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CMBS and the Fed…is there a crisis brewing in the office?

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Author

Robin Marshall
Director, Fixed Income Research
07504-797-961
robin.marshall@ftserussell.com

Co-author

Luke Lu
Director, Yield Book Mortgage Research
1-212-314-1113
An.lu@lseg.com

Overview

To prevent a re-run of the 2008/09 collapse in the US financial system, the US Fed again stepped into the agency-MBS market, after the COVID-19 shock emerged in Q1, buying almost $600 billion of agency-Mortgage Backed Securities in Q2 2020 alone.

However, this support has not extended across the economy. Other than the Term Asset-Backed Securities Loan Facility program (TALF 2.0), covering legacy AAA CMBS, Government and Fed rescue programs have been very limited in commercial real estate/CMBS. This is to avoid the criticism the Fed has caused moral hazard in financial markets by buying assets indiscriminately.

With the Fed not buying non-agency CMBS, COVID-19 lockdowns structurally challenging some sectors, and other programs not supporting them, non-agency CMBS are left more exposed to the pandemic-related recession.

- In this paper, we assess the impact on non-agency CMBS defaults, using our Yield Book model to simulate the impact of commercial real estate (CRE) price declines of 20%, 30% and 40%, over the next year. (CRE prices fell by 38% during the GFC, from peak to trough).
- We find a 40% CRE price decline gives CMBS losses close to the levels seen for 2007/08 loan vintages after the GFC.
- But we note that the impact of the COVID-19 recession is concentrated in sectors that comprise almost 70% of CMBS collateral. This skews non-agency CMBS default risks to the high side of the GFC outcomes, when CMBS generally suffered less than RMBS.

Fed intervention soon arrested the widening in agency-MBS spreads, post-COVID-19

After the sub-prime housing crisis proved the epicenter of the Global Financial Crisis (GFC), market commentators focused on the US housing market and residential mortgage-backed securities (RMBS) for signs of history repeating itself during COVID-19. Mortgage spreads did widen sharply, but the US Fed was very alive to these risks, and stepped into the agency-guaranteed MBS market, buying enormous quantities of agency-RMBS and agency-CMBS from March to May that allowed mortgage rates to stabilize at, or near, record lows[1].

But Fed and US Treasury support programs exclude non-agency MBS…

Although there is a belief the Fed and US Treasury have mobilized enormous support programs right across the economy, this is a misnomer. They are bigger support programs than those deployed after the GFC, and there are many of them, but they don't cover all sectors, and some businesses have inevitably slipped through the QE net. This is partly deliberate, since the Fed is well aware of the criticism that QE invokes moral hazard in financial markets, and Fed Chairman Powell has noted the Fed is not intending to "run through the bond market like an elephant, snuffing out price signals" [2] by buying assets indiscriminately. But it may also reflect the speed with which QE programs were put together, in extremis, in March/April, and market liquidity. Other than the Term Asset-Backed Securities Loan Facility program (TALF 2.0) which covers financing for legacy conduit CMBS AAAs, Government and Fed stimulus targeting CMBS/CRE has been very limited.

The Fed has only bought MBS that carries an agency guarantee, effectively endorsing the underwriting standard and eschewing the risks in lower quality MBS in both RMBS and CMBS. The agency guarantee also insulates the Fed from the charge of invoking moral hazard. The rate of Fed purchases has also slowed substantially since Q2 2020, as the market has stabilized, as Table 1 shows.

[1] See FTSE Russell, September 2020, "No US housing crisis, yet at least…"

[2] Fed Chairman Jay Powell, Semi-annual Congressional Testimony, June 16 2020.

Table 1: Fed (agency) MBS purchases and holdings

Fed's (agency) MBS holdgs. & purchases	End-March 2020	End-April 2020	End-May 2020	End-June 2020	End-July 2020	End-August 2020	End-Sept. 2020
Total MBS stock held (trillion, $)	$1.38	$1.60	$1.83	$1.94	$1.93	$1.95	$1.98
Net increase on month (billion, $)	+$1.30	+$220	+$230	+$108	-$10	+$15	+$3.40
Target increase	"To support smooth functioning of MBS markets"	As in March	As in March	As in March	$40bn net monthly increase	As in July	As in July

Source: Federal Reserve Bank of St. Louis, FTSE Russell, October 2020.

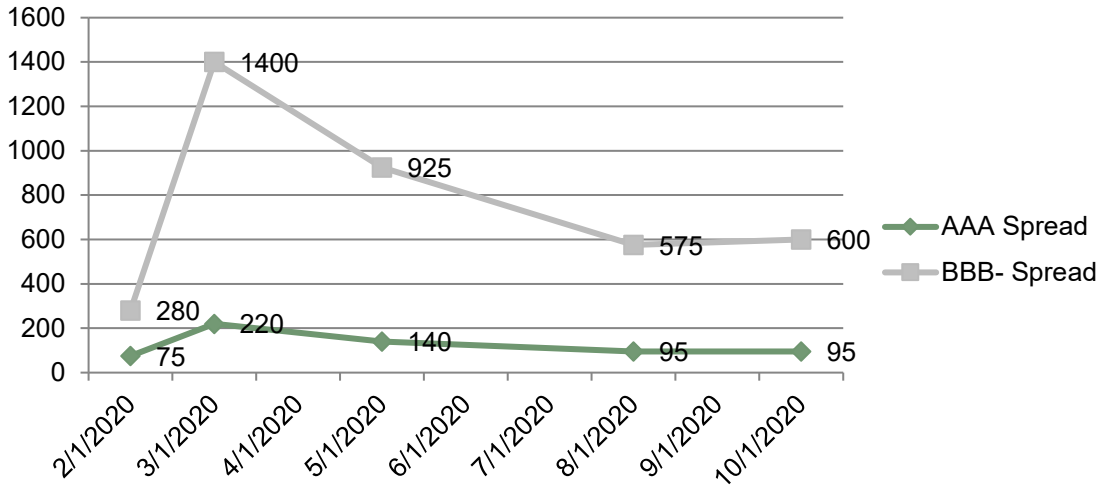
…so CMBS market bifurcated, like RMBS, with sharply wider spreads in non-agency CMBS

But with the Fed not buying non-agency CMBS, COVID-19 lockdowns structurally challenging some sectors, and other programs not supporting them, non-agency CMBS have been left exposed to the COVID-19 recession. This is reflected in credit spreads, which widened sharply[3] after the COVID-19 shock. While AAA spreads have rallied back to near the lows, BBB-spreads remain well above pre-COVID-19 levels, as Chart 1 shows. This is in stark contrast to agency-MBS spreads, which have narrowed and stabilized since the initial sharp spike in March.

[3] Also see FTSE Russell, August 21, 2020, "Is the outlook dimming for the CMBS market," An Luke Lu.

Chart 1: Mind the gap! Non-agency CMBS spreads before, and after, COVID-19

Date	AAA Spread (bps)	BBB- Spread (bps)
2/28/2020	75	280
3/27/2020	220	1400
5/28/2020	140	925
8/28/2020	95	575
10/30/2020	95	600



Source: FTSE Russell YieldBook, October 2020.

CMBS outperformed RMBS in GFC, due to diverse income streams, RMBS concentration risk…

Generally, CMBS did not suffer as badly in the GFC recession as RMBS did[4], helped by the diverse income streams supporting CMBS collateral from offices, retail, multi-family and lodging. In contrast, RMBS was hit hard by the concentration risk in collateral in residential property, which fell sharply in value, and particularly in the sub-prime, non-agency sector. Poor underwriting standards, and correlation risk, were also major issues for RMBS as the sub-prime housing market unraveled.

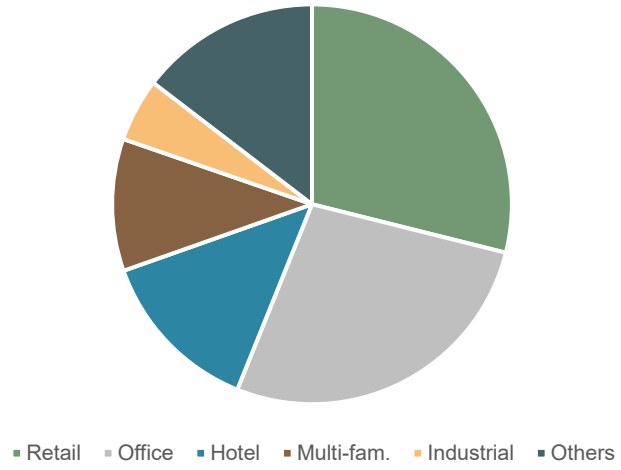
In general, RMBS investors also suffer more than CMBS during a period of rapidly falling interest rates, since higher mortgage redemptions and re-financings leave RMBS portfolio holders with more cash, and less duration, as rates and yields tumble (RMBS have negative convexity). In contrast, early redemption penalties and make-whole provisions protect CMBS investors from early redemptions.

[4] "CMBS: the ride is not over yet," Julie Tcherkassova, Journal of Structured Finance, Spring 2011.

…but CMBS sectors are more vulnerable in the COVID-19 recession, compared to the GFC

But in 2020, CMBS income streams from retail, hotel, and potentially office, are more vulnerable in the COVID-19 recession, and are three of the largest four sectors against which CMBS loans are secured, comprising about 70% of the conduit CMBS loans 2011-19 issuance, as Chart 2 shows.

Chart 2: Sectoral composition of CMBS collateral (based on conduit CMBS loans 2011-19 issuance)



Source: FTSE Russell, October 2020.

In non-agency CMBS, the hotel and retailing sectors have been particularly hard hit, with 19.43% delinquency and 25.2% special servicing for hotel and 14.33% delinquency and 18.0% special servicing for retail as of October 2020, according to Trepp. This compares with delinquency rates of 1-3% for industrial, office, and multifamily properties. Again, recent anecdotal data show so-called appraisal values are down more than 50% for some hotels and retail properties, compared to pre-Covid levels. Loan forbearances doubled in the last couple of months to over $30 billion, or 6% of the CMBS universe, with the majority of those in hotel and retail.

Improved underwriting standards and regulation reduce risks of a CMBS crash…

Before the GFC, there was a decline in underwriting standards of a typical non-agency CMBS deal from 2004 to 2008. Thus, loan losses were much greater in the loan vintages dating from just before the GFC, in 2007/08, than for the earlier deals in 2004/05, as underwriting standards had declined and earlier deals enjoyed property price uplift, pre-GFC. After the GFC, underwriting standards tightened, so apart from COVID-19, CMBS loan losses for post-GFC originations should be lower.

Table 2: Conduit CMBS historical losses for pre-GFC vintages

Vintage	Actual Realized Loss
2004	3.87%
2005	6.33%
2006	9.43%
2007	10.43%
2008	14.91%

Source: FTSE Russell YieldBook, October 2020.

…but how vulnerable is the CMBS market to a post-COVID-19 property market crash?

To assess the impact of the COVID-19 recession, and possible impact of commercial real estate (CRE) price declines on CMBS loan losses and default rates, we have simulated the impact of a 20%, 30% and 40% decline in CRE prices on loan loss rates over the next 12 months using YieldBook's experimental CMBS loan level credit model. The results are shown in Table 3. To benchmark these scenarios, note that commercial property prices fell by 38% from peak to trough during the GFC.

Table 3: Conduit CMBS loss forecasts for recent vintage CMBX indexes

	Issue Year	CRE Price Down 20%	CRE Price Down 30%	CRE Price Down 40%
CMBX13	2019	4.1%	7.4%	11.0%
CMBX12	2018	3.9%	7.3%	10.7%
CMBX11	2017	3.1%	6.0%	9.0%
CMBX10	2016	3.6%	6.5%	9.5%
CMBX9	2015	4.7%	7.9%	10.9%

Source: FTSE Russell YieldBook, October 2020.

It is assumed CRE prices fall in a straight line over four quarters, so the cumulative decline is 20%, 30% and 40% over 12 months. The model has the flexibility to handle non-linear CRE price assumptions, but the main purpose here is to illustrate the possible impact on loan losses, and given the high level of uncertainty in the outlook fine-tuning these scenarios may be unrealistic.

Modeling a 40% CRE price decline gives CMBS losses near GFC levels, despite better underwriting standards…

The main conclusions from Table 3 are that CRE price declines of 40% give CMBS projected losses of close to 11%, for 2018/19 vintages, similar to the loss vintage 2007 suffered through the GFC (10.43%, see Table 2). But the losses are a lot higher than those suffered on earlier vintages, like 2004 and 2005, which would also have been exposed to a near 40% decline in CRE prices, but not until later in the life of the loans and after an increase in CRE prices before the GFC crash. Underwriting standards were also higher in 2004 and 2005 than for the 2007 and 2008 loans.

…but sectoral impact more severe, skewing non-agency CMBS risks to the downside

As noted earlier, the other risk in 2020/21 is that the sectoral impact on CMBS income streams from retail and hotels is more severe than the impact from the GFC, where these sectors were less affected on occupancy rates, retail store closures, enforced Lockdowns, etc. Therefore, compared to the GFC, in the absence of a broadening of the Fed's MBS program into the non-agency space, the risks for overall non-agency CMBS losses may be higher from a similar CRE price decline of nearly 40%.

Appendix

Differences between CMBS and RMBS

It is also important to note the differences between the structure of CMBS and RMBS deals. A residential MBS, as the name suggests, is secured against a single-family, or a two-four family block of housing, whereas a commercial MBS is secured against multi-family, and other commercial property, like blocks of flats, offices, hotels, warehouses, etc. Pools of CMBS contain a smaller number of loans than RMBS pools, and rental income history is more readily available and predictable than for RMBS pools, which are far harder to analyze. CMBS pools are also more diverse in credit quality terms.

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EMEA
+44 (0) 20 7866 1810

North America
+1 877 503 6437

Asia-Pacific
Hong Kong +852 2164 3333
Tokyo +81 3 4563 6346
Sydney +61 (0) 2 8823 3521