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CMBS Research Morningstar Monthly Highlights

Morningstar Credit Ratings

April 2018 Remittance

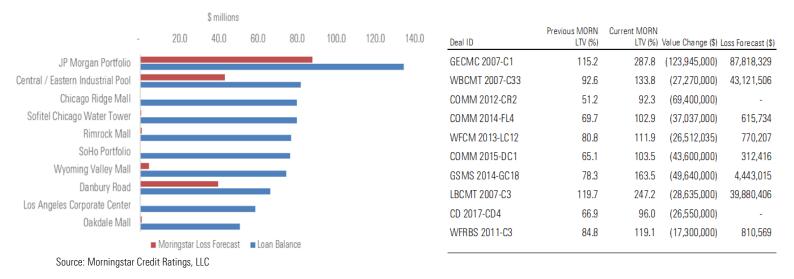
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Executive Summary

- ► The delinquency rate hit a postcrisis low of 2.24% in April, down 11 basis points from March.
- ► The delinquency rate is down 90 basis points from a year ago, and, with steady new issuance volume pushing the outstanding balance of commercial mortgage-backed securities loans higher and special servicers actively resolving or liquidating assets, Morningstar Credit Ratings, LLC believes the delinquency rate will hold below 2.5% for the rest of the year.
- ► Delinquencies from deals issued from 2010 through 2018 remain a small portion of the total, representing just 0.3% of the CMBS universe, while delinquent precrisis loans account for 1.9% of the CMBS universe.
- The payoff rate of maturing loans in CMBS remained below 80.0% for the second-consecutive month, improving to 79.2% from 74.3% in March. We anticipate that the maturity payoff rate will finish the year above 80%, as most of the remaining maturing loans have strong metrics.
- ► The balance of loans on the Morningstar Watchlist rose for the fifth-consecutive month, climbing to \$24.81 billion, up \$1.94 billion from March as the latest round of bankruptcies and store closures affected CMBS.
- The special-servicing unpaid principal balance fell for the seventh-consecutive month to \$21.86 billion, dipping \$555.5 million from March, and the percentage of loans in special servicing fell to a postcrisis low of 2.7%.
- Our projected losses on specially serviced loans rose to \$12.63 billion, up \$64.2 million from March and \$200.7 million from January.

Chart 1 – Significant Value Changes Among Large Loans



Significant Value Changes Among Watchlist and Specially Serviced Loans

In April, we raised our value on properties securing 55 loans with a combined balance of \$1.56 billion, while we lowered our values on properties securing 125 loans with a combined balance of \$6.81 billion. Of these, 65 loans showed value declines that resulted in increased loss forecasts. For example, the value of the JP Morgan Portfolio real estate owned asset, which backs a \$134.6 million loan in GECMC 2007-C1, was reduced to \$52.0 million from \$235.1 million. However, the decline can be attributed to the recent sale of the Chase Tower in Phoenix and a drop in value of the remaining asset, the Chase Building in Houston, which is down \$63.2 million from underwriting. The loan, which defaulted on its April 2017 maturity date, was aggressively underwritten with an 84.5% loan-to-value ratio and no amortization. What's more, the seller subsidized cash flow, paying the borrower a monthly rent enhancement. However, the borrower was unable to refinance the overleveraged loan after the rent enhancement obligation expired in 2015. Consequently, we forecast a loss of about \$87.8 million after servicing fees.

Separately, an updated appraisal valued the Danbury Road properties at \$29.9 million in December, down from \$93.5 million at underwriting. Two cross-collateralized Wilton, Connecticut, office properties with 265,142 square feet about 15 miles northeast of Stamford secure \$66.4 million in debt, which accounts for 31.9% of LBCMT 2007-C3, and we forecast a loss of \$39.9 million if the asset is liquidated in the short term; however, if the asset is not sold quickly, rising exposure would increase the loss. A 2015 interest-only modification was not enough to save the loans, as they defaulted on their January 2018 maturity because of low occupancy. The larger of the two properties, 50 Danbury Road, with 219,041 square feet, is 45.4% vacant, according to CoStar, Inc. The submarket's underperformance is hampering the borrower's ability to fill the space. The Wilton submarket reports a 23.8% vacancy rate, one of the highest within the Stamford market, which reports 13.9% vacancy, according to CoStar.

Special-Servicing Exposure

The special-servicing unpaid principal balance fell for the seventh-consecutive month, sliding by \$555.5 million to \$21.86 billion. Special-servicing exposure fell to 2.7%, the lowest since March 2009, when it registered 2.4%.



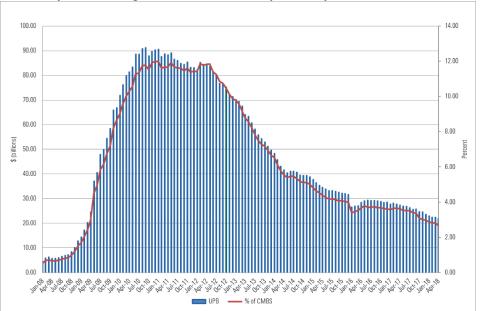


Chart 2 – Special-Servicing Balance and Rate January 2008 – April 2018

Special-servicing transfers, which fell by \$278.4 million from March, include 15 postcrisis loans totaling \$250.4 million. Of these, we project losses on eight loans, with the \$16.4 million loss forecast on the \$21.6 million Lycoming Crossing Shopping Center loan in MSBAM 2015-C25 the largest. Ross Dress for Less, a former tenant at the Muncy Township, Pennsylvania, 135,999-square-foot Class B shopping center, won a \$1.8 million judgment against the borrower because the borrower failed to notify Ross of Circuit City's departure, which would have triggered ac co-tenancy clause allowing for reduced rent for Ross. The collateral shopping center and an adjacent noncollateral Lycoming mall are in a rural portion of central Pennsylvania that remains largely undeveloped and thereby rely on vehicle traffic for sales. The closings of Bon-Ton, Macy's, Sears, and Toys 'R' Us at the Lycoming Mall have resulted in low traffic and sales in the area, which could affect the collateral as well. We project a \$16.4 million loss based on recent sales of nearby comparable properties.

Separately, the \$45.5 million Hotel Felix loan in WFRBS 2013-C18 was the largest transferred to the special servicer in April. Backed by a 225-room, full-service boutique hotel in downtown Chicago, the loan transferred for delinquency. Rising property taxes and an increase of hotels in the central business district have caused cash flow to tumble 29.6% from underwriting, with the year-end 2017 debt service coverage ratio registering 1.00x. Our \$36.0 million value, based on June 2017 net cash flow and a 9.0% capitalization rate, suggests a potential loss of \$10.4 million.

Watchlist Exposure

As shown in Chart 3, after hitting a multiyear low in November, Watchlist volume in April rose to a five-month high. In total, 944 loans with a UPB registering \$24.81 billion were on our Watchlist, up \$1.94 billion from \$22.87 billion in March. In April, we added 78 loans with a total UPB of \$2.43 billion to the Morningstar Watchlist, up from \$2.11 billion added in March. Morningstar also removed 48 loans from the Watchlist, 12 of which were transferred to special servicing.



We expect the volume of transfers to continue its gradual upswing in the coming months with retail continuing to account for the bulk of new Watchlist loans at \$1.02 billion. The wave of retail bankruptcies that began in 2017 and has continued into 2018 could lead to higher vacancy rates over the next year. In addition, consolidation in the grocery and apparel sectors could result in further store closures, especially at Class B and C assets.

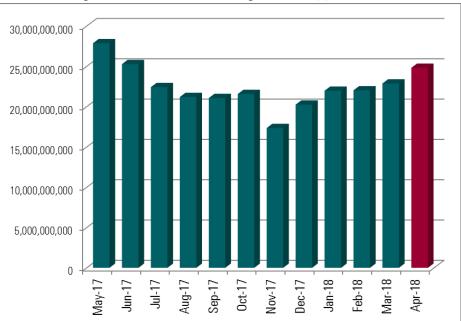


Chart 3 – Morningstar Watchlist Volume – Trailing 12 Months (\$)

Source: Morningstar Credit Ratings, LLC

The \$138.5 million Park City Center Ioan in MSC 2011-C3 was the largest added to our Watchlist. The collateral for the Ioan, a 1.2 million-square-foot regional mall roughly 70 miles west of Philadelphia, in Lancaster, Pennsylvania, will lose its second-largest tenant, Bon-Ton. Even with the loss of the tenant, we expect the Ioan to continue to perform in the near term because Bon-Ton contributed only 2.7% of the base rent and net cash flow has improved since underwriting, growing 12.4% through year-end 2017. The DSCR was 2.45x at year-end 2017 on 98.0% occupancy. However, a vacant anchor may cause a decrease in foot traffic. We value the property at \$209.3 million based on a discounted cash flow using a 10.0% capitalization rate.

Delinquency

The CMBS delinquent UPB declined modestly to \$18.36 billion, down \$483.6 million from \$18.85 billion in March, while the delinquency improved 11 basis points to 2.24% from 2.35% from the prior month. The balance of delinquent loans is down \$951.7 million from January, and down \$5.51 billion, or 21.3%, from the year-earlier period. While legacy CMBS now accounts for less than 5.0% of the CMBS universe, delinquencies from deals issued before 2010 represent 86.4% of all delinquencies by balance. Comparatively, delinquencies from deals issued from 2010 through 2018 contribute 13.6% of all delinquencies and represent 0.3% of the CMBS universe.



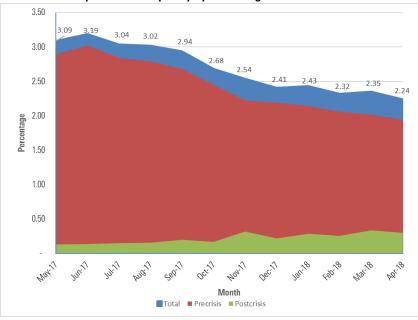


Chart 4 – Monthly CMBS Delinquency by Percentage

Category	Apr-18	Mar-18	Feb-18	Jan-18	Dec-17	Nov-17	Oct-17	Sep-17	Aug-17	Jul-17	Jun-17	May-17
30-Day	1.08	1.27	0.86	1.03	0.95	2.02	1.66	2.50	2.72	2.24	3.22	3.07
60-Day	0.62	0.34	0.27	0.68	0.40	0.63	0.76	0.98	1.08	1.37	1.16	1.68
90-Day	2.26	2.52	2.57	2.92	2.99	2.95	3.19	3.26	3.6	3.95	4.22	3.52
Foreclosure	4.55	4.85	5.03	5.3	5.33	5.16	5.78	6.02	5.91	6.3	6.28	6.09
Real Estate Owned	9.86	9.86	9.65	9.39	9.49	10.15	10.26	9.89	9.55	9.05	9.69	9.49
Total CMBS Del.	18.36	18.85	18.38	19.32	19.16	20.90	21.64	22.65	22.86	22.89	24.57	23.84
Current	800.45	781.77	774.84	775.01	774.77	801.98	787.06	747.75	735.30	730.10	744.77	746.37
Total CMBS	818.82	800.62	793.22	794.33	793.93	822.88	808.71	770.40	758.16	753.00	769.34	770.20
Delinquency %	2.24	2.35	2.32	2.43	2.41	2.54	2.68	2.94	3.02	3.04	3.19	3.09

Source: Morningstar Credit Ratings, LLC

The volume of newly delinquent loans continues to fluctuate, dipping below \$1.00 billion for the fourth time in the past seven months, registering \$856.8 million, down \$479.4 million from the prior month. Newly delinquent loans include the \$200.0 million Independence Mall Ioan in WBCMT 2007-C33. The Ioan, backed by 398,009 square feet of a 1.0-million-square-foot, three-story, super-regional mall in Independence, Missouri, was overleveraged at underwriting with a 7.4% debt yield and an 80.0% LTV. With just a 6.3% improvement in net cash flow over the life of the Ioan and no amortization, the borrower was unable to pay the Ioan off by its July 2017 maturity. A June 2017 appraisal valued the collateral at \$136.0 million, which suggests a potential loss of \$68.5 million.



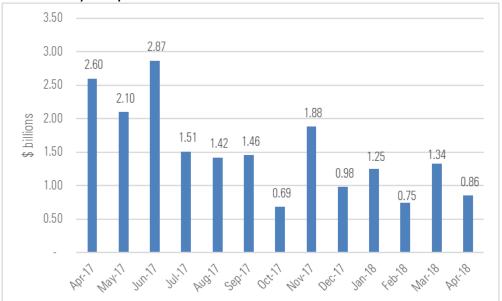


Chart 5 – Newly Delinquent Loans

Compared with year-ago levels, the office sector saw the largest decline in delinquent balance, tumbling \$2.35 billion, or 27.2%, as liquidations have far outpaced newly delinquent loans. By dollar amount, the other four major property types exhibit the following activity year over year:

- Retail loan delinquency tumbled by \$1.03 billion, or 12.6%, from \$8.15 billion one year ago, because more loans were either liquidated or resolved than were replaced with newly delinquent loans.
- Industrial loan delinquency dropped by \$349.3 million, or 29.9%, from \$1.17 billion one year ago.
- Multifamily loan delinquency eased by \$227.4 million, or 15.3%, from \$1.48 billion one year ago.
- Hotel delinquency slid by \$568.8 million, or 25.3%, from \$2.25 billion one year ago.

Property Type	\$ Current Balance	# Loans	% of CMBS Universe	% of CMBS Delinq.	% of Property Type
Healthcare	71,318,553	5	0.01	0.39	1.83
Hotel	1,683,478,115	94	0.21	9.17	2.29
Industrial	820,303,646	49	0.10	4.47	3.73
Multifamily	1,256,106,275	304	0.15	6.84	0.30
Office	6,283,878,359	291	0.77	34.22	5.00
Other	1,124,323,658	63	0.14	6.12	1.84
Retail	7,124,962,609	515	0.87	38.80	5.61
Total	18,364,371,215	1,321	2.24	100.00	

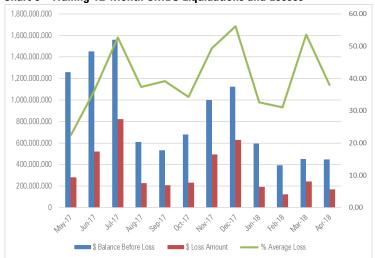
Table 2 – April Delinquency by Property Type

Figures may not sum to totals because they are rounded.

Source: Morningstar Credit Ratings, LLC

CMBS Liquidations

After touching a five-year low in February, liquidation volume remained subdued, inching down \$3.1 million from March, while the overall weighted average loss severity improved to 38.1% from 53.6% in March. CMBS loans backed by office and industrial properties made up the bulk of April's payoff activity. While two Maryland office loans had losses of more than \$20 million, average loss severity for the sector came in at around 37%, the lowest of the major property categories other than industrial. Helping to pull down the office loss severity rate, two large office loans, the \$89.8 million 950 L'Enfant Plaza (MSC 2007-HQ11) and the \$40.1 million 707 Broad Street loans (LBUBS 2007-C6), were each written off with a severity of less than 16%. Foreclosed government office buildings in the Northeast were collateral for both loans. The largest disposed loan in the industrial sector was the \$47.5 million First Industrial Portfolio (BSCMS 2006-PW13), which was written off with \$7.2 million in losses.







Source: Morningstar Credit Ratings, LLC

Monthly Maturity

With the maturity wave of 2015-17 behind us, the volume of maturing loans remained below \$1.00 billion for the third-consecutive month, registering \$572.2 million, down 98.5% from a year ago. After spiking above 87% in February, the maturity payoff rate remained below 80.0% for the second-consecutive month as two large office loans failed to pay off. The 492,192-square-foot office building in Washington, D.C., that backs the \$53.0 million 4000 Wisconsin Avenue loan in BACM 2007-5 will see its largest tenant vacate at year-end. While Fannie Mae occupies 87.0% of the building, it's likely that the borrower will execute a redevelopment plan, and the loan will be eventually retired without a loss.

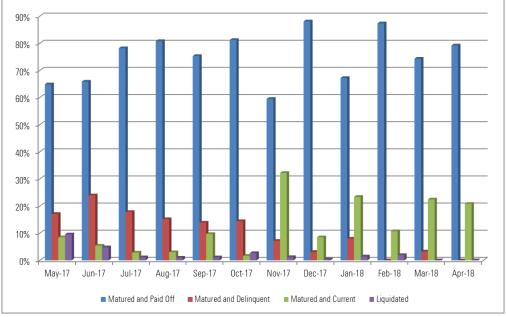


Chart 7 – 12-Month Performance Trend by Loan Status at Maturity

Maturity Outlook for 2018

Some \$6.07 billion of CMBS loans will mature through the remainder of 2018. We have valued 98.1% and project that the payoff rate will come in at roughly 80%, as 83.4% of the loans have LTVs below 80.0% or are defeased.

The largest loan of concern is the \$59.6 million Matrix Corporate Center, 8.2% of MSBAM 2013-C11. We forecast a loss of about \$8.6 million on the loan, which matures in August 2018, as September 2017 occupancy plummeted to 16.0% from 72.3% at underwriting after the two largest tenants vacated the 1.0-million-square-foot Danbury, Connecticut, office building. Losing both tenants has severely diminished cash flow and will hamper the borrower's efforts to refinance as maturity approaches. Our loss forecast, which includes fees and expenses, is based on a \$60.8 million July 2017 appraisal.



Source: Morningstar Credit Ratings, LLC

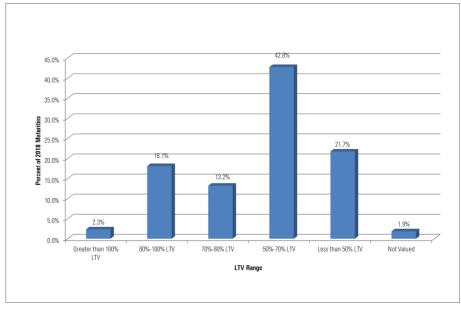


Chart 8 - 2018 Maturing Loans – Morningstar LTVs

Although LTV is a reasonable barometer in Morningstar's maturity analysis, a loan's refinancing ability is also subject to its DSCR, amortization, and lease expiration risk. Beyond an individual property's performance, factors such as capitalization rates and specific real estate market trends also will influence a loan's refinance prospects.

Once logged into Morningstar's CMBS Credit Risk Monitoring and Analytics, clients have access to loan-level details for all maturing loans in Microsoft[®] Excel[®] format by clicking the download icon at the top of Page 1.

Detailed Morningstar analyses and value estimates for all delinquent, matured-delinquent, and matured-current loans as well as loans on the Morningstar Watchlist can be found in the respective Morningstar DealView[®] CMBS Monitoring Analyses or Watchlists.



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