

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

November 2020

## Author

Robin Marshall  
Director, Fixed Income Research  
07504-797-961  
[robin.marshall@ftserussell.com](mailto:robin.marshall@ftserussell.com)

## Co-author

Luke Lu  
Director, Yield Book Mortgage  
Research  
1-212-314-1113  
[An.lu@lseg.com](mailto: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<sup>1</sup>.

## **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”<sup>2</sup> 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.

---

<sup>1</sup> See FTSE Russell, September 2020, “No US housing crisis, yet at least...”

<sup>2</sup> 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
<b>Total MBS stock held (trillion, \$)</b>	\$1.38	\$1.60	\$1.83	\$1.94	\$1.93	\$1.95	\$1.98
<b>Net increase on month (billion, \$)</b>	+\$1.30	+\$220	+\$230	+\$108	-\$10	+\$15	+\$3.40
<b>Target increase</b>	"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.

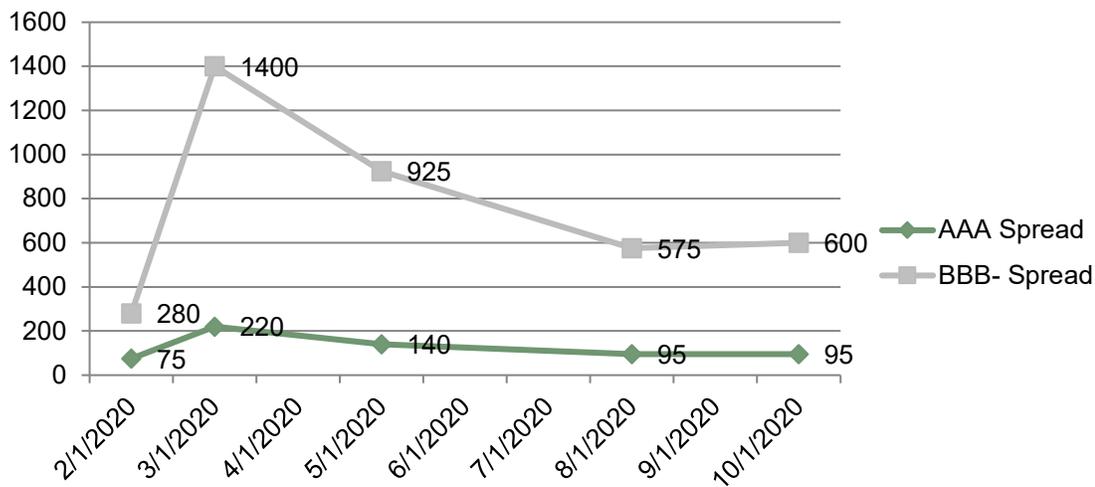
## ...so CMBS market bifurcated, like RMBS, with sharply wider spreads in non-agency CMBS

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<sup>3</sup> 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.

<sup>3</sup> 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<sup>4</sup>, 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.

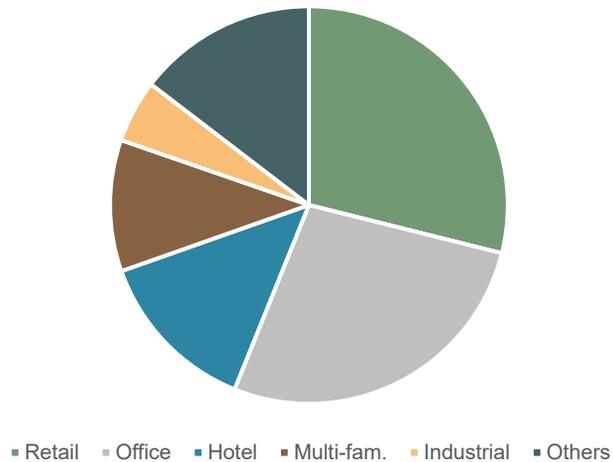
In general, RMBS investors also suffer more than CMBS during a period of rapidly falling interest rates, since higher mortgage redemptions and re-financings leave RMBS portfolio holders with more cash, and less duration, as rates and yields tumble (RMBS have negative convexity). In contrast, early redemption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

<sup>4</sup> "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**

<b>Vintage</b>	<b>Actual Realized Loss</b>
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%
<b>CMBX13</b>	2019	4.1%	7.4%	11.0%
<b>CMBX12</b>	2018	3.9%	7.3%	10.7%
<b>CMBX11</b>	2017	3.1%	6.0%	9.0%
<b>CMBX10</b>	2016	3.6%	6.5%	9.5%
<b>CMBX9</b>	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.

## About FTSE Russell

FTSE Russell is a leading global provider of benchmarks, analytics and data solutions with multi-asset capabilities, offering a precise view of the markets relevant to any investment process. For over 30 years, leading asset owners, asset managers, ETF providers and investment banks have chosen FTSE Russell indexes to benchmark their investment performance and create investment funds, ETFs, structured products and index-based derivatives. FTSE Russell indexes also provide clients with tools for performance benchmarking, asset allocation, investment strategy analysis and risk management.

To learn more, visit [ftserussell.com](https://ftserussell.com); email [info@ftserussell.com](mailto:info@ftserussell.com); or call your regional Client Service Team office

### 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

© 2020 London Stock Exchange Group plc and its applicable group undertakings (the "LSE Group"). The LSE Group includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) MTSNext Limited ("MTSNext"), (5) Mergent, Inc. ("Mergent"), (6) FTSE Fixed Income LLC ("FTSE FI"), (7) The Yield Book Inc ("YB") and (8) Beyond Ratings S.A.S. ("BR"). All rights reserved.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, MTSNext, Mergent, FTSE FI, YB and BR. "FTSE®", "Russell®", "FTSE Russell®", "MTS®", "FTSE4Good®", "ICB®", "Mergent®", "The Yield Book®", "Beyond Ratings®" and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of the LSE Group or their respective licensors and are owned, or used under licence, by FTSE, Russell, MTSNext, FTSE Canada, Mergent, FTSE FI, YB or BR. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

All information is provided for information purposes only. All information and data contained in this publication is obtained by the LSE Group, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or of results to be obtained from the use of the FTSE Russell products, including but not limited to indexes, data and analytics or the fitness or suitability of the FTSE Russell products for any particular purpose to which they might be put. Any representation of historical data accessible through FTSE Russell products is provided for information purposes only and is not a reliable indicator of future performance.

No responsibility or liability can be accepted by any member of the LSE Group nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any error (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of the LSE Group is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing contained herein or accessible through FTSE Russell products, including statistical data and industry reports, should be taken as constituting financial or investment advice or a financial promotion.

Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index inception date is back-tested performance. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. However, back-tested data may reflect the application of the index methodology with the benefit of hindsight, and the historic calculations of an index may change from month to month based on revisions to the underlying economic data used in the calculation of the index.

This document may contain forward-looking assessments. These are based upon a number of assumptions concerning future conditions that ultimately may prove to be inaccurate. Such forward-looking assessments are subject to risks and uncertainties and may be affected by various factors that may cause actual results to differ materially. No member of the LSE Group nor their licensors assume any duty to and do not undertake to update forward-looking assessments.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of the LSE Group. Use and distribution of the LSE Group data requires a licence from FTSE, Russell, FTSE Canada, MTSNext, Mergent, FTSE FI, YB, BR and/or their respective licensors.