CREFC Update on CRE Debt Marketplace

December 2022

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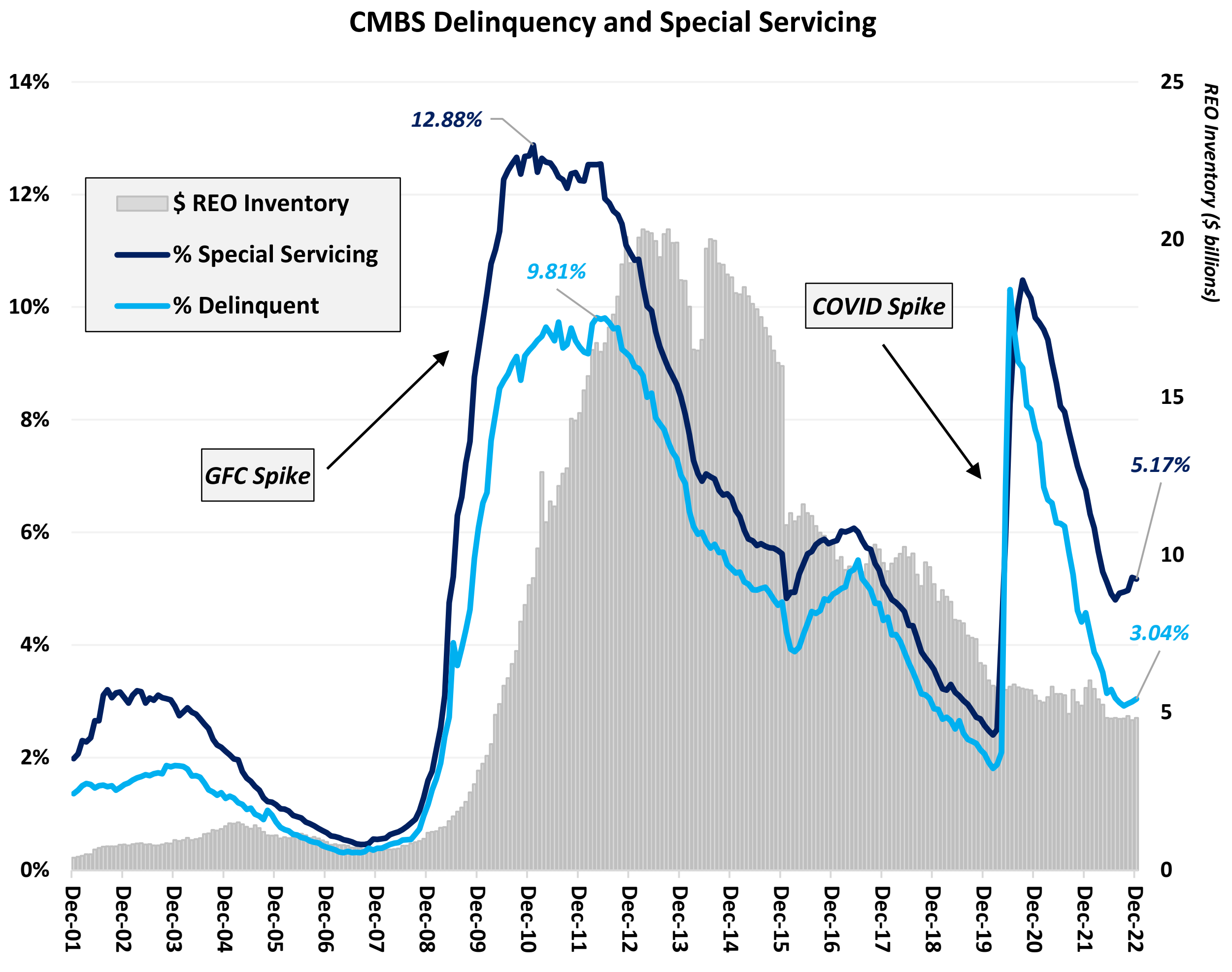
CMBS Delinquency Above 3% - First Time Since July 2022

CMBS loans in this report reflect a total outstanding balance of $626.5 billion as of December Month-End:

- **60.2% ($377.1B) fixed-rate conduit CMBS**
- **39.8% ($249.4B) single-asset/single-borrower (SASB) CMBS**

DELINQUENCY RATE INCHES ABOVE 3% TO END THE YEAR

- **The CMBS delinquency rate increased 5 bps in December to 3.04%**. After reaching a post-COVID low of 2.92% in September 2022, the delinquency rate has notched upward for three consecutive months.
- **We anticipate the delinquency rate being more volatile going forward, given the challenging macro environment.** This reflects both heightened market volatility and a growingly unfavorable landscape for lenders in refinancing loans at higher rates and potentially lower asset valuations as cap rates rise and property-level cash flows decline.
- **December's delinquency rate is still 727 bps lower from its peak of 10.31% in June 2020 during the height of lockdowns during the pandemic**



Source: Intex, Trepp; includes both conduit and SASB

Following Four Consecutive Increases, SS Rate Notches Down

- **Slight Decline in Special Servicing (SS) Rate:** The SS rate was down 3 bps in December to 5.17%; this follows four consecutive monthly increases, including a 23 bp increase in November. While the SS rate remains well below its high of 10.48% (in September 2020), the height of the pandemic, **higher benchmark rates~~,~~ and the real risk of an economic slowdown suggest asset valuations may deteriorate, increasing the potential for more loans to be transferred to SS in 2023 than seen to date**.

Current tally of SS loans is ~$32 billion vs. ~$14 billion at year-end 2019, pre-pandemic

- **De-Minimis In-Foreclosure and REO Loans to Date:** Relatively high dollar volume of SS loans nearly three years since the pandemic began suggest in-foreclosure and REO rates should be much higher; they remain low at 0.9% and 0.8%, respectively (combined conduit and SASB universe)
  - ***Based on feedback from servicers, most loans with COVID-related forbearances have returned to their original loan terms and are performing as expected. A few loans are still in forbearance or have been modified, and those are also generally paying as required.***
  - ***Servicers report that loans currently entering SS are almost all related to the current market downturn (versus COVID-related reasons).***
- **According to *Deutsche Bank*:**
  - Loan modification activity was flat in December. Special servicers have now modified ~10% of SASB loans outstanding (down from ~14% at the height of the pandemic) and ~8% of conduit loans outstanding (a figure that has held roughly constant over the last year).
    - **Retail is the primary driver of SASB loans in special servicing, with 14% of retail in SS**
  - Current conduit payoff rate stands at 75% (trailing 6-month average). An estimated 95% of all conduit loans have a coupon below current mortgage rates of ~6% and higher.
    - ***"We expect the refi success rate to fall and loan extensions to increase… Loan workout strategies for term default problem loans will also lean heavily on loan assumptions."***

In Context: Current CMBS Loan Performance Still Strong

- Overall performance for conduit and SASB CMBS remains sound – delinquency rates of 4.1% and 1.4%, respectively
- Low ‘in-foreclosure’ loan and REO asset rates: 2.3% for conduit and 0.5% for SASB
- Total special serviced loan rates low at 6.0% for conduit, 3.9% for SASB. During the peak of pandemic, SS rates for conduit and SASB exceeded 10%.
- Outperformance of SASB CMBS (1.4% delinquency rate and 0.5% ‘in-foreclosure) due primarily to institutional-quality assets and sponsorship
    - Specifically, heightened capital liquidity of these institutional borrowers and their ability to withstand cash-flow deficits caused by pandemic

% of Balance Outstanding	30+ Days Delinquent	60+ Days Delinquent	90+ Days Delinquent	In Foreclosure	REO	Non-Perf Matured Balloon	Total Delinquent	Current & Specially Serviced	Delinquent & Specially Serviced	Total Specially Serviced
Conduit CMBS	0.2%	0.1%	0.8%	1.1%	1.2%	0.5%	**4.1%**	2.0%	3.9%	**6.0%**
SASB CMBS	0.0%	0.0%	0.0%	0.5%	0.0%	0.8%	**1.4%**	2.4%	1.4%	**3.9%**
Total CMBS	**0.1%**	**0.1%**	**0.5%**	**0.9%**	**0.8%**	**0.6%**	**3.0%**	**2.2%**	**3.0%**	**5.2%**

Source: Trepp; Data represent a snapshot as of the date pulled and may differ slightly across slides as Trepp updates its website on a periodic basis

December 2022 Delinquency by Property Type

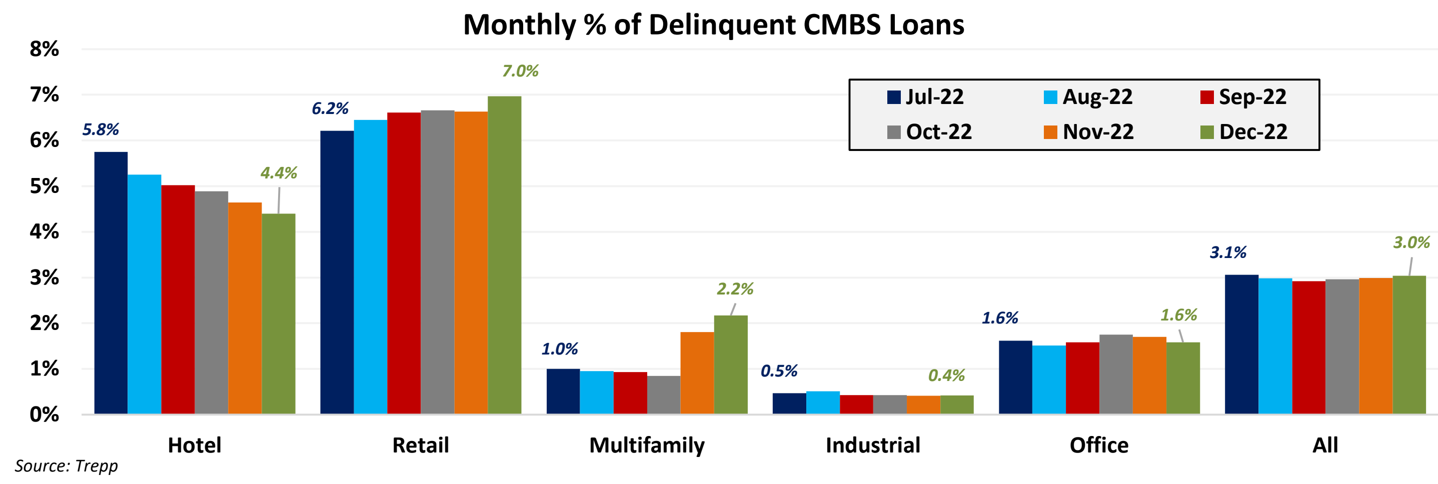
Uptick in Delinquency Rate Driven by Multifamily and Retail

- **Overall delinquency rate of 3.04%, up 5 bps in December**. Multifamily rate increased 36 bps in December (driven primarily by one large loan noted below), followed by retail at 34 bps; All other property types were flat to down for the month.

Notable New Large Loan Delinquencies:

- **Veritas Multifamily Portfolio Pool - $447M (GSMS 2021-RENT, GSMS 2021-RNT2)**. Secured by a portfolio of 62 multifamily properties located in San Francisco. The loan matured on 11/15/22 and is now in maturity default. The borrower is looking to recapitalize the portfolio but has yet to present a plan to the SS.
- **Northrop Grumman Portfolio - $23M (CSAIL 2018-CX11)**. Secured by two single-tenant data centers in Virginia totaling 295k sf. As of 10/31/22, both tenants had vacated, leaving the property completely unoccupied. Loan is now 30+ days delinquent with a maturity date of 11/1/24.
- **Ocotillo Plaza - $19M (JPMCC 2017-JP5)**. Secured by a 114k sf anchored shopping center in Las Vegas, NV. Borrower has not submitted financial statements since 9/30/2021 despite multiple requests. Loan is now 30+ days delinquent with a 2/1/27 maturity date.

DLQ by Property Type	Dec-22	Nov-22	Oct-22	Jun-22	Dec-21	Jun-21	Dec-20	Jun-20	Dec-19
Hotel	4.40%	4.64%	4.89%	5.93%	8.79%	14.26%	19.80%	24.30%	1.42%
Retail	6.97%	6.63%	6.66%	6.69%	8.27%	10.71%	12.95%	18.04%	4.24%
Multifamily	2.17%	1.81%	0.85%	1.02%	1.76%	2.02%	2.77%	3.28%	1.78%
Industrial	0.42%	0.41%	0.43%	0.49%	0.53%	0.65%	1.14%	1.56%	1.36%
Office	1.58%	1.70%	1.75%	1.68%	2.55%	2.10%	2.19%	2.65%	1.85%
All	**3.04%**	**2.99%**	**2.96%**	**3.21%**	**4.57%**	**6.16%**	**7.82%**	**10.31%**	**2.17%**



December 2022 Special Servicing by Property Type

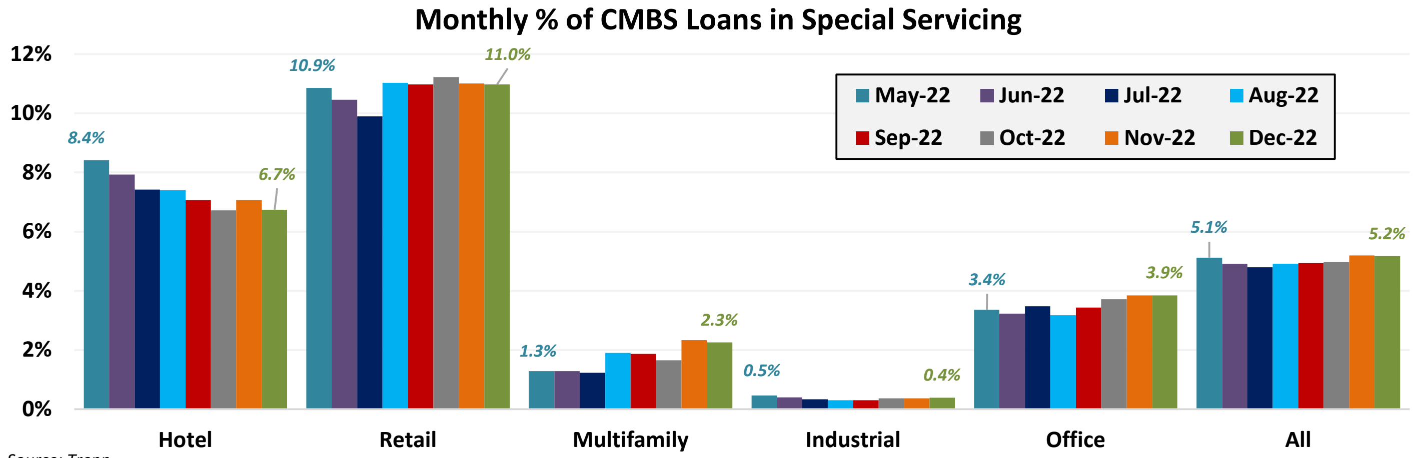
Special Servicing Rate Inches Down. SS loans totaled 5.17% in December, down 3 bps. Hotel loans saw a large drop of 32 bps over the month, while all other property types were flat or slightly lower.

Loans Totaling $1.1B Transferred to SS with Office Comprising 85%. Larger Transfers Include:

- **Republic Plaza - $243M (WFRBS 2012-C10 & 2013-C11).** Secured by 1.3m sf office tower in Denver, CO, built in 1982. Transferred to SS in 11/2022 due to imminent maturity default (12/2022). Loan is cash managed; current occupancy of 79%. Prior commentary indicates borrower in discussions with new lenders regarding refinance.

- **Federal Center Plaza - $130M (COMM 2013-CR6).** Secured by a 725k sf government office property in Washington, DC, built in 1981, and renovated in 2008. Loan was transferred to SS in December due to imminent maturity default (2/6/23). Borrower delivered notice loan will not pay off at maturity and requested a transfer to SS to negotiate a resolution. Last reported occupancy was 75%. Borrower previously indicated GSA is interested in a new lease for up to 600k sf but cannot give final approval until 2023 (no date was provided). Loan currently less than 30 days delinquent.

SS by Property Type	Dec-22	Nov-22	Oct-22	Jun-22	Dec-21	Jun-21	Dec-20	Jun-20	Dec-19
Hotel	6.74%	7.06%	6.72%	7.93%	13.72%	18.68%	24.07%	20.46%	1.94%
Retail	10.97%	11.01%	11.22%	10.46%	12.73%	14.43%	17.20%	14.22%	4.99%
Multifamily	2.26%	2.33%	1.65%	1.29%	2.11%	2.69%	2.91%	1.85%	2.22%
Industrial	0.39%	0.37%	0.37%	0.40%	0.60%	0.77%	1.22%	1.40%	1.74%
Office	3.85%	3.85%	3.72%	3.23%	3.23%	3.01%	2.71%	2.66%	2.46%
All	**5.17%**	**5.20%**	**4.97%**	**4.91%**	**6.75%**	**8.24%**	**9.81%**	**8.28%**	**2.71%**



Source: Trepp

December Remit Realized Losses

- **10 loans ($198.9mm) across 9 CMBS transactions liquidated with realized losses of $131.5 million in the December remit period**. Severities ranged from 7.1% to 100%, based on outstanding balance at disposition.
- Largest loan to resolve for a loss was $84.7 million Blackpoint Puerto Rico Retail loan, secured by six retail centers in Puerto Rico, totaling 850,000 sf. Collateral assets were inspected in May 2022 and some were found to have unrepaired damage from previous hurricanes. The servicer's comments note that the loan was resolved through a discounted payoff agreement (structured as a note sale). Deducting liquidation and other accrued expenses from the proceeds of the note sale (of ~$31.5 million) resulted in a 100% loss severity. Before its resolution, it was the last remaining loan in the pool.
- The second most significant loss was related to the $30.6 million Hilton College Station loan. The loan was collateralized by a 303-room full-service hotel in College Station, TX, built in 1984 and renovated in 2013. At securitization, the property was valued at $54.8 million, which was lowered to $20.7 million in 2021. Liquidation proceeds came in at $14.9 million, net of expenses, resulting in a 48.8% loss severity.

No.	Deal Name	Property Name	Securitized Balance	Balance Before Disposition	Property Type	City	State	Disposition Date	Loss Amount	Loss % (on Sec. Balance)	Loss % (on Disp. Balance)
1	MLCFC 2007-6	Blackpoint Puerto Rico Retail	$84,675,000	$84,675,000	RT-Unclassified	Various	PR	11/29/22	$84,675,000	100.0%	100.0%
2	COMM 2014-CR21	Hilton College Station	$35,653,928	$30,579,426	LO-Full Service	College Station	TX	11/23/22	$14,935,461	41.9%	48.8%
3	GSMS 2014-GC24	Hampton Inn & Suites	$25,750,000	$22,076,050	LO-Limited Service	Yonkers	NY	11/8/22	$8,488,188	33.0%	38.4%
4	MSBAM 2015-C25	Staybridge Suites DFW Airport	$11,473,015	$10,087,928	LO-Limited Service	Irving	TX	11/22/22	$1,923,902	16.8%	19.1%
5	JPMCC 2006-CB15	Stow Falls Center	$10,641,654	$8,610,570	RT-Anchored	Cuyahoga Falls	OH	11/21/22	$6,111,733	57.4%	71.0%
6	GSMS 2007-GG10	Corporate Lakes I	$8,500,000	$8,500,000	OF-Suburban	Lisle	IL	12/2/22	$7,394,875	87.0%	87.0%
7	UBSCM 2018-C11	Sugarman's Plaza	$6,500,000	$5,992,656	MU (all)	Archbald Borough	PA	12/5/22	$2,567,582	39.5%	42.8%
8	LBCMT 2007-C3	Walgreens Eastpointe	$5,744,000	$5,213,370	RT-Single Tenant	Eastpointe	MI	11/22/22	$3,378,975	58.8%	64.8%
9	WBCMT 2006-C23	Walgreens - Taylor, MI	$5,694,107	$3,294,122	RT-Single Tenant	Taylor	MI	12/12/22	$1,864,251	32.7%	56.6%
10	WBCMT 2006-C23	Walgreens - Flushing, MI	$4,234,412	$2,446,329	RT-Single Tenant	Flushing	MI	12/12/22	$174,205	4.1%	7.1%
Total			**$198,866,116**	**$181,475,451**					**$131,514,172**	**66.1%**	**72.5%**

CRE Lending Landscape and Debt Outstanding

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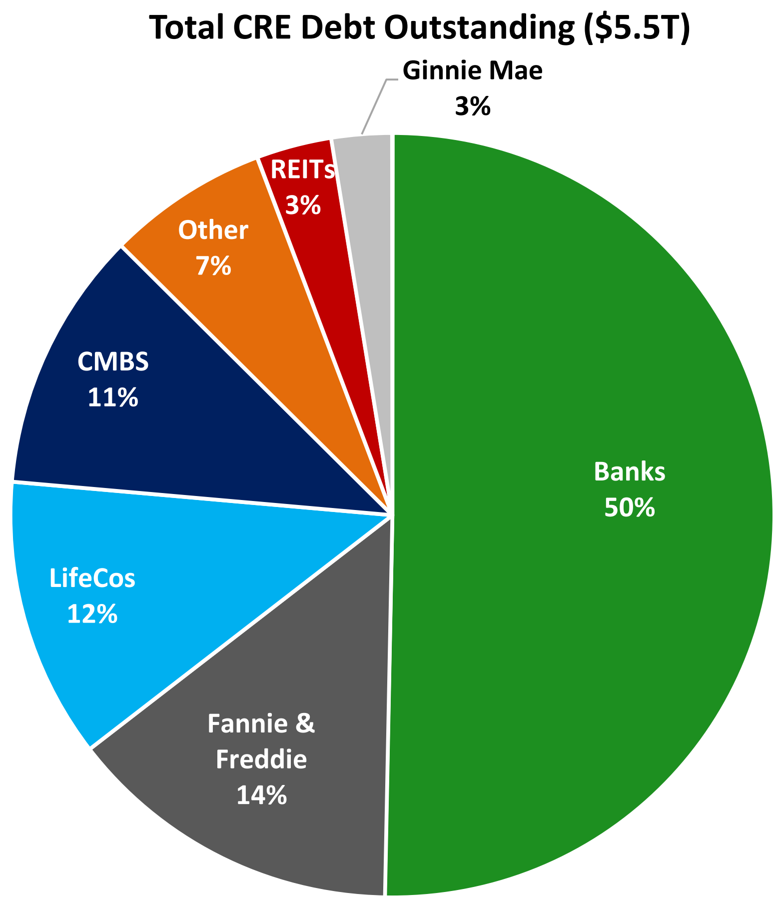
CRE Debt Outstanding Continues to Grow: $5.5 Trillion

- *Banks outpace all lenders in CRE debt outstanding; GSEs take that honor on the multifamily debt outstanding front*

CRE Debt Outstanding: 3Q 2022 ($ billions)		
Holder Type	**Total CRE Debt**	**% of CRE Debt Outstanding**
Banks	2,778	50%
Fannie & Freddie	785	14%
LifeCos	655	12%
CMBS	610	11%
Other	376	7%
REITs	176	3%
Ginnie Mae	142	3%
Total	**5,522**	**100%**

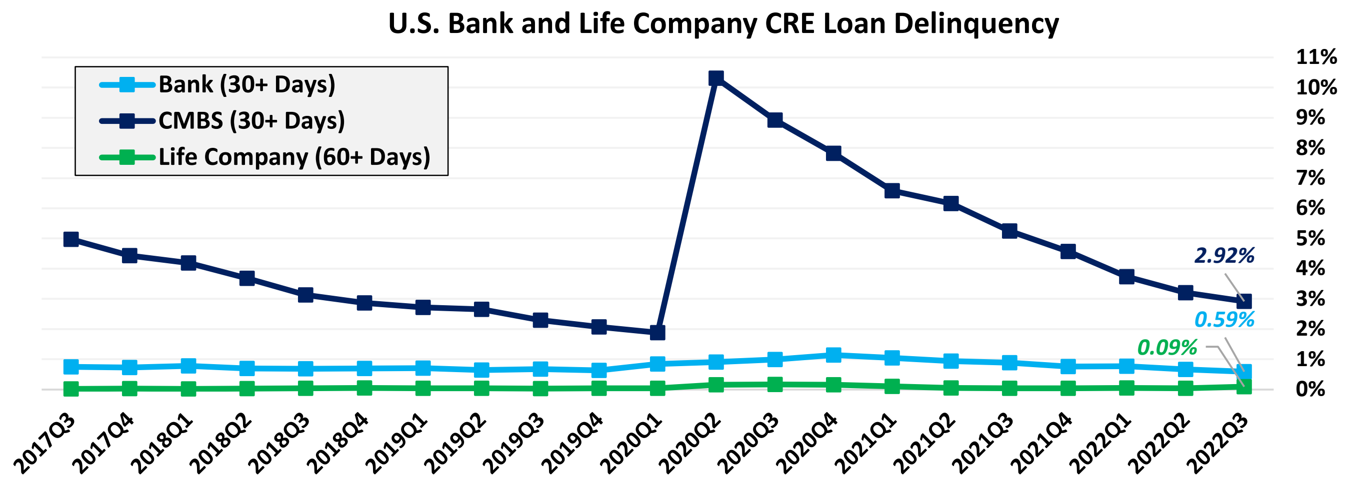
Holder Type	Multifamily Debt Only	% of Multifamily Debt Outstanding	Non-Multifamily CRE Debt	% of Non-Multifamily CRE Debt Outstanding
Banks	657	33%	2,121	60%
Fannie & Freddie	785	39%	0	0%
LifeCos	189	9%	466	13%
CMBS	68	3%	542	15%
Other	151	8%	224	6%
REITs	7	0%	169	5%
Ginnie Mae	142	7%	0	0%
Total	**2,007**	**100%**	**3,515**	**100%**

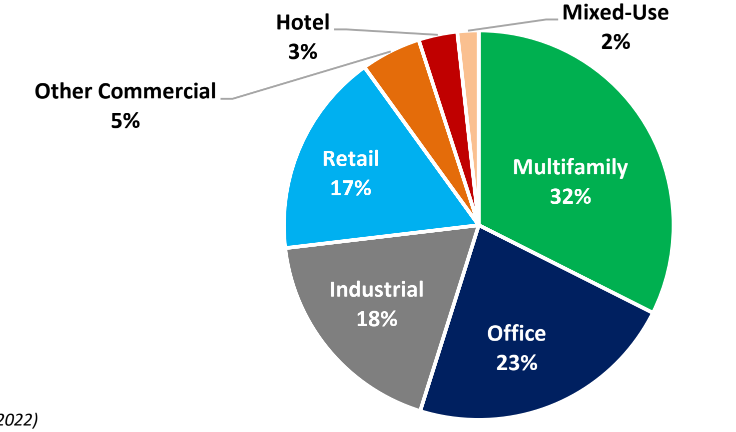
Source: Federal Reserve



Bank and Life Company CRE Loan Performance Solid

- **Bank, Life Company CRE Delinquencies Remain Low**
  - 60+-day delinquency rate for life company loans increased 5 bps to 0.09% in 3Q22 (ACLI), 283 bps lower than CMBS (2.92%)
  - 30+-day delinquency rate for bank loans declined 7 bps to 0.59% in 3Q22 (FDIC), 233 bps lower than CMBS
  - CMBS delinquencies narrowed to within 104 bps and 184 bps of bank and lifeco delinquencies, respectively in early 2020, before the pandemic
- **Troubled Debt Restructuring (TDR) Guidance**
  - CREFC advocated for TDR relief extension/ clarification, aiding lenders in their efforts to continue to work with borrowers impacted by the pandemic
  - Based on the success of TDR relief, a March 2022 update by FASB was put forth to eliminate its recognition for creditors that have adopted the CECL standard, saying "…the additional designation of a loan modification as a TDR and the related accounting are unnecessarily complex and no longer provide decision-useful information"
  - According to *BofA Global Research*, while this is "positive on the margin, it remains to be seen whether or not credit problems that arise from a dramatic increase in interest rates or an economic recession qualify as 'short-term.'"



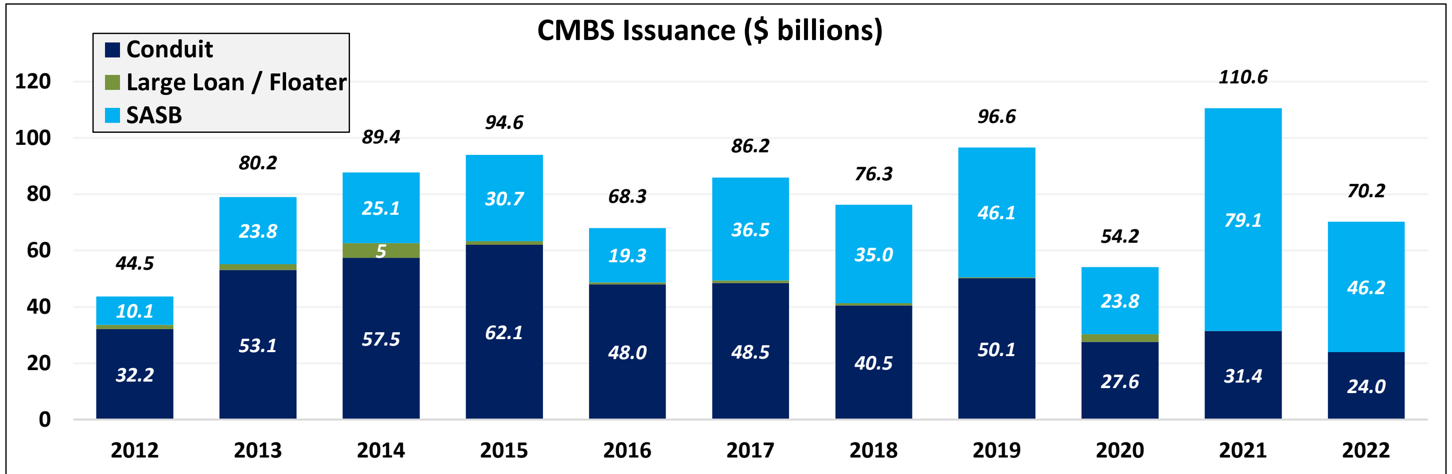


Source: ACLI (as of 3Q 2022)

Private-Label CRE Securitized Debt Overview

CMBS

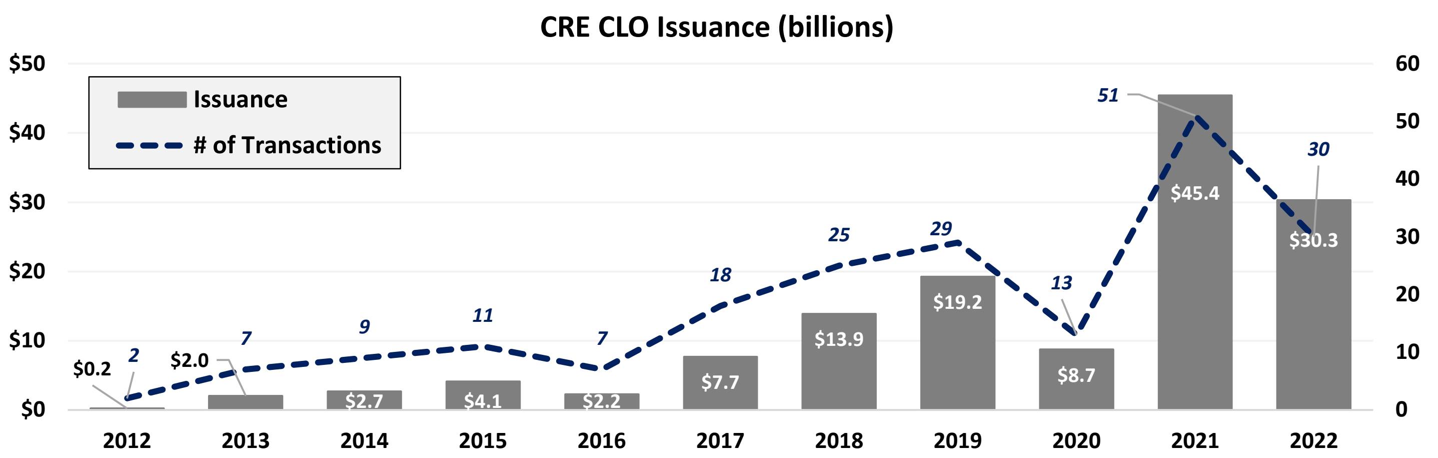
- **Combined 2022 conduit & SASB CMBS issuance totaled $70.2 billion, 36% lower than $110.6 billion in 2021**
- **Conduit CMBS** are fixed-rate bonds secured by multiple fixed-rate loans to multiple borrowers across all core asset types. Each loan is secured by single stabilized asset or portfolio of stabilized assets.
- **SASB CMBS** is secured by a large loan to an institutional borrower secured by either a single stabilized asset or portfolio of assets



Source: Commercial Mortgage Alert

CRE CLOs

- **CRE CLO issuance rose from <$1 billion in 2012 to a record $45.5 billion in 2021 via 51 CRE CLO transactions**
    - ***2022 CRE CLO issuance was $30.3 billion, across 30 transactions***
- **CRE CLOs** are collateralized by first mortgages of multifamily and commercial properties in transition
    - Outstanding CRE CLO universe secured 65% by multifamily assets, many of which are older, naturally occurring affordable housing (NOAH) properties that accommodate lower-income tenants



Source: Commercial Mortgage Alert, BofA

CMBS and CRE CLO Issuance Slows, Foggy Asset Valuations

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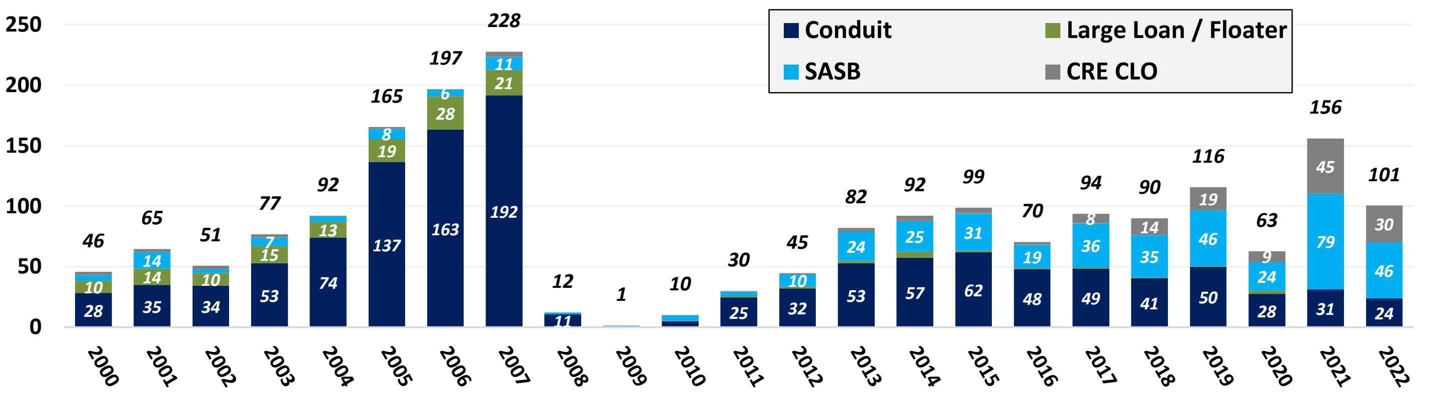
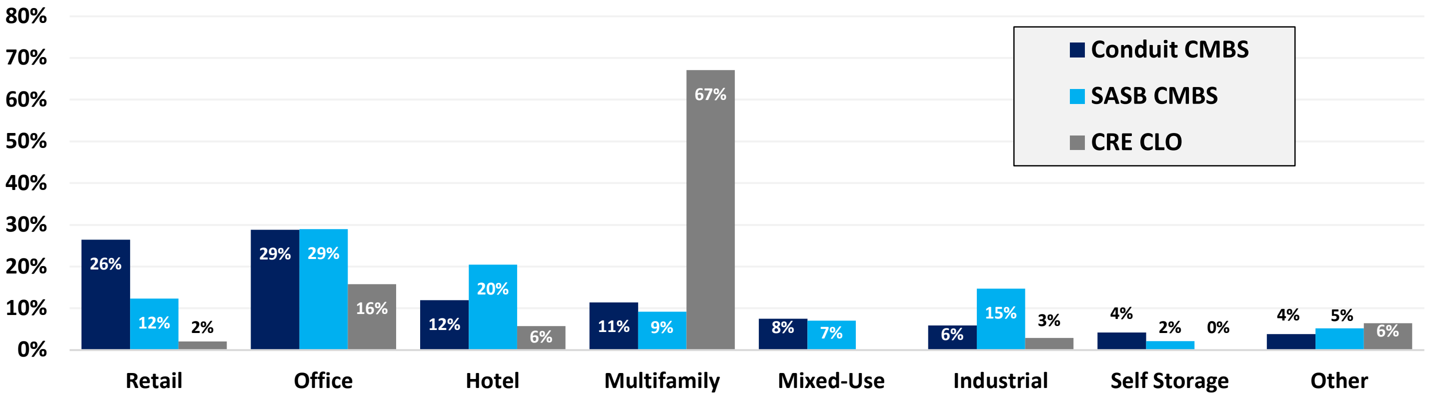
- **2022 new issuance slowed significantly after 1Q22 due to continued macro uncertainty and the challenges of originating loans at higher coupons and realized or anticipated lower valuations due to rising cap rates**
- **2022 CMBS & CRE CLO issuance totaled $101 billion, 36% lower than full-year 2021's $156 billion.**
  - ***Notably, at the end of Q1 2022, issuance was 70% ahead of same 2021 period***
- **Private-label CRE securitized debt issuance reached a post-financial crisis high of $156 billion in 2021**
  - Marked a sharp rebound from $63 billion in 2020, which reflected pandemic stress
  - SASB & CRE CLO issuance reached record levels in 2021

Private-Label CRE Securitized Debt Issuance ($ billions)



Source: Commercial Mortgage Alert

Private-Label CRE Securitized Debt by Property Type



Source: Trepp, BofA Global Research (as of June 2022)

About CREFC

The CRE Finance Council (CREFC) is the trade association for the over $5 trillion commercial real estate finance industry. More than 300 companies and almost 18,000 individuals are members of CREFC. Member firms include balance sheet and securitized lenders, loan and bond investors, private equity firms, servicers and rating agencies, among others.

Our industry plays a critical role in the financing of office buildings, industrial and warehouse properties, multifamily housing, retail facilities, hotels, and other types of commercial real estate that help form the backbone of the American economy.

CREFC promotes liquidity, transparency, and efficiency in the commercial real estate finance markets. It does this by acting as a legislative and regulatory advocate for the industry, playing a vital role in setting market standards and best practices, and providing education for market participants.

CREFC also hosts globally recognized events that bring together market participants from leading companies and organizations. Complementing these major conferences are regular After-Work Seminars and regional conferences held throughout the year.

For questions regarding this update, please contact:

Lisa Pendergast, Executive Director
CRE Finance Council
646-689-4649 (mobile)
lpendergast@crefc.org

Raj Aidasani, Managing Director
CRE Finance Council
917-796-1866 (mobile)
raidasani@crefc.org