures has declined over the last two years but remains at historically elevated levels and is at risk for future increases due to CRE exposure



Source: Deutsche Bank , FDIC
Note: Total assets are measured using the axis on the right side of the chart and in millions of dollars.

Not surprisingly, bank failures have been concentrated in the Southeast, Southwest and to a lesser extent the Northeast. In all we estimated over $60B of bad CRE loans with nearly a third of those from Nevada. Also of note, the ratio of bad CRE loans per institution is much higher in Nevada than anywhere else. The average for the 50 states was $62mm, Alabama's ratio was $164mm, New York's was $77mm, California's was $70mm but Nevada's was $1.5B!

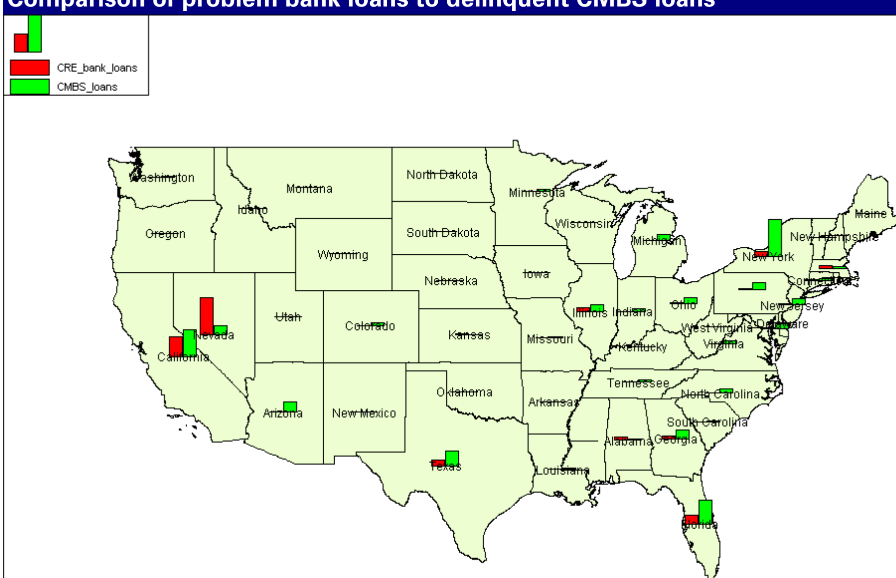
Heat map of the impaired CRE bank loans



Source: Deutsche Bank, FDIC
Note: Totals are based on Deutsche Bank estimates. Areas shaded in red indicate a high concentration of impaired loans, green represents a low concentration.

We also compared our estimates of bad CRE loans to the CMBS market. In order to facilitate the comparison, we adjusted the CMBS figures upwards so the overall size of the two markets was equal. Accordingly, we do not provide the absolute numbers because it is the relative measures which are important. At quick glance one will notice, besides Nevada, the CMBS market has performed worse in every major state. We attribute this to the prevalence of pro-forma underwriting in the CMBS market during 2005-2008.

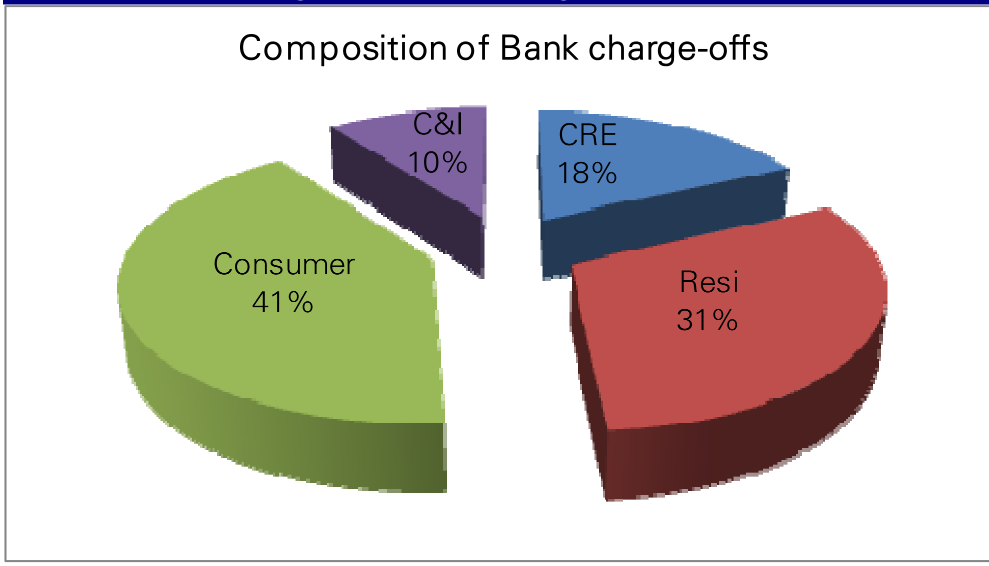
Comparison of problem bank loans to delinquent CMBS loans



Source: Deutsche Bank,, FDIC
Note: CMBS balances have been adjusted up to account for the difference in the overall size of the market relative to the bank market.

Taking a slightly broader view of CRE loan portfolios relative to a bank's other major loan holdings; we see that for the industry, CRE loans have not contributed much to recent charge-offs rates. So far this year, it is actually consumer loans which have comprised the bulk of charge-offs.

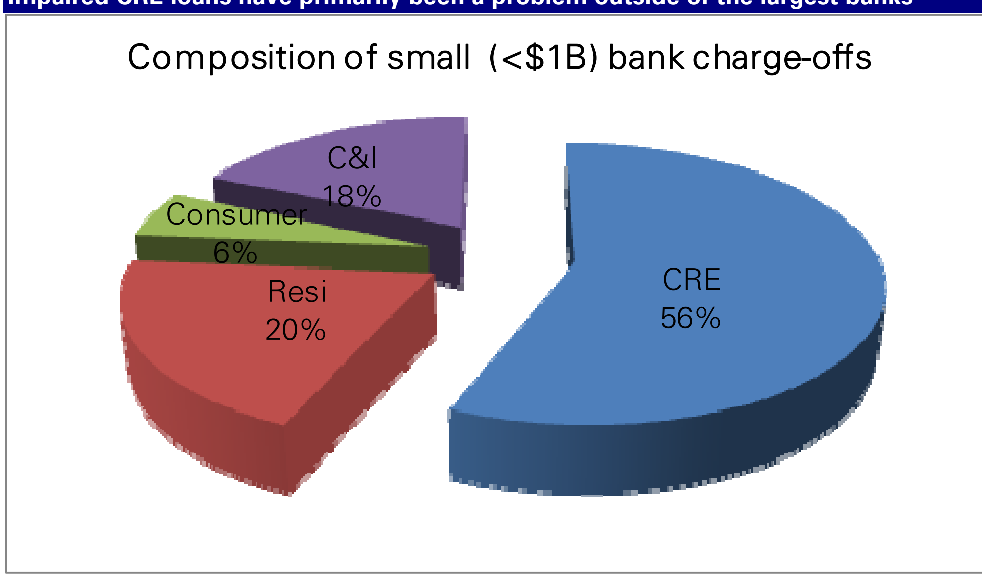
Charge-offs related to CRE loans are much lower than residential loans or consumer debt but industry-wide figures can be misleading



Source: Deutsche Bank,, FDIC
Note: Data is for the first six months of 2011

Headline statistics can be misleading. Problem CRE loans are and have been a more serious issue for smaller banks than larger ones. By narrowing the sample set to banks with assets of less than $1B, the composition of the charge-offs changes dramatically. CRE's share increases more than 3x. In our view this is a function of the highly localized lending often done by smaller banks and the fundamental weakness inherent in secondary and tertiary markets. Another factor is simply that small banks generally have a much higher concentration of CRE loans than larger banks do.

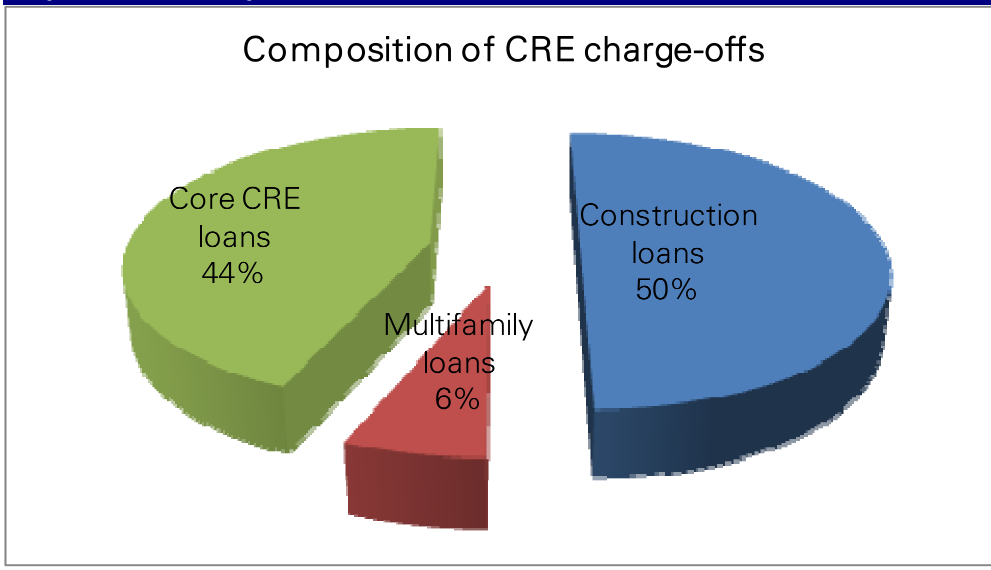
Impaired CRE loans have primarily been a problem outside of the largest banks



Source: Deutsche Bank,, FDIC
Note: Data is for the first six months of 2011

The composition of the CRE charge-offs is split roughly 50/50 to construction loans and core CRE loans. This is noteworthy because as we will show later, core CRE loans outnumber construction and development loans 4:1. In addition, the continued high charge-off rate for developments is interesting due to the timing of the charge-offs. In the immediate aftermath of the recession, the withdrawal of demand and the subsequent failure of development projects were to be expected. The current charge-off rate could therefore be a product of new construction loans which are failing, a source of significant concern.

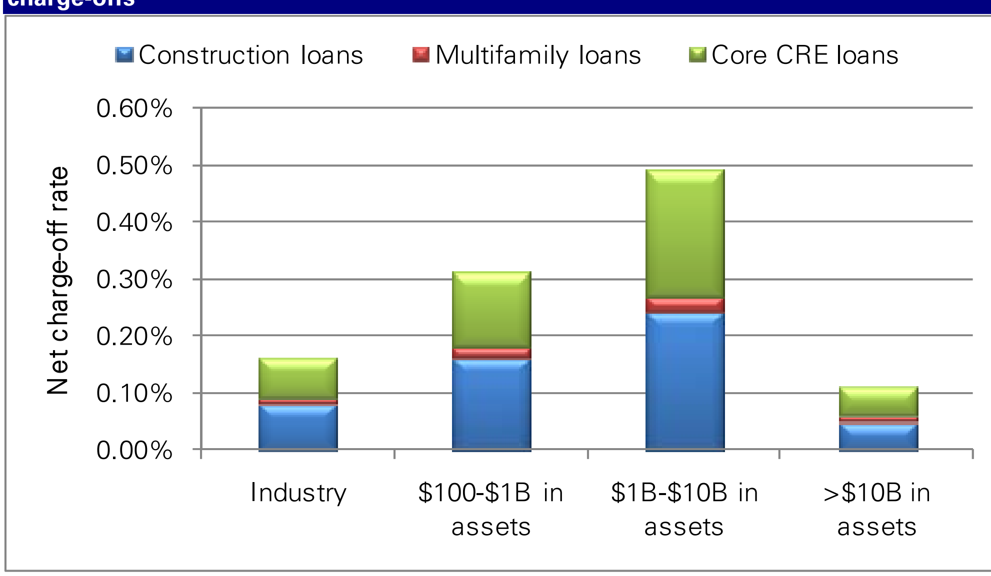
Although construction loans comprise a small amount of outstanding CRE exposure – they are an outsized problem



Source: Deutsche Bank,, FDIC
Note: Data is for the first six months of 2011

The absolute level of charge-offs has been highest among banks with $1-$10B of assets The rate at the largest banks is 80% lower.

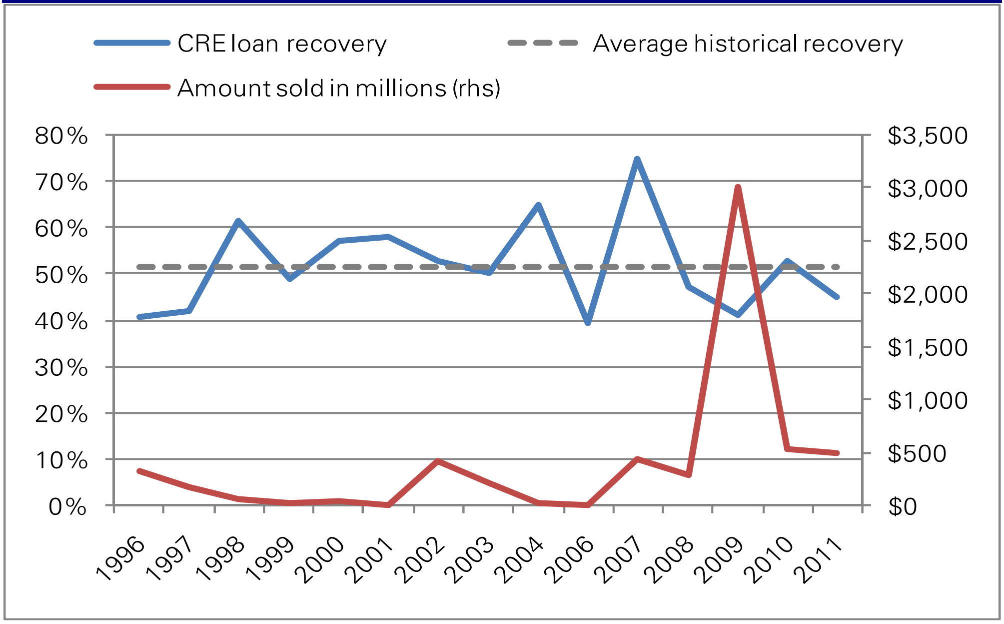
The approximately 50-50 mix of construction and core CRE loan charge-offs is consistent across the industry, despite large differences in the absolute level of charge-offs



Source: Deutsche Bank,, FDIC
Note: Data is for the first six months of 2011

The increase of bank failures over the last few years has led to an increase in the balance of CRE loans which have been sold. Over the last 15 years, the recovery rate on the loans which have been sold has averaged just over 50% but more recently the recovery rate had been in the mid-40s.

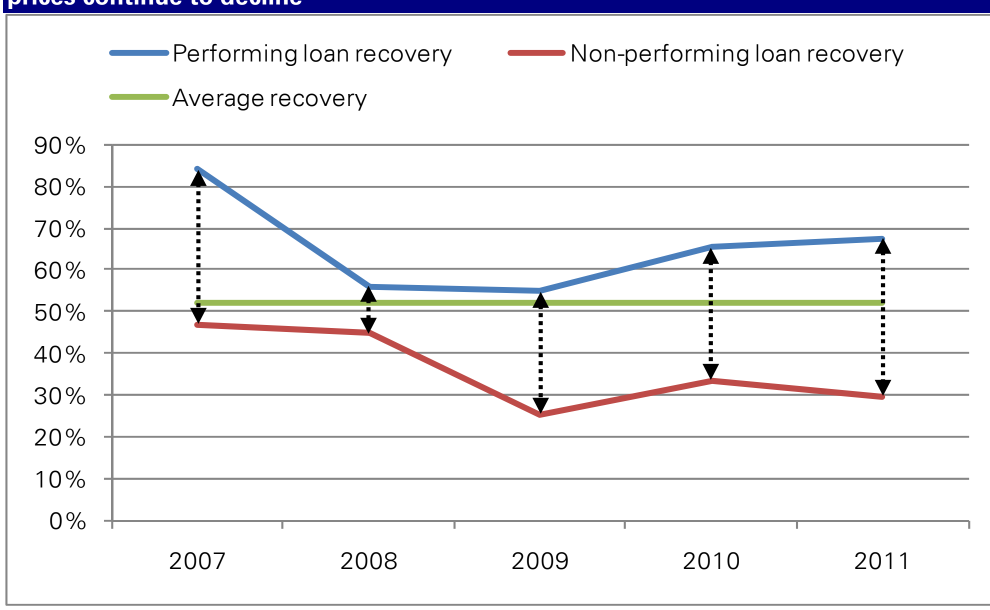
Recoveries on disposed CRE loans have generally remained at 50% over the last few years despite the amount of supply since 2009



Source: Deutsche Bank,, FDIC
Note: The 2011 supply has been estimated based on YTD data

The recovery rate continues to fluctuate much in the same way the nation price index fluctuates due to a similar tug of war between performing and non-performing loans.

Prices on performing loan sales have begun to stabilize but non-performing loan prices continue to decline



Source: Deutsche Bank, FDIC

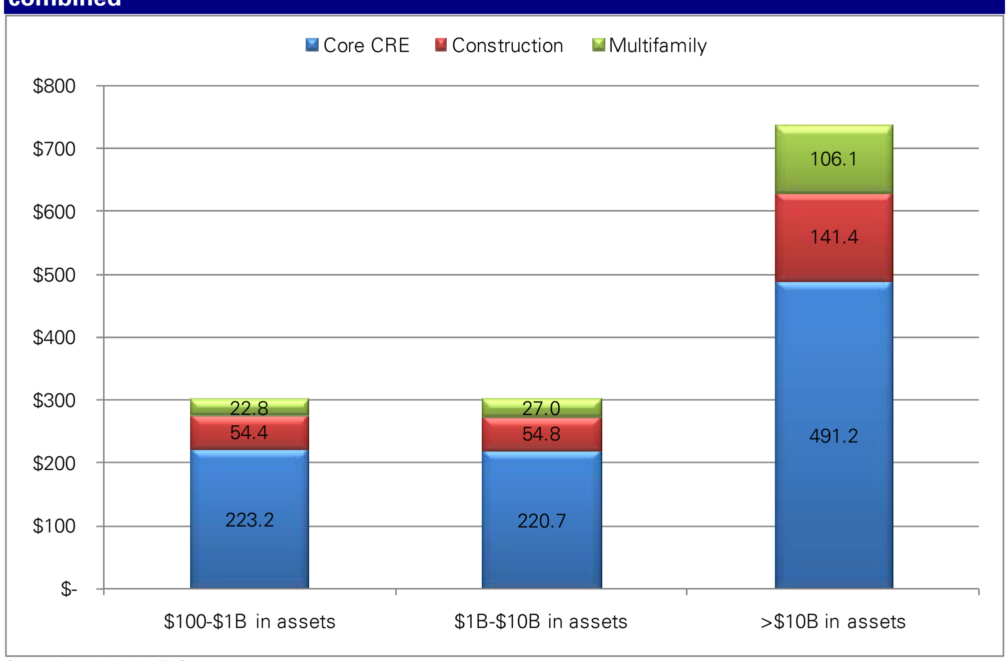
Since the credit crisis, the difference between the recovery rates on performing and non-performing loans has grown larger. So far this year, the difference has grown to nearly 40% compared to an 11% difference in 2008. We believe that early in the crisis, the price of performing loans was dragged down due to systemic failure fears and investors characterizing all CRE loans as one group. As time passed by and those fears abated, investors have done a better job of drawing a distinction between the two groups and as a result the "arbitrage" has dissipated. As CRE fundamentals continue to stagnate for many secondary markets, the option value embedded in many non-performing loans will get wiped away, bringing the prices being paid for such loans down significantly. On the other hand, investors are competing against one another to buy portfolios of performing loans, with prices quickly approaching par. The prices paid on loans from the large European bank sales over the summer are the best evidence of this dynamic.

The Outlook for CRE Related Losses

In this section, we detail the aggregate amount of concentration of CRE loans across the sector and estimate losses on the loans.

Currently there are $1.34T of CRE loans held by banks with at least $100mm of assets. The majority of the exposure is comprised of conventional loans secured by major property types. However, there are some more obscure property types which would most likely never be included in a CMBS transaction. We saw earlier that construction loans made up the majority of CRE charge-offs, which in turn represents the largest portion of small bank impairments. Within the CRE space however, construction loans represent only a small fraction of outstanding bank assets. The biggest banks hold more than twice as much in construction loans than all of the smaller banks combined and roughly the same amount of other CRE debt.

The large banks have more CRE loans than all the community and regional banks combined



Source: Deutsche Bank,, FDIC
Balances are in billions

In order to compare CRE exposure on a relative basis, we divided the sector in to 4 groups: less than $100mm in assets, between $100mm and $1B in assets, between $1B and $10B and more than $10B. We then compared the amount of CRE loans to total assets and total loans and then the delinquent CRE loans to total assets and Tier 1 capital. The results are shown in the chart below.

Very small and large banks remain well insulated from problem CRE loans

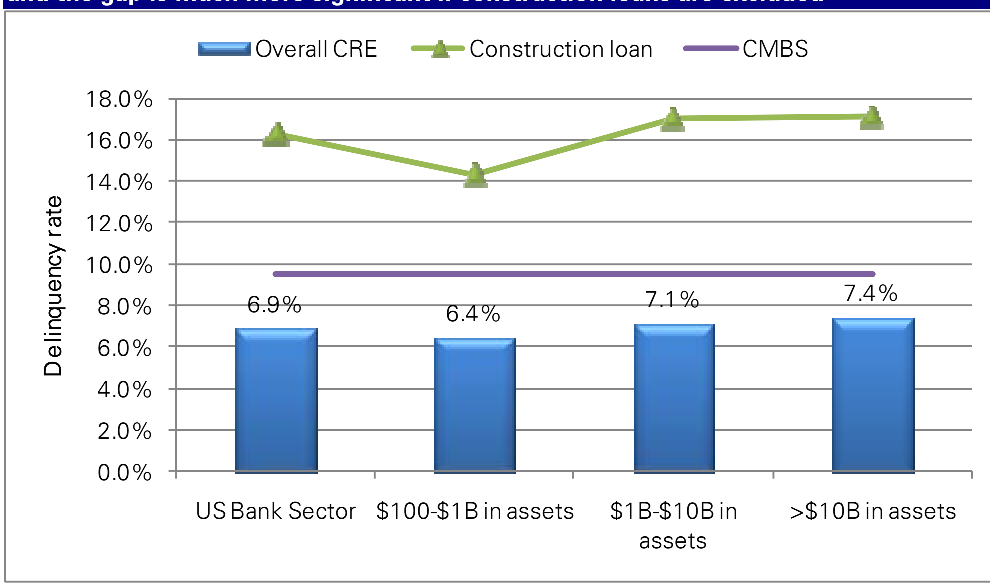
Bank asset size	Loan portfolio / Total assets	CRE loans / Total assets	CRE loans / Total loans	Delinquent CRE loans / Total assets	Delinquent CRE loans / Tier 1 capital
<$100mm	56.5%	16.2%	29.7%	1.00%	8.7%
$100mm-$1B	72.1%	28.2%	40.2%	1.83%	18.9%
$1B-$10B	61.8%	28.7%	45.3%	2.09%	22.5%
>$10B	49.3%	7.7%	15.5%	0.58%	7.0%
US banks	51.6%	11.9%	23.1%	0.92%	10.8%

Source: Deutsche Bank, FDIC

The small and medium sized banks not only have more of their asset base in the form of loans but CRE loans also comprise a much bigger share of their loan portfolios than larger banks and the smallest banks. Banks with assets between $1B and $10B were the most aggressive. That group had nearly 140% the amount of CRE loans relative to total assets than the industry average and has a proportionally large balance of delinquent CRE loans.

Although the community banks have a large amount of problem CRE loans, the delinquency rates for the portfolios is not as high as one might think. The banks currently have a 7.1% delinquency rate which is actually slightly less than the larger banks (7.4%). Across the sector the delinquency rate is 6.9% which includes construction loans.

The overall CRE delinquency rate remains below the CMBS market across the sector and the gap is much more significant if construction loans are excluded



Source: Deutsche Bank, FDIC and Trepp

We break out the construction loans to show their disproportionate contribution to the CRE portfolio performance of banks. Even with the construction loans, the entire banking sector has a delinquency rate well below the CMBS market. Even so, banks hold a lot more CRE debt overall than CMBS (it is also due sooner) and a 6.9% delinquency rate is still high, especially considering it is calculated off of a $1+T base.

Using this information, and taking into account historical charge-off rates, impending maturities and the results from our CMBS credit model., we projected future losses in CRE portfolios at approximately 450 banks with a total market capitalization of $640B The banks that were selected met two criteria: 1) they were public companies 2) all the necessary data was available to conduct the analysis. We also included two different scenarios, as the uneven and slow pace of the economic recovery remains a formidable and unpredictable headwind. We also used a different set of assumptions for construction and development loans. Our findings are summarized below:

- *Future losses under our base case scenario on core CRE loans will be between $30-40B; and $45-60B in our stress case.*
- *Losses on construction and development loans in our base case will cause another $25-35B; and $40-$55B in our stress case.*
- *In our sample, average CRE related losses will total over 9% of Tier 1 capital and 90% of loan loss allowance.*

The results provide more evidence that the CRE exposure present in the US bank sector still presents significant risks to the viability of many institutions and much will depend on the timing of the losses/write-downs.

In the following three tables, we list the top 20 banks in terms of their relative CRE exposure, projected losses versus Tier 1 Capital and also versus loan loss allowance.

The 20 banks with the largest (relative) CRE exposure

Company Name	Market Cap. (in mm)	Core CRE/Total assets	Total CRE/Total assets	DB Proj. CRE losses/Tier 1 Capital	DB Proj. CRE losses/Loan Loss Allowance
TEMECULA VALLEY	$0.0	44.9%	81.0%	215.4%	225.1%
SILVER STATE BCP	$0.0	17.3%	79.1%	93.9%	926.0%
GRAND RIVER COMM	$14.5	55.4%	67.3%	22.6%	515.5%
VIRGINIA HERITAG	$34.1	49.3%	66.8%	42.1%	361.5%
DEARBORN BANCORP	$8.0	60.4%	66.5%	94.9%	128.8%
METROCORP BANCSH	$70.7	58.1%	65.2%	36.6%	183.2%
PACIFIC COAST NA	$0.0	40.7%	64.8%	154.1%	123.3%
INTERVEST BNCS-A	$61.9	64.1%	64.8%	32.8%	196.1%
SOUTHWEST BAN/OK	$84.8	47.1%	63.9%	30.9%	210.9%
WILSHIRE BANCORP	$199.6	61.4%	63.8%	33.6%	94.7%
SAEHAN BANCORP	$51.1	61.0%	63.3%	34.0%	76.6%
CLARKSTON FINL	$24.1	54.9%	62.5%	101.9%	176.6%
HANMI FINL CORP	$136.6	58.2%	61.9%	43.3%	69.0%
IMPERIAL CAPITAL	$0.0	52.5%	61.7%	74.8%	351.6%
FRONTIER FINL CP	$0.5	32.2%	61.6%	329.7%	142.8%
PRESIDIO BANK	$27.0	56.1%	61.0%	22.0%	176.3%
PACIFIC PREMIER	$61.6	60.3%	60.3%	29.8%	280.7%
SAN JOAQUIN BANC	$0.0	39.2%	60.1%	69.3%	307.5%
NORCAL COMMUNITY	$23.9	31.5%	60.0%	51.8%	226.5%
PARKE BANCORP	$35.9	46.7%	59.5%	38.2%	217.8%

Source: Deutsche Bank, FDIC, Bloomberg Finance LLP

The 20 banks with the highest projected losses relative to Tier 1 capital

Company Name	Market Cap. (in mm)	Core CRE/Total assets	Total CRE/Total assets	DB Proj. CRE losses/Tier 1 Capital	DB Proj. CRE losses/Loan Loss Allowance
CRESCENT BNKG/GA	$0.1	26.6%	54.1%	20924.4%	194.0%
MERCANTILE BNCRP	$6.5	18.7%	28.5%	3979.3%	95.4%
CASCADE BANCORP	$382.6	41.5%	50.7%	836.7%	127.2%
HORIZON FINL CRP	$0.0	22.6%	41.2%	549.8%	129.6%
AMERICANWEST BAN	$0.3	37.9%	48.1%	401.8%	145.3%
FRONTIER FINL CP	$0.5	32.2%	61.6%	329.7%	142.8%
FIRST MARINER	$5.7	26.4%	33.3%	297.4%	218.3%
TEMECULA VALLEY	$0.0	44.9%	81.0%	215.4%	225.1%
RAINIER PACIFIC	$0.0	52.5%	59.1%	198.2%	255.0%
MARCO COMMUNITY	$0.0	21.4%	32.8%	178.1%	68.9%
SECURITY BANK CO	$0.0	16.1%	51.0%	162.4%	289.2%
PACIFIC COAST NA	$0.0	40.7%	64.8%	154.1%	123.3%
CORUS BANKSHARES	$1.3	5.8%	47.9%	146.2%	204.6%
CITY BANK LYNWOO	$3.9	26.5%	47.2%	137.5%	436.1%
COMMUNITY VALLEY	$0.1	22.7%	48.3%	120.3%	206.5%
COWLITZ BANCORP	$0.1	33.8%	41.4%	108.5%	154.0%
CLARKSTON FINL	$24.1	54.9%	62.5%	101.9%	176.6%
DEARBORN BANCORP	$8.0	60.4%	66.5%	94.9%	128.8%
IRWIN FINL CORP	$0.1	31.6%	40.9%	94.3%	106.6%
SILVER STATE BCP	$0.0	17.3%	79.1%	93.9%	926.0%

Source: Deutsche Bank, FDIC, Bloomberg Finance LP

The 20 banks with the highest projected losses relative to loan loss allowance

Company Name	Market Cap. (in mm)	Core CRE/Total assets	Total CRE/Total assets	DB Proj. CRE losses/Tier 1 Capital	DB Proj. CRE losses/Loan Loss Allowance
PAC CAP BANCORP	$815.7	32.6%	35.7%	20.2%	24646.6%
STATE BANK FINAN	$401.5	19.5%	31.9%	23.3%	1499.8%
SILVER STATE BCP	$0.0	17.3%	79.1%	93.9%	926.0%
NY COMM BANCORP	$5,196.6	54.1%	55.5%	34.3%	703.4%
BRUNSWICK BNCRP	$18.7	33.4%	41.8%	14.7%	658.3%
TOWER BANCORP	$265.8	33.7%	40.6%	30.0%	529.6%
GREATER SACRAMEN	$24.3	35.2%	51.9%	46.3%	518.5%
GRAND RIVER COMM	$14.5	55.4%	67.3%	22.6%	515.5%
OLD LINE BANCSHA	$49.4	42.2%	48.0%	33.7%	484.6%
NEW JERSEY COMMU	$10.2	50.1%	59.0%	31.9%	439.8%
CITY BANK LYNWOO	$3.9	26.5%	47.2%	137.5%	436.1%
LCNB CORPORATION	$85.0	24.2%	25.8%	17.6%	417.1%
FIRST NATIONAL B	$532.9	19.0%	27.5%	14.6%	403.7%
BRITTON & KOONTZ	$24.6	27.1%	34.8%	22.1%	390.2%
TOWNE BANK	$320.9	25.5%	42.4%	37.9%	382.5%
VIRGINIA HERITAG	$34.1	49.3%	66.8%	42.1%	361.5%
INTL BANCSHARES	$925.1	13.8%	26.1%	22.8%	359.9%
CODORUS VLY BANC	$39.7	31.8%	40.2%	32.4%	357.6%
EAGLE BANCRP INC	$229.9	37.4%	53.1%	45.7%	356.5%
IMPERIAL CAPITAL	$0.0	52.5%	61.7%	74.8%	351.6%

Source: Deutsche Bank, FDIC, Bloomberg Finance LP

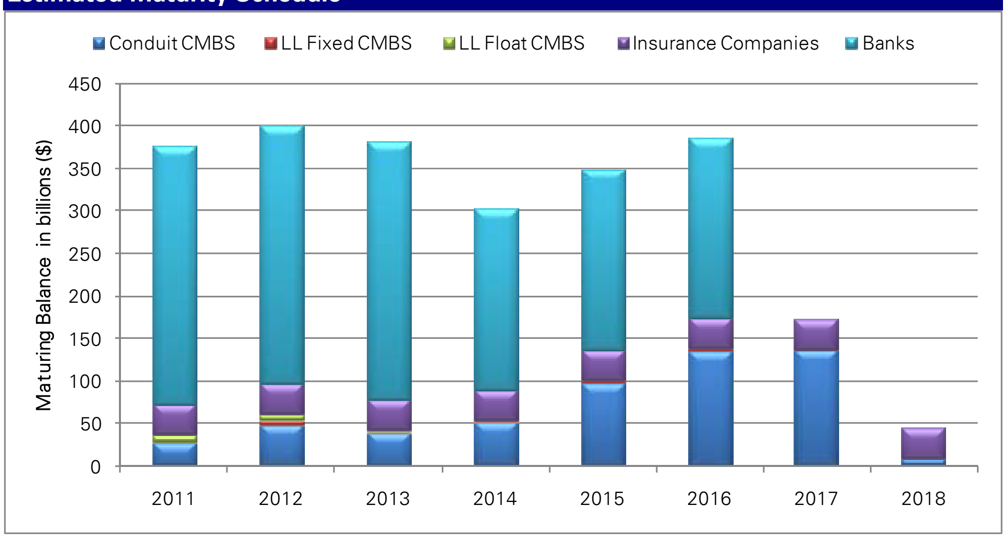
Investment implications for CMBS

With all of the pessimism currently present in the financial markets and the fairly pessimistic but not yet draconian outlook for CRE in US Banks presented in this report, "rock solid" CRE debt investments will continue to be difficult to find. Given the high level of delinquencies in both CMBS and bank CRE debt, it will take some time for the losses to work their way through the system and even loans which have been extended or otherwise modified over the last two years, will need to be resolved eventually. But for the time being, fundamentals have stabilized and financing remains available (but more expensive). The potential for a new recession remains a risk but the effect on the sector should not be severe since we are already very close to the cyclical bottom (in terms of cashflows as well as price indices). As a result, we still think there are some relative value opportunities in the CMBS market that will outperform.

As shown in the chart below, the majority of maturities are currently concentrated in the next few years. The majority of the loans coming due are on bank balance sheets, with the next biggest contributors being CMBS and insurance companies (over $100 billion each through 2013). While some might be extended, there is still almost $1 trillion of loans coming due soon, an amount that would easily strain a fully functioning market, much less an illiquid one.

The biggest determinant for how these maturing loans will resolve is the evolving financing environment and willingness of borrowers / lenders to close the equity gap. Long-term interest rates look favorable for the foreseeable future, which should support the availability of capital, and cap rates have only widened slightly (mainly for non-primary markets and property types). Also, the GSEs and insurance companies remain active originators, along with a renewed CMBS issuance market. The market should be able to resolve the impending avalanche of debt, and losses should not exceed current base case projections but a significant economic deterioration coupled with a pull back in lending would not only make out stress case projections the new base care but depending on the severity of the downturn, they might prove to be too low. In either case, the maturing loans will provide many investment and lending opportunities for all levels of risk.

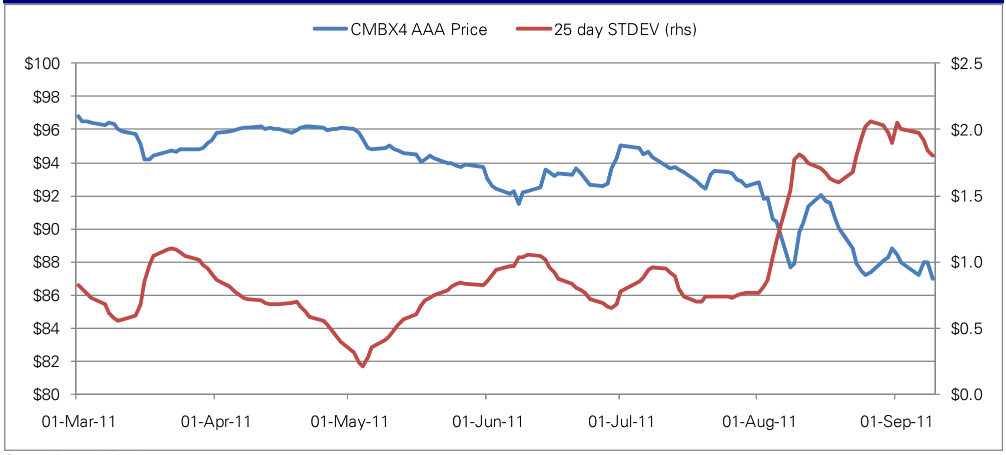
Estimated Maturity Schedule



Source: Deutsche Bank, FDIC, Federal Reserve, Intex

Since the beginning of summer, CMBS correlation with the broader markets has increased, along with its volatility. Even though that trend has abated somewhat over the last few days, we still see continuing pressure on prices that have already pushed us through YTD lows. Aside from the large pipeline of deals over the next month, technicals for the rest of the year are favorable as dealer inventories remain light and most investors are not looking to sell into weakness. However, the recent bout of volatility could become a market fixture due to the large number of structural imbalance in and out of the CRE market and investors will need to be able to cope or adjust their portfolios.

AAA CMBS volatility has jumped in the last two months as prices have declined



Source: Deutsche Bank

In general, we favor the latter approach. Although we see value across the credit curve, we favor strategies which lower beta. Picking up yield on at the top of the capital structure from less volatile older deals (e.g. CMBX 1 has less than half the beta of CMBX 4) is one of our preferred approaches. We also believe the new issue CMBS 3.0 deals with publically issued super senior classes will do well. Likewise re-REMICs of legacy LCFs with low premiums are attractive as are IO strips to the extent they become available. On the other hand, we would avoid going down in credit, especially mezzanine bonds from later vintages as the looming maturity schedule for CMBS and Bank CRE loans will probably prevent any sustained rally over the next couple of years as losses continue flow through the system.

Conclusion

Nearly four years have passed from the start of the credit crisis and little seems to have changed in respect to CRE loan exposure in the US banking system. While the worst fears of some have been avoided for now, systematic risks are still present. Furthermore, the downside tail risk seems more likely than an upside scenario which would cause significant capital issues. The silver lining here is it is unlikely the tail will wag the dog – we don't expect further CRE loan impairment, absent a significant deterioration in economic conditions. In other words, the causality is not directed from CRE but rather to CRE.

Lastly, due to the scope of the issue and the potential for further deterioration, we are increasingly convinced that the end game will entail deleveraging via inflationary channels. The over-leverage in nearly every corner of the developed world makes this the only "acceptable" resolution strategy. As a result, it is possible that some of the projections detailed in this report will not come to fruition. The road from here to there however will be long, arduous and undoubtedly interesting.

Appendix 1

Important Disclosures

Additional information available upon request

For disclosures pertaining to recommendations or estimates made on a security mentioned in this report, please see the most recently published company report or visit our global disclosure look-up page on our website at http://gm.db.com/ger/disclosure/DisclosureDirectory.eqsr**.**

Analyst Certification

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

Deutsche Bank debt rating key

Buy: These bonds are expected to outperform other issues in the sector/industry group over the next three to six-month period.
Hold: These bonds are fairly valued currently. If owned, no need to sell, but we await events/ releases/ conditions that would make the bond attractive enough for us to upgrade. In the interim, the bond will likely perform as well as the average issue in the sector/industry group.
Sell: There exists a significant likelihood that these bonds will underperform relative to other issues in their sector/industry group, at least over the next three months.

Regulatory Disclosures

1. Important Additional Conflict Disclosures

Aside from within this report, important conflict disclosures can also be found at https://gm.db.com/equities under the "Disclosures Lookup" and "Legal" tabs. Investors are strongly encouraged to review this information before investing.

2. Short-Term Trade Ideas

Deutsche Bank equity research analysts sometimes have shorter-term trade ideas (known as SOLAR ideas) that are consistent or inconsistent with Deutsche Bank's existing longer term ratings. These trade ideas can be found at the SOLAR link at http://gm.db.com.

3. Country-Specific Disclosures

Australia and New Zealand: This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act and New Zealand Financial Advisors Act respectively.

Brazil: The views expressed above accurately reflect personal views of the authors about the subject company(ies) and its(their) securities, including in relation to Deutsche Bank. The compensation of the equity research analyst(s) is indirectly affected by revenues deriving from the business and financial transactions of Deutsche Bank.

EU countries: Disclosures relating to our obligations under MiFiD can be found at http://www.globalmarkets.db.com/riskdisclosures.

Japan: Disclosures under the Financial Instruments and Exchange Law: Company name - Deutsche Securities Inc. Registration number - Registered as a financial instruments dealer by the Head of the Kanto Local Finance Bureau (Kinsho) No. 117. Member of associations: JSDA, Type II Financial Instruments Firms Association, The Financial Futures Association of Japan. Commissions and risks involved in stock transactions - for stock transactions, we charge stock commissions and consumption tax by multiplying the transaction amount by the commission rate agreed with each customer. Stock transactions can lead to losses as a result of share price fluctuations and other factors. Transactions in foreign stocks can lead to additional losses stemming from foreign exchange fluctuations. "Moody's", "Standard & Poor's", and "Fitch" mentioned in this report are not registered credit rating agencies in Japan unless “Japan” is specifically designated in the name of the entity.

Malaysia: Deutsche Bank AG and/or its affiliate(s) may maintain positions in the securities referred to herein and may from time to time offer those securities for purchase or may have an interest to purchase such securities. Deutsche Bank may engage in transactions in a manner inconsistent with the views discussed herein.

Russia: This information, interpretation and opinions submitted herein are not in the context of, and do not constitute, any appraisal or evaluation activity requiring a license in the Russian Federation.

Risks to Fixed Income Positions

Macroeconomic fluctuations often account for most of the risks associated with exposures to instruments that promise to pay fixed or variable interest rates. For an investor that is long fixed rate instruments (thus receiving these cash flows), increases in interest rates naturally lift the discount factors applied to the expected cash flows and thus cause a loss. The longer the maturity of a certain cash flow and the higher the move in the discount factor, the higher will be the loss. Upside surprises in inflation, fiscal funding needs, and FX depreciation rates are among the most common adverse macroeconomic shocks to receivers. But counterparty exposure, issuer creditworthiness, client segmentation, regulation (including changes in assets holding limits for different types of investors), changes in tax policies, currency convertibility (which may constrain currency conversion, repatriation of profits and/or the liquidation of positions), and settlement issues related to local clearing houses are also important risk factors to be considered. The sensitivity of fixed income instruments to macroeconomic shocks may be mitigated by indexing the contracted cash flows to inflation, to FX depreciation, or to specified interest rates – these are common in emerging markets. It is important to note that the index fixings may -- by construction -- lag or mis-measure the actual move in the underlying variables they are intended to track. The choice of the proper fixing (or metric) is particularly important in swaps markets, where floating coupon rates (i.e., coupons indexed to a typically short-dated interest rate reference index) are exchanged for fixed coupons. It is also important to acknowledge that funding in a currency that differs from the currency in which the coupons to be received are denominated carries FX risk. Naturally, options on swaps (swaptions) also bear the risks typical to options in addition to the risks related to rates movements.

David Folkerts-Landau
Managing Director
Global Head of Research

Stuart Parkinson
Associate Director
Company Research

Marcel Cassard
Global Head
Fixed Income Research

Europe	Asia-Pacific	Germany	Americas
Guy Ashton Regional Head	Fergus Lynch Regional Head	Andreas Neubauer Regional Head	Steve Pollard Regional Head

Principal Locations

Deutsche Bank AG
London
1 Great Winchester Street
London EC2N 2EQ
Tel: (44) 20 7545 8000

Deutsche Bank AG
New York
60 Wall Street
New York, NY 10005
United States of America
Tel: (1) 212 250-2500

Deutsche Bank AG
Hong Kong
Filiale Hongkong
Intl. Commerce Centre
1 Austin Road West Kowloon,
Hong Kong
tel: (852) 2203 8888

Deutsche Securities Inc.
Japan
2-11-1 Nagatacho
Sanno Park Tower
Chiyoda-ku, Tokyo 100-6171
Tel: (81) 3 5156 6770

Deutsche Bank AG
Frankfurt
Große Gallusstraße 10-14
60272 Frankfurt am Main
Germany
Tel: (49) 69 910 00

Deutsche Bank AG
Aurora business park
82 bld.2 Sadovnicheskaya street
Moscow, 115035
Russia
Tel: (7) 495 797-5000

Deutsche Bank AG
Singapore
One Raffles Quay
South Tower
Singapore 048583
Tel: (65) 6423 8001

Deutsche Bank AG
Australia
Deutsche Bank Place, Level 16
Corner of Hunter & Phillip Streets
Sydney NSW 2000
Tel: (61) 2 8258 1234

Deutsche Bank Dubai
Dubai International Financial Centre
The Gate, West Wing, Level 3
P.O. Box 504 902
Dubai City
Tel: (971) 4 3611 700

Subscribers to research via email receive their electronic publication on average 1-2 working days earlier than the printed version.

If you would like to receive this or any other product via email please contact your usual Deutsche Bank representative.

Publication Address:
Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
United States of America
(1) 212 250 2500

Internet:
http://gmr.db.com
Ask your usual contact for a username and password.

Global Disclaimer

The information and opinions in this report were prepared by Deutsche Bank AG or one of its affiliates (collectively "Deutsche Bank"). The information herein is believed to be reliable and has been obtained from public sources believed to be reliable. Deutsche Bank makes no representation as to the accuracy or completeness of such information.

Deutsche Bank may engage in securities transactions, on a proprietary basis or otherwise, in a manner inconsistent with the view taken in this research report. In addition, others within Deutsche Bank, including strategists and sales staff, may take a view that is inconsistent with that taken in this research report.

Opinions, estimates and projections in this report constitute the current judgement of the author as of the date of this report. They do not necessarily reflect the opinions of Deutsche Bank and are subject to change without notice. Deutsche Bank has no obligation to update, modify or amend this report or to otherwise notify a recipient thereof in the event that any opinion, forecast or estimate set forth herein, changes or subsequently becomes inaccurate. Prices and availability of financial instruments are subject to change without notice. This report is provided for informational purposes only. It is not an offer or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular trading strategy. Target prices are inherently imprecise and a product of the analyst judgement.

As a result of Deutsche Bank's March 2010 acquisition of BHF-Bank AG, a security may be covered by more than one analyst within the Deutsche Bank group. Each of these analysts may use differing methodologies to value the security; as a result, the recommendations may differ and the price targets and estimates of each may vary widely.

In August 2009, Deutsche Bank instituted a new policy whereby analysts may choose not to set or maintain a target price of certain issuers under coverage with a Hold rating. In particular, this will typically occur for "Hold" rated stocks having a market cap smaller than most other companies in its sector or region. We believe that such policy will allow us to make best use of our resources. Please visit our website at http://gm.db.com to determine the target price of any stock.

The financial instruments discussed in this report may not be suitable for all investors and investors must make their own informed investment decisions. Stock transactions can lead to losses as a result of price fluctuations and other factors. If a financial instrument is denominated in a currency other than an investor's currency, a change in exchange rates may adversely affect the investment. Past performance is not necessarily indicative of future results. Deutsche Bank may with respect to securities covered by this report, sell to or buy from customers on a principal basis, and consider this report in deciding to trade on a proprietary basis.

Unless governing law provides otherwise, all transactions should be executed through the Deutsche Bank entity in the investor's home jurisdiction. In the U.S. this report is approved and/or distributed by Deutsche Bank Securities Inc., a member of the NYSE, the NASD, NFA and SIPC. In Germany this report is approved and/or communicated by Deutsche Bank AG Frankfurt authorized by the BaFin. In the United Kingdom this report is approved and/or communicated by Deutsche Bank AG London, a member of the London Stock Exchange and regulated by the Financial Services Authority for the conduct of investment business in the UK and authorized by the BaFin. This report is distributed in Hong Kong by Deutsche Bank AG, Hong Kong Branch, in Korea by Deutsche Securities Korea Co. This report is distributed in Singapore by Deutsche Bank AG, Singapore Branch, and recipients in Singapore of this report are to contact Deutsche Bank AG, Singapore Branch in respect of any matters arising from, or in connection with, this report. Where this report is issued or promulgated in Singapore to a person who is not an accredited investor, expert investor or institutional investor (as defined in the applicable Singapore laws and regulations), Deutsche Bank AG, Singapore Branch accepts legal responsibility to such person for the contents of this report. In Japan this report is approved and/or distributed by Deutsche Securities Inc. The information contained in this report does not constitute the provision of investment advice. In Australia, retail clients should obtain a copy of a Product Disclosure Statement (PDS) relating to any financial product referred to in this report and consider the PDS before making any decision about whether to acquire the product. Deutsche Bank AG Johannesburg is incorporated in the Federal Republic of Germany (Branch Register Number in South Africa: 1998/003298/10). Additional information relative to securities, other financial products or issuers discussed in this report is available upon request. This report may not be reproduced, distributed or published by any person for any purpose without Deutsche Bank's prior written consent. Please cite source when quoting.