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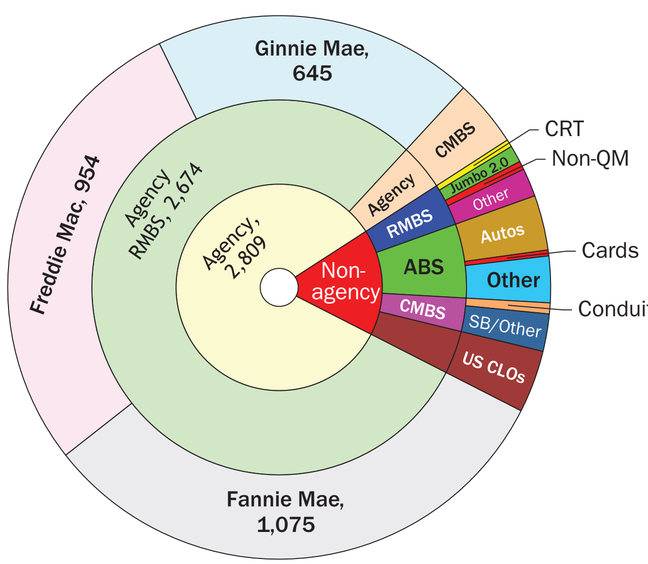
Welcome to the Fall 2021 issue of *The Journal of Structured Finance*. US Securitization activity through the first three quarters of 2021 has been brisk, led by heavy agency issuance (Exhibit 1). Total agency securitization issuance exceeded $2.8 trillion, comprising roughly $2.67 trillion of RMBS and $135 billion of CMBS. Agency RMBS issuance is on track to reach a record-breaking $3.5 trillion for the full year.

US non-agency securitization issuance stands at $560 billion as of late September, well ahead of last year's pace, but still far below the levels of the mid-2000s. The breakdown across the major categories is $215 billion ABS, $125 billion US CLOs, $123 billion RMBS, and $97 billion CMBS. Of note, within the RMBS category, there has been just $34 billion of jumbo 2.0 issuance and $17 billion of non-QM issuance through late September (Exhibit 2).

So far in 2021, the flow of new mortgage production into agency RMBS is more than 50 times the flow into non-agency RMBS. Compare that to the early 2000s, when the flow into agency RMBS was only four to six times the flow into non-agency RMBS. Ever since 2008—the first full year of the mortgage meltdown—the non-agency RMBS sector has been just a meager vestige of what it was before. Instead of providing funding for a significant share of new mortgage production, most of the

EXHIBIT 1

US Securitization Issuance Breakdown $3.37 Trillion, January 2021 to September 2021 ($ billions)



SOURCE: BofA Global Research.

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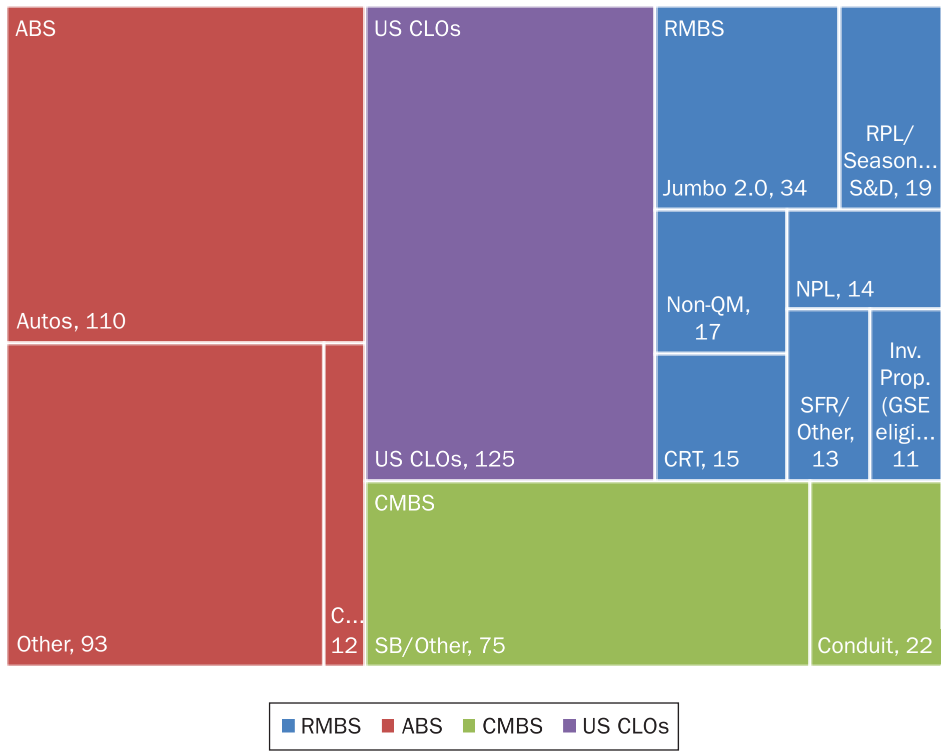
EXHIBIT 2

US Non-agency Securitization Issuance Breakdown $560 Billion, January 2021 to September 2021 ($ billions)



SOURCE: BofA Global Research.

sector's issuance comprises a menagerie of specialty securitizations: credit risk transfer, single-family rental, non-performing, re-performing, scratch-and-dent, seasoned loans, etc.

Many factors have contributed to the malaise in the non-agency RMBS space. Weakened contractual protections for investors are one issue.[1] Another is the increased laxity of GSE underwriting guidelines—the expansion of the "credit box." Exhibit 3 shows an excerpt from Fannie Mae's current eligibility matrix. Notice that it allows for loans with debt-to-income ratios (DTIs) of up to 45%. In fact, a borrower with a credit (FICO) score of 720 and a DTI of 45% could qualify for a purchase loan on a one-unit principal residence with a loan-to-value ratio (LTV) of up to 95% (see the highlighted cells in Exhibit 3). Those are lenient standards. They are certainly lenient relative to the traditional standards of 80% LTV, a clean credit report, and 28/36 DTI.[2]

[1] I discussed this briefly in the editor's letter for the Fall 2020 issue of the Journal, https://doi.org/10.3905/jsf.2020.26.3.001.

[2] 28/36 DTI refers to DTI standard where no more than 28% of a borrower's gross monthly income goes toward housing expense and no more than 36% goes toward servicing total household debt (including housing, auto loans, credit cards, student loan debt, and others).

EXHIBIT 3

Fannie Mae Standard Eligibility Requirements—Manual Underwriting Excludes: High LTV Refinance, HomeReady, HomeStyle Renovation

Transaction Type	Number of Units	Maximum LTV, CLTV, HCLTV	Maximum DTI ≤ 35		Maximum DTI ≤ 45	
			Credit Score/LTV	Minimum Reserves	Credit Score/LTV	Minimum Reserves
Principal Residence						
Purchase Limited Cash-Out Refinance	1 Unit	FRM/ARM: 95%	680 if > 75% 640 if ≤ 75%	0	720 if > 75% 680 if ≤ 75%	0
			FRM: 620 if ≤ 75%	2		
			660 if > 75%	6	700 if > 75% 660 if ≤ 75%	6
	2 Units	FRM/ARM: 85%	680 if > 75% 640 if ≤ 75%	6	700 if > 75% 680 if ≤ 75%	6
	3–4 Units	FRM/ARM: 75%	660	6	680	6
Cash-Out Refinance	1 Unit	FRM/ARM: 80%	680 if > 75% 660 if ≤ 75%	0	700 if > 75% 680 if ≤ 75%	2
			660 if > 75% 640 if ≤ 75%	6		
	2–4 Units	FRM/ARM: 75%	660	6	700	6
					680	12

SOURCE: Fannie Mae. 2021. "Eligibility Matrix." May 26. https://singlefamily.fanniemae.com/media/20786/display.

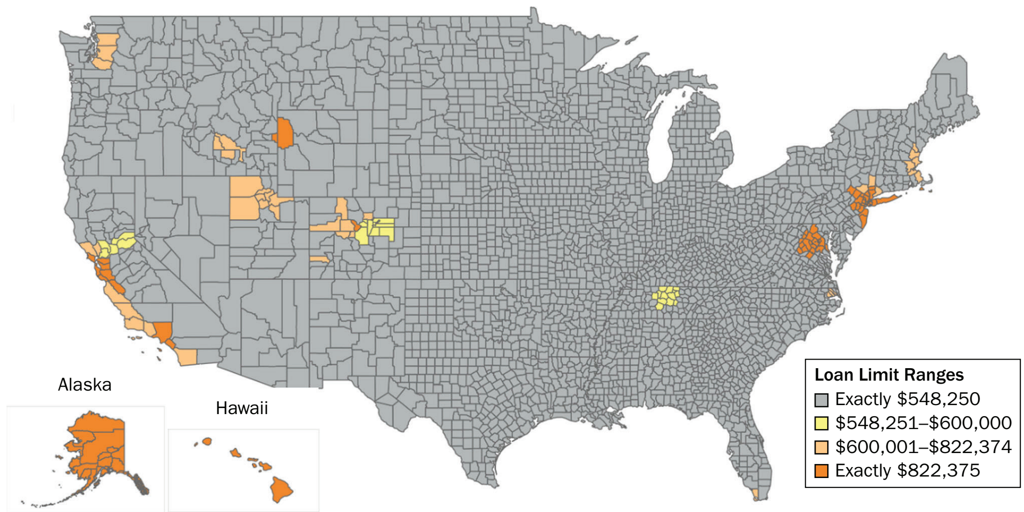
The affordable housing goals that the FHFA sets for Fannie Mae and Freddie Mac are undoubtedly a key driver of the lenient lending standards.[3] For 2021, those goals call for each GSE to make 24% of its single-family loans to borrowers with incomes at or below 80% of the median income in their area, and 6% of its single-family loans to borrowers with incomes at or below 50% of the median income in their area (85 Fed. Reg. at 82884). For 2022 through 2024, the FHFA proposes to increase those percentages to 28% and 7% respectively (86 Fed. Reg. at 47400).

Meanwhile, the conforming loan limits for Fannie Mae and Freddie Mac remain quite high. The standard limit for 2021 is $548,250. That limit applies in most parts of the US and was set when the US median home price was around $332,000. The recent dynamics of the US housing market have pushed the median home price up to roughly $380,000, as of August 2021. Of course, in certain high-cost areas, a higher loan limit applies: up to $822,375 (Exhibit 4). Because of the high conforming loan limits, the lower bound for jumbo loans is quite high. This produces a crowding-out effect and may partly explain the low $34 billion year-to-date issuance level for jumbo 2.0 RMBS deals.

[3]Federal Housing Finance Agency, 2021 Enterprise Housing Goals, 85 Fed. Reg. 82882 (Dec. 21, 2020), https://www.govinfo.gov/content/pkg/FR-2020-12-21/pdf/2020-28083.pdf; Federal Housing Finance Agency, 20222024 Enterprise Housing Goals, 86 Fed. Reg. 47398 (Aug. 25, 2021) (proposed rule), https://www.govinfo.gov/content/pkg/FR-2021-08-25/pdf/2021-18008.pdf; see also 12 C.F.R. Part 1282 (2021), https://www.govinfo.gov/content/pkg/CFR-2021-title12-vol10/pdf/CFR-2021-title12-vol10-part1282.pdf.

EXHIBIT 4

Maximum Conforming Loan Limits by County and County Equivalents



SOURCE: Federal Housing Finance Agency, Conforming Loan Limits Map, https://www.fhfa.gov/DataTools/Tools/Pages/Conforming-Loan-Limits-Map.aspx.

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Conferences: By the time this issue is released, the **SFVegas 2021** conference will already have happened. The **27th Annual ABS East** event is scheduled for December 13–15 at the Fontainebleau in Miami Beach.

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This issue opens with an article by David Yu, a finance professor at NYU Shanghai and chairman of Asia Aviation Valuation Advisors. He is also a member of the Journal's editorial board. Prof. Yu gives a detailed examination of the pressures on the aircraft sector from the exogenous shock of the Covid pandemic. He describes recent stressful episodes in the aircraft sector that may lend insight into future developments. The issue's second article is by Guangning Xu, Geng Deng, Xindong Wang and Ken Fu, all of whom work at Wells Fargo. They present a new form of model for predicting mortgage defaults based on loan characteristics and macroeconomic factors, such as home price appreciation and unemployment. They call their model the Quantile-based Shape Constrained Maximum Likelihood Estimator (QSC-MLE). They explain the workings of the model and demonstrate that it outperforms other approaches, including logistic regression and the Cox proportional hazard model, in out-of-sample testing.

The next item is a report by me on the "Jumbo Mortgage Loan Virtual Symposium," an IMN-sponsored virtual event in April. The report contains summaries of seven session from the event, including separate panels of jumbo loan originators and buyers, as well as sessions about home prices and the US economy.

The following item is comment, also by me, about credit rating failures in the aftermath of the mortgage meltdown. I analyze data filed by the rating agencies in 2018, covering the 10-year performance of the structured finance ratings that they had outstanding at year-end 2007. The analysis yielded a number of interesting (and sometimes surprising) results, including an unexpectedly high incidence of rating withdrawals.

Following the item on credit ratings are selected highlights from *GlobalCapital* for the third quarter of 2021. The selection was compiled and curated by *GC* securitization reporter Jennifer Kang. It includes six stories. The first discusses buy-now-pay-later ABS and how they have performed well during the pandemic. The second examines the recent surge in super-sized CLO issuance driven by favorable market conditions. The third explores the recent move from public aircraft ABS deals into private credit transactions, including EETCs. The fourth reviews recent interest in CMBS backed by retail properties. Some investors are pursuing opportunities in that sector, for example by focusing on higher-yielding securities that are approaching their maturities. The fifth discusses a recent surge in middle-market CLO activity and the sixth explores CLO warehouses.

This issue also includes a selection of industry news items from the Structured Finance Association, also from Q3 2021. The selection includes more than two dozen snippets covering a wide range of developments during the year's third quarter.

As always, we welcome your submissions. Please encourage those you know who have good papers or who have made good presentations on structured finance- or project finance-related subjects to submit them to us.

Submission guidelines can be found at https://jsf.pm-research.com/authors. If you have comments or suggestions, you can e-mail them directly to me at M.Adelson@PageantMedia.com.

Mark Adelson
Editor