

15 April 2010

**CMBS Research****Loan Modifications in CMBS Step into the Spotlight**

- Faced with a collapse in commercial real estate values, a continuing decline in property cash flows and a financing market that has just recently began to thaw, borrowers, banks and special servicers are all looking very closely at using loan modifications as a means of dealing with the growing mess.
- The GGP bankruptcy case and revised Treasury regulations will make future modifications even easier to justify but loan modifications do not represent a panacea.
- A lack of an alignment of interests among market participants, differing special servicer behavior, vastly different loan and bond cash flows and challenges in collecting and modeling modifications all present significant challenges.
- This report examines the mechanics behind a CMBS loan modification, the major types of modifications that have been done to date, as well as various examples. In addition, the report reviews the differences in behavior among special servicers and can serve as a guide for what lies ahead.

**Special Report****Table of Contents**

I. Introduction.....	Page 2
II. CMBS Loan Modification 101 .....	Page 2
III. An Overview of Modifications ...	Page 3
IV. Other Modifications .....	Page 5
V. Extensions .....	Page 8
VI. Combinations.....	Page 10
VII. Amortization Changes .....	Page 11
VIII. Observed Servicer Behavior ..	Page 12
IX. Conclusions .....	Page 13
X. Appendix.....	Page 15

**Research Team****Richard Parkus**

Research Analyst  
 (+1) 212 250-6724  
 richard.parkus@db.com

**Harris Trifon**

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

Deutsche Bank Securities Inc.

All prices are those current at the end of the previous trading session unless otherwise indicated. Prices are sourced from local exchanges via Reuters, Bloomberg and other vendors. Data is sourced from Deutsche Bank and subject companies. Deutsche Bank does and seeks to do business with companies covered in its research reports. Thus, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. DISCLOSURES AND ANALYST CERTIFICATIONS ARE LOCATED IN APPENDIX 1. MICA(P) 106/05/2009

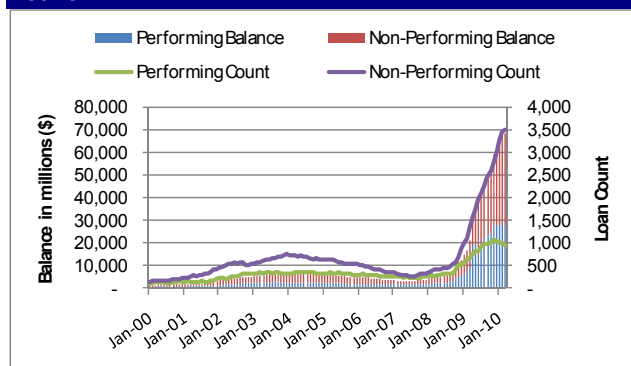
## I. Introduction

As underwriting standards in CMBS deteriorated dramatically throughout the 2005-2008 period, and loan structures migrated from the traditional 10-year term and 30-year amortization schedule to interest-only (IO) and partial IO loans, the margin for error faced by lenders eroded significantly. Since that time underwriting standards have reversed course and tightened back to pre-bubble levels, excess leverage has disappeared and property cash flows have fallen by historically large magnitudes. The result has been collapsing property prices, with peak-to-trough declines of 30-50%, depending on property segment and market. This in turn has left vast swaths of the commercial mortgage sector severely over-levered. Faced with these problems, a virtual tidal wave of borrower requests for workouts and/or loan modifications is now building. While this report focuses on the situation in CMBS, a similar situation is playing out with commercial mortgages in bank portfolios, a market three times the size of CMBS, and to a lesser extent in life company portfolios as well.

Over the past twelve months the number of CMBS loans that have been transferred to special servicers has grown dramatically, and now exceeds 4,400 loans with a balance of nearly \$70 billion, approximately 10% of the outstanding CMBS universe (Figure 1). Nearly 1,000 of the specially serviced loans (\$27.4 billion) are performing, and it is likely that a large percentage of these were transferred at the request of the borrower in order to facilitate some sort of loan modification negotiation.

The growth in performing specially serviced loans was spurred by new Treasury regulations, released in September 2009, that allow loans that are not at imminent risk of default to be modified without putting the REMIC status of the trust at risk.

**Figure 1: Special Serviced Fixed Rate Conduit CMBS Loans**



Source: Deutsche Bank and Intex

It is still early days in terms of commercial real estate (CRE) loan modifications, and the available evidence, mainly culled from trustee remittance and special servicer reports, is extremely limited. Nevertheless, CMBS loan modifications, which were effectively non-existent just two years ago, are growing quickly and are likely to be widespread in the near future.

Loan modifications can have a significant impact on a bond's cash flows and expected losses. Their rise will require CMBS deal modeling firms like Intex and Trepp to remodel deals frequently going forward, as new loans are modified. Thus, we expect that loan modifications will shortly become one of the most frequently watched metrics by CMBS investors.

This report reviews the guidelines special servicers must follow when modifying CMBS loans and examines the different types of modifications that have taken place to date within the fixed rate conduit CMBS.

The major findings include the following:

- As of March 2010, 490 loans with a total balance of \$13.7 billion have been modified.
- The GGP loan modification agreements opened the floodgate for loan modifications, maturity extensions in particular, and still represent the majority of modified CMBS loans (87 loans with a balance of \$8.3 billion).<sup>1</sup>
- The modification terms on the remaining \$5.1 billion of modified CMBS loans often include multiple modification types and are somewhat difficult to categorize.
- Loans secured by multifamily properties have been modified more frequently than the other property types.
- Most importantly: There appears to be clear differences in preferred modification strategies between the large special servicers.

## II. CMBS Loan Modifications 101

As noted earlier revised Treasury regulations have made it easier for CMBS loans to be modified. The major changes include the following:

- The set of loans eligible for modification were expanded to include any loan the servicer deems to be at significant risk of default in the reasonably

<sup>1</sup> Another \$2+ billion of GGP loans have been extended but the changes have as of this writing have not yet reflected in our database.

foreseeable future. No guidance is given on how long a “reasonably foreseeable time period” might be, but the IRS document does give an example of a loan that will mature in one year.

- Allowing releases, additions and substitutions of collateral on the condition that the mortgage remains principally secured (see the bullet below) by real property. Previously, a significant change to the collateral would have been viewed as tantamount to making a new loan which would have threatened the REMIC status of the CMBS trust.
- A new test to determine if a loan is principally secured by real property: the LTV must be no greater than 125%. The market value can be determined by any commercially reasonable valuation method. These methods include obvious examples like new appraisals but could also be a broker’s opinion of value.

Once a loan is transferred to the special servicer, the asset manager assigned to working out the loan has three basic options:

- Sell the loan to a subordinate debt holder or third-party investor
- Execute a modification or forbearance agreement
- Foreclose on the property and liquidate

Depending on the nature of the problem, the borrower’s willingness to cooperate and the property’s projected performance, the asset manager must determine the most appropriate workout strategy. The only constraint on an asset manager in working out the loan is that they follow the servicing standard. The servicing standard stipulates that the special servicer must choose the workout strategy that maximizes the net present value of the loan and to act in the best interest of all the bond holders. Furthermore, the special servicer must disregard any existing relationship with the borrower, any ownership of CMBS certificates or any other related interest.

In addition to the constraints placed on asset managers by following the servicing standard, the controlling class holder also can exert some leverage on a workout. According to the majority of pooling and servicing agreements, the controlling class is determined by the most subordinate bond in a transaction that has at least 25% of its original balance. Generally the special servicer is required to notify the controlling class holder of the suggested workout strategy and provide a report outlining the rationale. The controlling class holder has a right to provide input on the workout but the special servicer can override their decision so long as they are acting within the servicing standard. However, the controlling class

holder also has the right to remove the special servicer and reappoint a new one.

For their efforts, CMBS special servicers are paid by three types of fees: an ongoing servicing fee, a workout fee and a liquidation fee. The ongoing fee is typically 25bp per annum and is paid so long as the loan remains in special servicing. The workout fee is typically 100bp (although the fee on very large loans, like Stuyvesant Town are capped) and is paid if the loan is returned to the master servicer as a performing loan. The liquidation fee is also typically 100bp and is paid as the name suggests, from the liquidation proceeds resulting from the sale of a loan. Because most special servicers also own the subordinate bonds in a given conduit/fusion transaction, they have a predisposition to modify loans in order to extend the fee income as long as possible.

Another reason special servicers are inclined to modify loans is because as the owner of the subordinate bonds they are often times the controlling class certificate holder. Therefore, if a troubled CMBS loan is modified and otherwise left intact, the special servicer will retain their right as the controlling class certificate holder, thereby ensuring their control of existing and future workouts and the fee income generated from them.

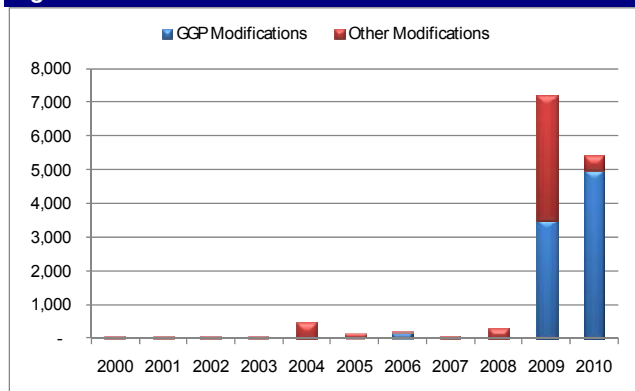
Because the servicing standard is loosely defined, it is very difficult to prove that a special servicer has not acted in accordance with the standard. Through the preparation of this report, there was little evidence of wide-spread abuse. However, this is an issue that will need to be closely monitored in the months and years ahead.

Another problem facing the CMBS market is the lack of clear and consistent reporting on CMBS loan modifications. As part of the CREFC investor reporting package v5.0, there is a report titled “Historical Loan Modification and Corrected Mortgage Loan Report” which is intended to provide pertinent information on modified loans. Although the report itself is quite comprehensive, in many cases the report was not filled out completely or sometimes at all. Perhaps the most important field in the report is the “Servicer Comment” field which is critical in determining the nature and scope of the workout. Unfortunately this field was nearly always incomplete or empty. As the use of modifications continues to grow, it will be increasingly important that servicers completely fill out the reports so the data providers can accurately report the modifications to market participants.

### III. An Overview of Completed Modifications

The growth of modified loans in the CMBS market has been tremendous. Between 2000 and 2008, a total of \$1.1 billion of CMBS loans had been modified and in the last 15 months another \$12.6 billion of loans have been modified. (See Figure 2) Of course most of the extensions have been related to the GGP bankruptcy, but excluding GGP modifications there is still nearly \$5.1 billion of modified loans in conduit and fusion CMBS transactions.

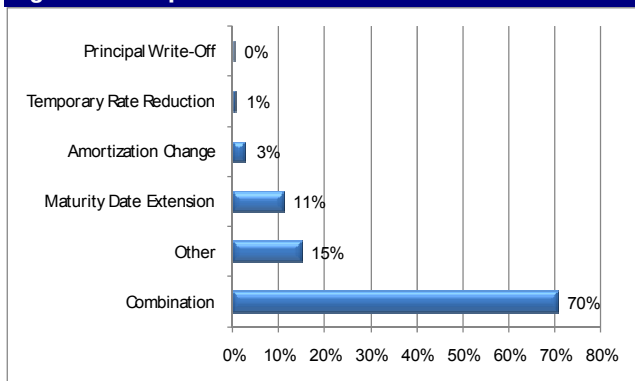
**Figure 2: Balance of Loan Modifications in CMBS**



Source: Deutsche Bank and Intex. Note: Balance in millions (\$)

Figure 3 shows what types of modifications have been done so far.<sup>2</sup> The data includes all modifications that have been done to date. As the GGP loans are tagged as combination modifications, because they were extended and the amortization schedule was changed, the category is by far the dominant type of modification.

**Figure 3: Completed Modifications with GGP**

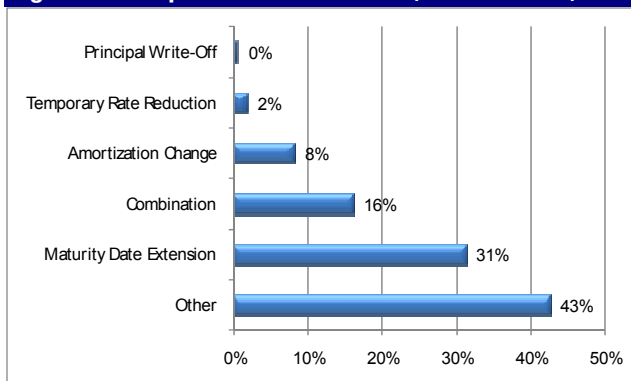


Source: Deutsche Bank and Intex

In Figure 3, the GGP loans are removed from the data set since in many respects the GGP loans were essentially modified as if they were one giant loan. By removing

those loans, a much different picture of the most popular modification types appears.

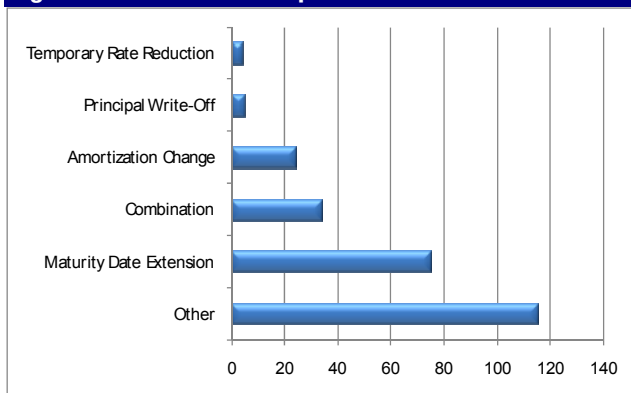
**Figure 4: Completed Modifications (without GGP)**



Source: Deutsche Bank and Intex

In Figure 5, the number of times each modification type has been used is shown. The results show that one or two large loan balances did not skew the results in Figure 4.

**Figure 5: Number of Completed Modifications**

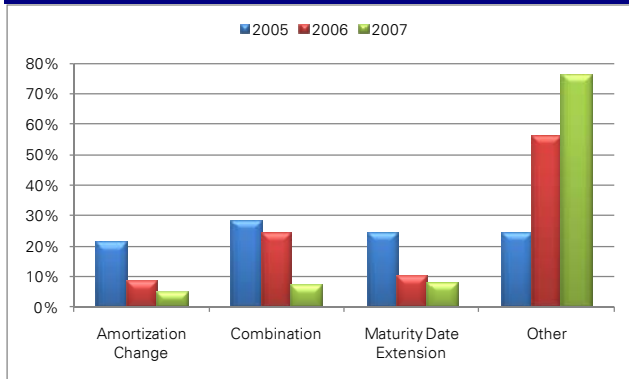


Source: Deutsche Bank and Intex

Over 80% of the loans that have been modified have come from the 2005-2007 vintages. Figure 6 shows the differences between the four main modification strategies among the 2005-2007 vintage loans. Perhaps not surprisingly, plain vanilla extensions or a combination of an extension and another modification comprise over half of the 2005 vintage modifications compared to only 15% for the 2007 vintage loans. This is in large part because at this point in the cycle, there have simply been more 2005 vintage loans that have matured than 2007 vintage loans. For this reason, most of the modifications that have occurred so far have fallen into the "other" category which is explored in greater detail later in the paper.

<sup>2</sup> The data in this chart and most of the charts throughout the paper were computed using loan balances.

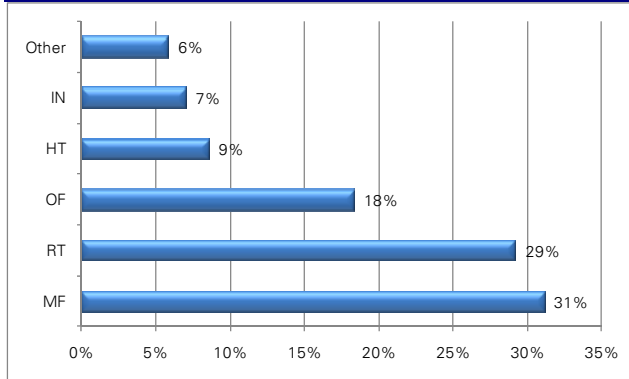
**Figure 6: Major Modifications in 2005-2007 Vintage Loans**



Source: Deutsche Bank and Intex

As shown in Figure 7, multifamily loans have been more likely to be modified than any other property type. This is true even though by balance, multifamily is only the third largest sector in the conduit CMBS universe.

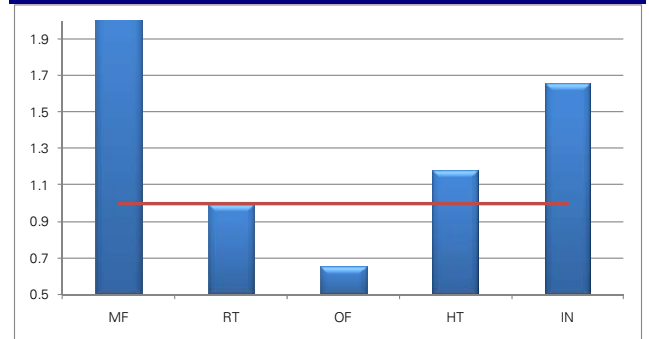
**Figure 7: Modified Loan Property Types**



Source: Deutsche Bank and Intex

Multifamily, hotel and industrial loans have been modified to a much higher degree than one would otherwise expect by looking at the representation of each property type within the CMBS. See Figure 8. One possible explanation for this trend is these properties have much shorter leases (or in the case of hotels, daily leases) and therefore in periods of declining rents such as the current cycle, the net operating income at these properties comes under pressure more quickly than compared to office and retail properties. The cash flow stress in many cases has caused loans to be transferred to the special servicer sooner and has led to a “head start” in modification negotiations. Over the next year or two as the lag effect diminishes more office and retail loans will come under pressure and eventually become modified.

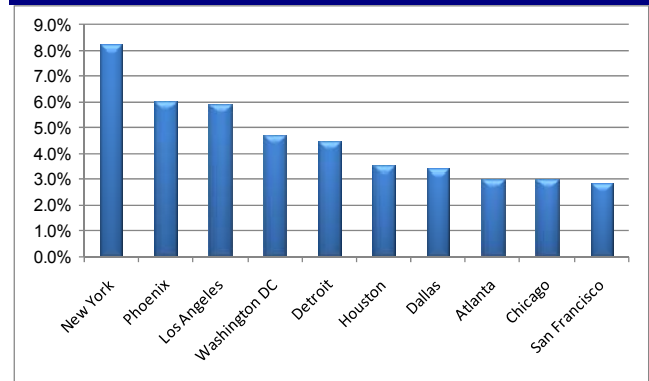
**Figure 8: Ratio of Modified Loans within Each Property Type to Overall Representation**



Source: Deutsche Bank and Intex

Figure 9 presents the MSAs with the most modified loans. The names on the list are an eclectic mix of the MSAs most represented in CMBS (NYC, LA, Washington DC, San Francisco) and some geographic areas that are exhibiting double-digit delinquency rates (Detroit, Houston, Phoenix, Atlanta).

**Figure 9: MSAs with the Biggest Balance of Modified Loans**



Source: Deutsche Bank and Intex

In the next four sections, the major modification types are reviewed in greater detail and some examples of each type are provided.

#### IV. “Other” Modifications

As shown earlier in this report, modified CMBS loans that do not neatly fit into one of the major modification types (extension, amortization change, combination, or rate reduction) represent nearly 40% of all modified loans. As such, it is difficult to generalize how these loans are being changed. Below a few of the larger loans which fall into this category are highlighted.

##### DDR/Macquarie Portfolio

The loan had an original balance of \$258.5mm and was split into a fixed rate and floating rate component. The

fixed rate component had a balance of \$212.6mm with half of the balance placed in the GECMC 2005-C4 transaction and the other half in the GMACC 2006-C1 transaction. The floating-rate component was included in the COMM 2005-FL11 transaction. The loan is scheduled to mature on October 1, 2010 and was originally secured by 35 single-tenant Mervyn's stores. The majority of the original collateral (75% by appraised value) was located in California. Mervyn's filed for bankruptcy in the summer of 2008 and by October the retailer announced their intention to close all their stores. Following the announcement, the loan was transferred to the special servicer.

The loan modification was finalized a year later and provided for an \$8mm pay down of the floating rate component and over \$10mm of funding for various reserve accounts. In addition, five properties have been sold and three are pending. The proceeds have been used to pay down the loan balance of which the fixed-rate components have current balances of \$102.1mm and the floating-rate component has a balance of \$16.4mm. The special servicer has released 100% of six of the remaining properties and 50% of the space at three more. Despite the executed modification agreement and property sales, it is unlikely the final chapter of the story has been written. Earlier this year, the borrower requested a charge down in the principal balance and if not successful will execute a deed-in-lieu.

### Pointe South Mountain Resort

This 10-year loan had an original balance of \$190mm and a fixed coupon of 6.68%. The collateral is a 640-room AAA four diamond resort in Phoenix, AZ. It is one of the largest resorts in Phoenix and has numerous amenities including two golf courses and a water park. The recession took a dramatic toll on the performance at the property. Occupancy rates dropped from over 80% in the twelve months prior to the loan origination to 56% in 2009. The loan was transferred to the special servicer in March 2009.

Over the next six months, the borrower and special servicer negotiated and ultimately finalized a modification agreement. The senior loan was split in two, a \$100mm A note and a \$90mm B note. Furthermore, the A note's coupon was reduced to 5.50% for 30 months after which it reverts back to the original coupon. Also the loan will not amortize until 2014 and then will be on a 30-yr schedule. The B note becomes the hope note and does not accrue interest. In return for the split note, the borrower funded a \$5.8mm interest reserve. To the extent there is excess cash flow available every month the balance will be split by the hope note and the borrower. At maturity, after the A note balance has been paid in full,

to the extent there is excess cash from a sale or refinancing, the proceeds will be split by the hope note and the borrower.

### Bethany Portfolio Consolidated

The modification agreement for this portfolio loan appears to be the most complicated modification to date. The special servicer utilized nearly all the available tools to workout the loans including: an extension, coupon reduction, debt forgiveness, discounted payoff, a change in required reserves, cross-collateralization and a change of control to a new borrower.

In 2007 when the LB-UBS 2007-C1 was issued, three large loans secured by three different multifamily portfolios were included in the trust. All the loans were sponsored by Bethany Holdings and together the loans represented over 8% of the deal balance. The portfolios were located in Maryland (1587 units), Houston (2439 units) and Austin (920 units) and generally were built in the 1960s and 1970s. The loans were transferred to the special servicer when Bethany declared bankruptcy in March 2009.

The loan modification was finalized on January 29, 2010 and as noted earlier is quite comprehensive, covering a many aspects of the loan's terms. A summary of the major terms are as follows:

- The three loans were consolidated into one new loan and all the collateral properties were cross-collateralized and cross-defaulted.
- The loan's maturity date was extended for five years until 12/11/2016.
- The loans coupon was reduced from an average rate of 6.09% to:

2010: 3.78%	2011: 3.93%
2012: 4.94%	2013: 5.41%
2014: 6.00%	2015: 6.00%
2016: 6.10%	

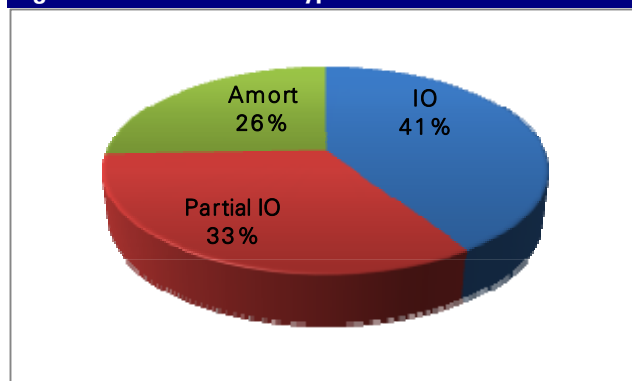
- A new borrower assumed the loan and contributed \$8.8mm of capital to the DIP accounts.
- An interest reserve of \$6.6mm was established and the agreement stipulates that all excess cash will be captured until the balance of the reserve is \$8.4mm.
- Accrued interest (\$1.8mm), advances (\$900k), and late fees (\$622k) were written off. The recovery of the accrued interest led to an interest shortfall of the AJ class on the March 2010 remittance report.

- The new borrower paid \$9.8mm to extinguish the B note on the Maryland portfolio (the BMP rake). The original balance of the subordinate debt was \$33.5mm.
- The B note on the Houston portfolio was sold to the borrower for \$5.5mm compared to the original balance of \$18.4mm. In addition, the C note was sold for \$100k versus an original balance of \$1.4mm. The debt was subsequently extinguished and converted to equity.
- The B note on the Austin portfolio was sold to the borrower for \$4.5mm compared to the original balance of \$9.7mm. The C note was sold for \$100k compared to the original balance of \$505k. Similarly to the other portfolios, the debt was subsequently extinguished and converted to equity.

After evaluating the changes above, the special servicer calculated the changes would result in a loss of \$36.4mm with a net present value of \$256.6mm. These figures compare to a foreclosure and immediate liquidation strategy that based on the special servicer's calculations would have resulted in a \$68.7mm loss and a \$217.4mm net present value. The third option reviewed (a foreclosure, stabilize and sell) was estimated to incur a \$43.3mm loss.

Clearly the vast differences in the final modification terms for the loans detailed above make it difficult to generalize the loan characteristics that make a modification of this type more prevalent. But there are a few observations that can be made. In Figure 10, the amortization types of the modified loans under the "other" classification are shown. Not surprisingly, the IO and partial IO loans comprise the majority of the loans and approximate the overall distribution found in the transactions.<sup>3</sup>

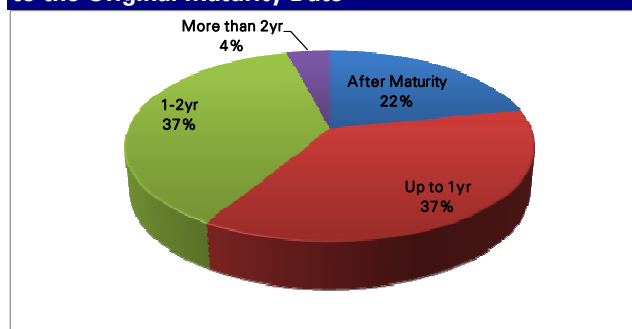
**Figure 10: Amortization Type of "Other" Modifications**



Source: Deutsche Bank and Intex

However, in terms of when modifications are being granted relative to the original maturity date of the loan (or in the case of partial IO loans, the IO expiration date) there are very clear differences in servicer behavior within each sub-sector. Figure 11 shows that more than half of IO loans are receiving their modification either after the maturity date or up to one year prior. Nearly all the other loans are being modified no more than two years before the scheduled maturity date.

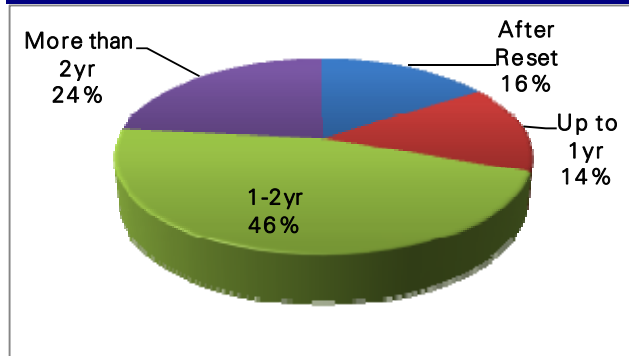
**Figure 11: Timing of Modification on IO Loans Relative to the Original Maturity Date**



Source: Deutsche Bank and Intex

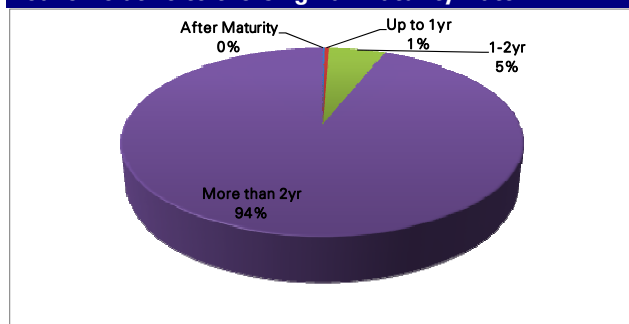
The story is a bit different for partial IO loans. (See Figure 12) In this subset only about one in three loans are being modified within one year or after the payment reset date. Of perhaps greater significance, one in four loans has been modified at least two years in advance of the reset date.

<sup>3</sup> Includes all the modified and non-modified loans in the transactions with modified loans classified as "other".

**Figure 12: Timing of Modification Relative to Partial IO Reset Date**

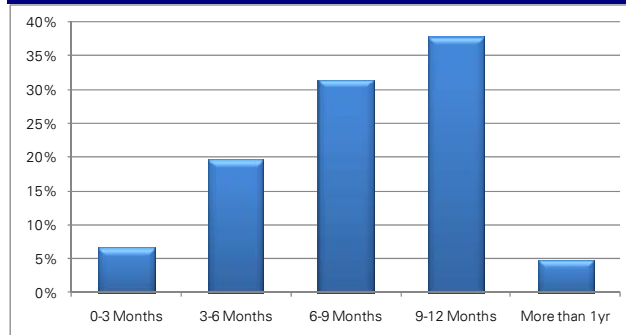
Source: Deutsche Bank and Intex

From a timing perspective, amortizing loans are being modified much more aggressively than either IO or partial IO loans. (See Figure 13) On a relative basis, the higher debt service payments required on an amortizing loan puts an additional burden on borrowers faced with declining net operating incomes and potentially increases the propensity for a modification request. The presence of amortization also provides special servicers another lever to pull when negotiating a modification since in some cases removing the principal component of the monthly payment can alleviate cash flow pressure.

**Figure 13: Timing of Modification on Amortizing Loans Relative to the Original Maturity Date**

Source: Deutsche Bank and Intex

While there is a stark difference among IO, partial IO and amortizing loans in the lengths of time from the modification date to a loan's maturity date, loans of all amortization types are being modified approximately eight months after the initial transfer to the special servicer. As shown below in Figure 14, nearly all modifications within the "other" category take place three to twelve months after the initial transfer. The average lag is slightly over nine months.

**Figure 14: Number of Months Between Transfer and Other Modification**

Source: Deutsche Bank and Intex

## V. Extensions

To date, loan extensions have only accounted for one in three modifications. However, the proportion of modified loans should grow dramatically over the next 12-24 months. The major cause of future loan extensions will come from the \$31.6 billion of fixed-rate CMBS loans of the 2005-2008 vintages that are scheduled to mature by the end of 2011. It is likely that at least half of these loans will not qualify for refinancing. In fact, the actual number could be higher. A 2010 maturity analysis published earlier in the year, indicated approximately two thirds of loans from the 2005 and 2006 vintages would not be able to qualify for a take-out loan.<sup>4</sup>

Because many of these loans are able to remain current under the existing loan terms and considering the huge number of delinquent loans that have transferred in recent months, granting extensions to performing loans will be a very practical strategy. The market has acknowledged the viability of this strategy by bidding up many of the A2 and A3 bonds by 100bp since the beginning of the year.

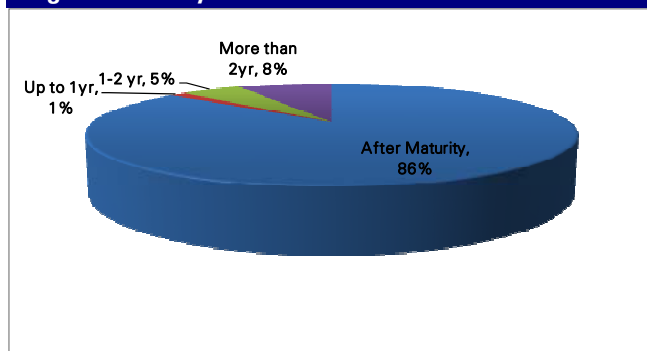
Servicers have broad latitude to grant a potentially large number of extensions. The pooling and servicing agreements for conduit CMBS transactions generally allow extensions up until two or three years prior to the rated final distribution date which is usually 25-30 years after the anticipated repayment window of the most subordinate bond. So for all practical purposes, special servicers can exercise nearly an unlimited number of extension options without violating the transaction's governing document. The only other constraint placed upon special servicers is that if the extension is granted, the loan should be reasonably expected not to default. Hence, the extension option should result in a higher

<sup>4</sup> See "Market Update", published February 8, 2010 for more information.

recovery to bondholders than another type of modification or liquidation.

Considering the relative freedom servicers have in regards to extensions and the steady supply of loans in need of them, the natural question is: Are servicers handing extensions out like candy? The answer is mixed. As referenced earlier in this report, extensions are the second most-popular modification and growing but special servicers appear to be taking their time before granting them. Over 85% of all extensions were granted after the original maturity date had passed.

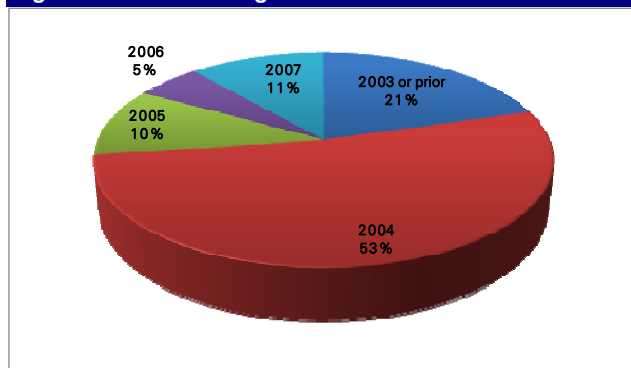
**Figure 15: Timing of Extension Grant Relative to Original Maturity**



Source: Deutsche Bank and Intex

The majority of the extended loans have been the five-year matured loans from the 2004 vintage. Only 9.6% of extended loans have come from the 1998 or 1999 loans and 21.5% from the 2003 vintage or prior.

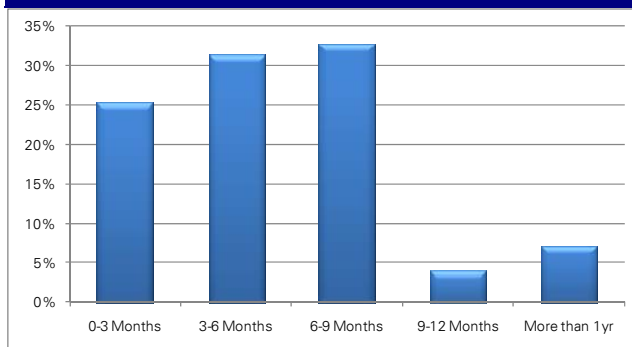
**Figure 16: Loan Vintage of Extensions**



Source: Deutsche Bank and Intex

To be fair to the special servicers, 95% of the loans that have been extended have not transferred until the maturity date had already passed. Furthermore, once the loan has been transferred, the turnaround time has been relatively quick. On average, a loan has been extended 5.3 months after it was originally transferred to the special servicer.

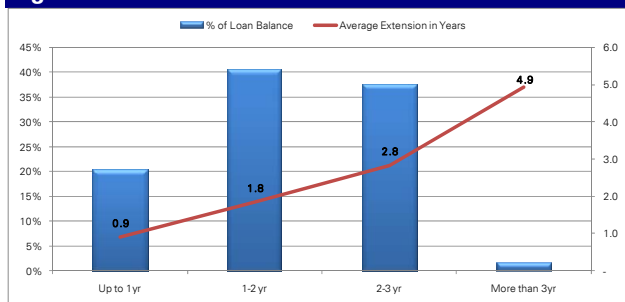
**Figure 17: Number of Months Between Transfer and Extension**



Source: Deutsche Bank and Intex

The average length of the extension has varied. Only 20% of the loans have been granted a one year extension while approximately 40% has been granted an extension between one and two years. Nearly all the remaining extensions have been between two and three years. To date, the average extension has been 2.1 years.

**Figure 18: Extension Period Distribution**



Source: Deutsche Bank and Intex

Earlier in the year there was general concern that special servicers would grant only three or six month extensions, which would in most cases do little to remedy the financing hurdles faced by borrowers and cause CMBS investors to pay unnecessary fees. The fact that the vast majority of extensions are at least one year confirms that special servicers are acting prudently when granting extension requests and are not abusing their role.

**180 Maiden Lane**

This loan originally had a five year term and payments were scheduled to be interest-only. The balance of the whole loan was \$292mm and was participated in three notes, a \$93mm piece in the WBCMT 2004-C15 transaction, a \$93mm piece in the WBCMT 2005-C16 transaction, a \$69.5mm subordinate note which supports the series "180" rakes in the C15 deal and a \$36.5 C note. The collateral for the loan was 180 Maiden Lane, a 1.1mm sf office building in the Financial District of Lower Manhattan. At the time of securitization, Goldman Sachs

leased 74% of the net rentable area but exercised an early termination option in May 2008. The lease was subsequently assumed by AIG and they are scheduled to move in to the building in a few weeks. The servicer estimates the whole loan DSCR is 1.93x.

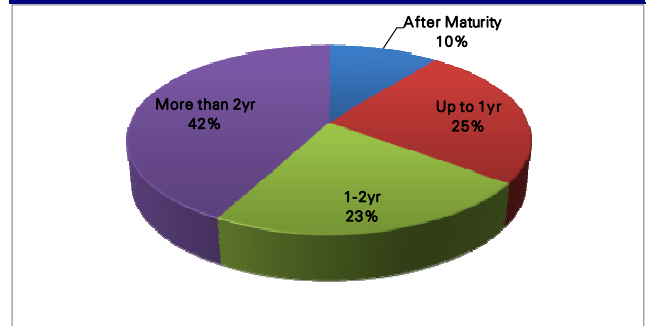
The loan was transferred to the special servicer in June 2009 due to concerns about the likelihood of a successful payoff at the scheduled maturity date in November. In December the servicer agreed to extend the loan for three years. In exchange, the borrower contributed an additional \$6mm of capital that was placed into a tenant improvement/leasing commission and replacement reserve accounts. In addition, the modification agreement calls for the coupon to be raised 100bps one year prior to the maturity date (December 2011).

## VI. Combinations

The combination modification is similar to the “other” modification type in that there is more than one change made to the loan. The modification package usually allows for an extension of the original maturity date and usually a change to the payment rate or the amortization schedule. The GGP loan modifications were tagged as combinations and were excluded from the following analysis in order to gain insights on a wider variety of loans. Because many combination modifications include an extension and the removal of amortization in the monthly debt service payment; these modifications can lengthen the weighted average life of shorter super-senior bonds more than a generic extension. Consequently, an investor who acquired those bonds at a premium over the last few months would prefer this type of modification.

The trigger for this type of modification is much more performance related compared to extensions and to a lesser extent, “other” modifications. As shown in Figure 19, 42% of loans are modified at least two years before the original scheduled maturity date compared to 24% for “other” modified loans. Also only 10% of the loans are modified after maturity compared to 16% for “other” modifications.

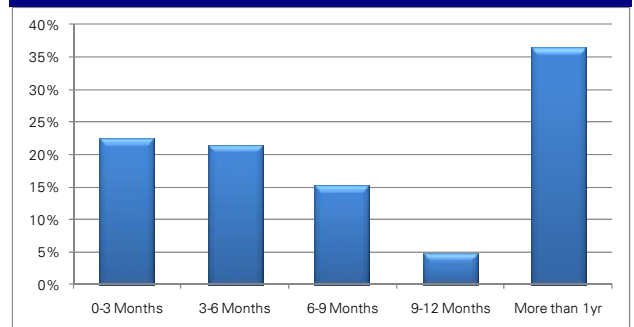
**Figure 19: Timing of Combination Modification Grant Relative to Original Maturity**



Source: Deutsche Bank and Intex

Not only are special servicers modifying these loans well before the scheduled maturity dates, they are also taking longer to modify the loans after they have transferred. About one in three loans in this subset are modified one year after the initial transfer to the special servicer compared to less than 5% of loans with other modifications.

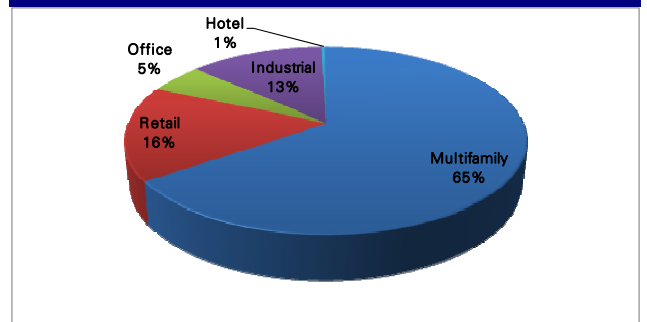
**Figure 20: Number of Months Between Transfer and Combination Modification**



Source: Deutsche Bank and Intex

Multifamily loans represent the majority of loans with a combination modification.

**Figure 21: Property Types of Loans with Combination Modifications**



Source: Deutsche Bank and Intex

Generally there are two reasons these loans have been modified:

- The loan was underwritten to pro-forma expectations that failed to materialize.
- The loan was a partial IO and the cash flow was not enough to keep the loan current after the interest only period expired.

The story of one such multifamily loan, Pelican Point, is below.

### Pelican Point

The \$72mm interest only loan was included in the JPMCC 2007-LDPX transaction and was scheduled to mature in February 2012. In addition to the senior loan there is also a \$24mm mezzanine loan outstanding. The senior loan is secured by a 400-unit multifamily property in Ventura, CA that was undergoing a renovation at the time of securitization. The renovation was expected to result in a substantial increase to the rental income. But after the renovation was completed the net operating income (NOI) at the property was only \$3.6mm compared to an underwritten NOI of \$4.8mm. The master servicer reported the 2008 DSCR to be only 0.67x and the loan became delinquent in early 2009. In March, after the loan became 60-days delinquent it was transferred to the special servicer.

By August, the special servicer and borrower agreed to a loan modification which resulted in the following modifications:

- The coupon was reduced 55% to 3%. The coupon reduction resulted in a permanent interest shortfall of \$222k monthly or 7.3% of the available scheduled interest to all classes not originally rated AAA (class B –S)
- The maturity was extended for two years and is now scheduled for February 2014.
- The borrower contributed \$2mm in capital which was used to fund an interest reserve.

### FBI Building

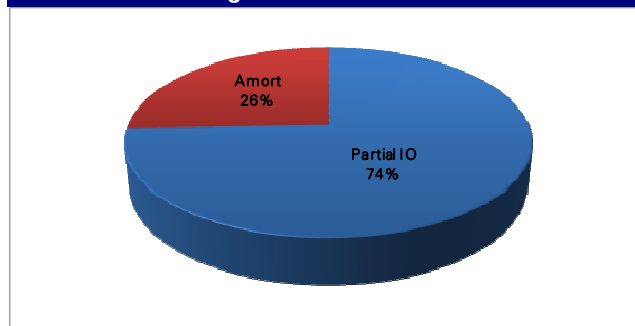
The \$17.3mm loan had an original balance of \$21mm and was included in the CSFB 2004-C3 transaction. The collateral is an 87k sf office building in Pittsburgh, PA; entirely occupied by the FBI until 2016. The loan was originally scheduled to mature in August 2009 and was transferred to the special servicer for imminent default four weeks before the maturity date.

The modification was finalized a month later and extended the maturity date out 18 months. In addition, the pay rate was raised 2% with the excess funds used to fund an interest reserve.

## VII. Amortization Change

Changes to the amortization schedule have accounted for about 10% of all modifications but like extensions the number of amortization changes should grow significantly in the future. The nearly \$80 billion of partial IO loans in CMBS that have not yet reset will serve as a natural supply for this type of modification. All of these loans come from the 2005-2008 vintages and because they are generally more levered than loans from earlier vintages, they will have a higher propensity for becoming delinquent once the interest-only period expires. Recently, Deutsche Bank estimated 350 loans with a balance of \$5.3 billion will not be able meet the required debt service obligation when the loan payment increases.<sup>5</sup> Already partial IO loans account for nearly three out of four loans that have experienced an amortization change.

**Figure 22: Loan Amortization Type of Loans with a Amortization Change**

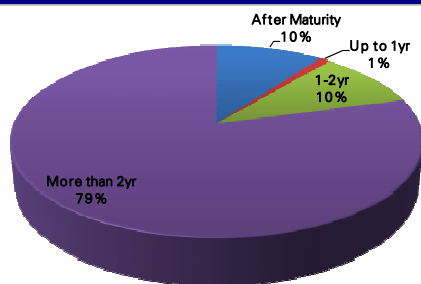


Source: Deutsche Bank and Intex

Because partial IO loans represent most of the loans that have had changes to the amortization schedule, it is not surprising that approximately 80% of these modifications have occurred more than two years prior to the originally scheduled maturity date. (See Figure 23)

<sup>5</sup> See "Partial IO Loans: The Past, Present and Future", published March 2, 2010 for more information.

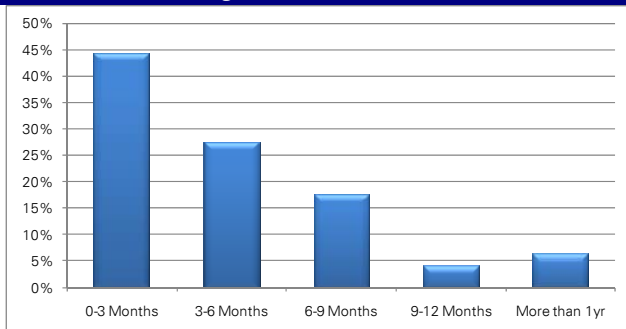
**Figure 23: Timing of Amortization Change Grant Relative to Original Maturity**



Source: Deutsche Bank and Intex

Figure 24 shows that these modifications are being effectuated sooner than the other major modifications. 72% of the modifications are occurring within six months of transferring to the special servicer compared to 56% for extensions, 44% for combinations and 26% for other modifications. For many troubled partial IO loans and amortizing loans, removing amortization from the monthly payment is a simple way of giving borrowers more flexibility to remain current on their payments. However, this type of modification in many cases might not be enough to prevent a trip back to the special servicer at a later date if the cash flow declines further.

**Figure 24: Number of Months Between Transfer and Amortization Change**



Source: Deutsche Bank and Intex

If the loan does in fact get transferred back to the special servicer and require another type of modification or possible foreclosure, not only will the servicer lose precious time but the future value of the property could also suffer. Below are two examples of loans that have been converted to interest only and may in fact eventually require another workout.

#### Renaissance Baltimore Harborplace

The \$110mm loan is the third-largest in the BACM 2005-4 transaction and comprises 7.1% of the trust balance. The loan was structured with a two-year interest-only period and then the payment flipped to a 25-year amortization

schedule until the scheduled maturity date of January 2016. The collateral for the loan is a leasehold interest in a 12-story 622-room full-service hotel in Baltimore's Inner Harbor. The property is part of a larger mixed-use development which includes the Gallery Mall (owned by GGP) and 260k sf of office space. The loan was originally underwritten to \$47.4mm of effective gross income. Yet in 2009 the property only produced \$35.6mm.<sup>6</sup> The most recent DSCR was reported to be 0.78x. The loan was transferred to the special servicer in July 2009 following a request by the borrower.

The borrower requested a principal forgiveness in exchange for a modest principal pay down but was denied. The approved modification allows for an interest-only payment for 18 months beginning in September 2009. The change resulted in a loss of approximately \$200k of monthly amortization payments. Another one year extension of the interest-only period is still under consideration. In exchange for the reduced payment, the excess cash is being swept into a reserve account.

#### Centerpointe Mall

The \$44.1mm loan is the fourth-largest in the CSFB 2004-C3 transaction and originally had a 10-year term and was on a 30-year amortization schedule. The collateral is secured by a 774k sf regional mall in Grand Rapids, Michigan. The property was anchored by a furniture store which occupied 24% of the net rentable area but the lease was terminated in May 2008, six years before the scheduled expiration date. The loan was transferred to the special servicer in November 2008.

The borrower requested the loan be switched to an interest-only to allow for the asset to be repositioned. The request was granted for a period of two years beginning in April 2009. The modified payment is nearly \$70k/month lower than the amortizing payment. Despite the drop in the monthly payment the 2009 net cash flow was only slightly over \$600k, well short of the modified annual debt service payment of \$2.4mm.<sup>7</sup> The loan remains current but a replacement tenant has not yet been found for the space vacated by the furniture store.

## VIII. Observed Servicer Behavior

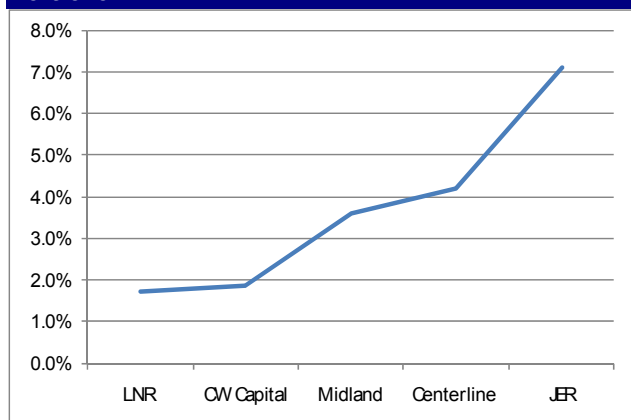
Some special servicers have been more amenable to modifications than others. As shown in Figure 25, to date,

<sup>6</sup> The 2009 EGI was derived by annualizing the reported nine-month EGI figure of \$26.7mm.

<sup>7</sup> The 2009 EGI was derived by annualizing the reported nine-month EGI figure of \$461k.

LNR has been the least likely to modify loans in their current portfolio. They have modified less than 2% of their current portfolio compared to JER which has modified more than 7% of their current portfolio. The propensity to modify appears to be inversely related to the size of the servicing portfolio, as the larger servicers have executed the smallest number of modifications on a relative basis.

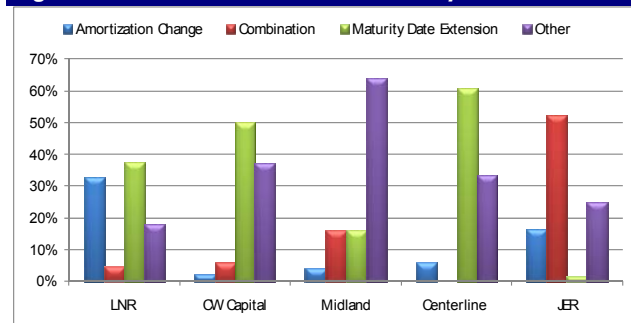
**Figure 25: Modified Loan Percentage of Overall Portfolio**



Source: Deutsche Bank, Intex and Trepp

An important question we sought to answer while writing this report was: Are certain modifications more likely than others depending on which special servicer is responsible for workouts? Figure 26 presents how often the largest special servicers have used the various types of modifications to workout problem loans.

**Figure 26: Modifications Differences by Servicer**



Source: Deutsche Bank and Intex

Clearly what type of modification is ultimately executed depends to some extent on the differences in servicer behavior. While there is little doubt that some of the differences are due to a limited data set, some important trends are highlighted below.

### LNR

LNR has been very aggressive in pursuing amortization changes compared to the other major special servicers.

Amortization changes make up one third of their modifications compared to an average of 8% for the broader market.

### CW Capital

The servicer has more actively pursued extensions compared to its competitors. Half of the modifications CW Capital has agreed to have been extensions, which is 60% higher than the market average.

### Midland

Midland has pursued the "other" type of modification in two of every three executed modifications.

### Centerline

Like CW Capital, Centerline has been aggressive in pursuing extensions. They have agreed to an extension in 60% of all their modifications.

### JER

JER has pursued combination modifications at a rate more than three times the market average of 16%. The combinations have been at the expense of plain vanilla extensions. This would seem to indicate that perhaps JER is more concerned about future property performance and is therefore bundling extensions with other modifications. The modification on the Pelican Point loan, described earlier in this report, was modified by JER.

As special servicers continue to deal with the unresolved loans in their portfolios and the number of modified loans continues to increase, it is unclear if the observed trends will continue.

## **IX. Conclusions**

The explosive growth in the use of loan modifications on troubled CMBS loans is here to stay. Over the near to intermediate term, modifications will continue to take workout share away from the special servicer's other options, namely foreclosure/liquidation. If used appropriately, modifications will save CMBS investors money by avoiding unnecessary losses. However, there is also the potential that some of the unrealized losses are unavoidable given the dramatically different CRE landscape compared to the one that existed in 2006 and 2007.

If extensions and other types of modifications are used indiscriminately, investors run the risk of seeing a loan modified in 2009-2010 transferred back to the special

servicer in 2011-2012. If that scenario were to play out, it foreclosure would inevitably be the only remaining workout strategy and the eventual loss would likely be higher than if the loan was liquidated on the first trip to the special servicer.

The biggest wildcard in all of this is the state of the burgeoning economic recovery. If the recovery proves stronger than the current consensus, it would likely ease many of the ills that owners of troubled properties currently face. A sharp bounce-back would improve owner's position with current and prospective tenants, eventually allowing the property to increase cash flow or, at a minimum, soften the cash flow decline many properties are and will be experiencing. In addition, a strong recovery in the broader economic landscape would likely improve the availability of financing on a broader array of commercial real estate properties, which in turn would help prop up values. All of these factors would greatly reduce the need to modify loans in the future. Investors could look back on some of the loans that already have been modified and wish special servicers had afforded borrowers more time prior to executing the modification agreement.

While its possible a "goldilocks" scenario could make many of the current modifications unnecessary and eliminate the need for many more in the future, it is unlikely. It appears that loan modifications will serve a big role in working out the legacy issues in existing CMBS transactions. However, absent a strong economic recovery and clear guidelines for servicers to evaluate modifications requests, the increased use of modifications will shed light on many of the structural deficiencies that are inherent in the existing structures.

# X. Appendix

**Figure 27: Top 2004 Vintage Deals with Modified Loans**

Deal Name	Modified Loan Count	Modified Loan Balance (\$)	% of Deal
WBCMT 2004-C15	2	162.50	14.4%
LBUBS 2004-C8	9	113.88	10.6%
JPMC 2004-PNC1	6	83.32	8.8%
CSFB 2004-C3	6	80.51	6.2%
LBUBS 2004-C2	3	59.86	6.6%

Source: Deutsche Bank and Intex. Note: Balances are in millions

**Figure 28: Top 2005 Vintage Deals with Modified Loans**

Deal Name	Modified Loan Count	Modified Loan Balance (\$)	% of Deal
WBCMT 2005-C16	2	146.00	9.7%
GECC 2005-C4	2	108.97	4.7%
BACM 2005-4	1	105.24	7.1%
BSC 2005-T18	1	71.15	6.9%
MLMT 2005-MC1	2	64.85	4.0%

Source: Deutsche Bank and Intex. Note: Balances are in millions

**Figure 29: Top 2006 Vintage Deals with Modified Loans**

Deal Name	Modified Loan Count	Modified Loan Balance (\$)	% of Deal
GSMS 2006-GG8	1	190.00	4.5%
GMAC 2006-C1	1	102.13	6.2%
MLMT 2006-C2	3	96.64	7.3%
MSC 2006-HQ9	2	74.25	2.9%
GSMS 2006-GG6	1	69.25	1.8%

Source: Deutsche Bank and Intex. Note: Balances are in millions

**Figure 30: Top 2007 Vintage Deals with Modified Loans**

Deal Name	Modified Loan Count	Modified Loan Balance	% of Deal
LBUBS 2007-C1	2	346.88	9.4%
BACM 2007-3	3	197.60	5.6%
BACM 2007-1	3	135.95	4.4%
MSC 2007-IQ16	2	119.95	4.7%
JPMC 2007-LDP10	3	95.25	1.8%

Source: Deutsche Bank and Intex. Note: Balances are in millions

# 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. Richard Parkus

### 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:** This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act.

**EU countries:** Disclosures relating to our obligations under MiFiD can be found at <http://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, The Financial Futures Association of Japan. This report is not meant to solicit the purchase of specific financial instruments or related services. We may charge commissions and fees for certain categories of investment advice, products and services. Recommended investment strategies, products and services carry the risk of losses to principal and other losses as a result of changes in market and/or economic trends, and/or fluctuations in market value. Before deciding on the purchase of financial products and/or services, customers should carefully read the relevant disclosures, prospectuses and other documentation.

**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.

**New Zealand:** This research is not intended for, and should not be given to, "members of the public" within the meaning of the New Zealand Securities Market Act 1988.

**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 Chief Operating Officer	Guy Ashton Global Head Company Research	Marcel Cassard Global Head Fixed Income Strategies and Economics
---	---	--

<b>Germany</b>	<b>Asia-Pacific</b>	<b>Americas</b>
Andreas Neubauer Regional Head	Michael Spencer 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**  
Cheung Kong Center,  
2 Queen's Road Central  
Hong Kong  
Tel: (52) 2203 8888

**Deutsche Bank AG  
Japan**  
2-11-1 Nagatacho  
Sanno Park Tower  
Chiyoda-ku, Tokyo 100-6171  
Tel: (81) 3 5156 6701

**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 (1) engage in securities transactions in a manner inconsistent with this research report, (2) with respect to securities covered by this report, sell to or buy from customers on a principal basis, and (3) consider this report in deciding to trade on a proprietary basis.

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.

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.

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.

Copyright © 2010 Deutsche Bank AG