

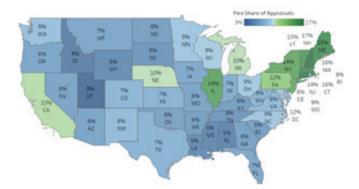
WHAT WE'RE WATCHING



On October 18, Sandra L. Thompson, Acting Director at FHFA, <u>announced</u> that starting in 2022 Fannie Mae and Freddie Mac (the Enterprises) will incorporate desktop appraisals into their selling guides for many new purchase loans. This takes "one of the temporary flexibilities" extended during the pandemic and turns it into an "established option." Allowing desktop appraisals as a permanent option is part of FHFA's ongoing efforts to modernize the appraisal process to incorporate efficiencies of technological advancements and to respond to the challenge posed by a shrinking appraiser workforce, which has been declining at an annual rate of 3% since 2015.

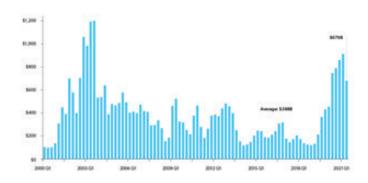
Constrained appraiser capacity became particularly acute as rising home sales and first-lien refinancing activity dovetailed with the COVID-19 crisis. During the pandemic, lenders reported extensions in appraisal turn times with some hotter real estate markets reporting delays as long as <u>four</u> weeks. The FHFA responded by easing standards on property appraisals, allowing for <u>appraisal flexibilities</u>, like desktop, hybrid, and exterior-only appraisals. To speed up loan processing times, the Enterprises encouraged lenders to accept appraisal waivers when offered. Appraisal waivers, which were first implemented by Fannie Mae in 2001, allow qualified borrowers to opt out of in-person appraisals for <u>eligible</u> transactions¹ perceived by the Enterprises as lower risk. When a borrower chooses to waive the appraisal on an eligible transaction, property values are estimated using the Enterprise's proprietary automated valuation models (AVMs), which use big data and mathematical algorithms to estimate property values.

Appraisal Flexibilities Share by State – March 23 through November 14, 2020



Source: Freddie Mac, FHFA

U.S. Single-Family Mortgage Refinance Originations (2020 U.S. Dollars, Billions)



Source: Freddie Mac Economic and Housing Research Total Market Estimates, Originations deflated by U.S. Bureau of Labor Statistics CPI-U All Items

¹In addition to meeting the eligibility requirements, there must be a record of prior appraisal on the subject property for a waiver to be considered.



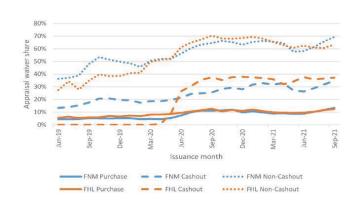
The use of appraisal waivers proliferated in 2020. According to Agency MBS Research at Nomura Securities International, 34% of residential mortgage transactions across Enterprise loans in October 2021 used appraisal waivers. This is more than 1.7 times the level recorded in January 2020, almost 2.5 times the average level in 2019, and more than 6.9 times the average level in 2018. Usage peaked at 43-46% in February 2021 and by August had fallen to 29-32%. October data, however, indicates that usage is once again on the rise. Arun Manohar, Managing Director of Agency MBS Research at Nomura Securities International, sees the rise in waiver use as a product of both demand and advancements in technology. "Utilization of appraisal waivers increased slowly in the initial years as lenders were limited by technology and process related impediments. The sharp rally in mortgage rates boosted the share of non-cash-out refinances in 2020, which increased the aggregate share of loans receiving an appraisal waiver. In addition, appraiser capacity constraints in 2020 may have also contributed to the sharp increase in the share of loans with waivers, as lenders could process more such loans."

Appraisal Waiver Share by Agency

50% 45% waiver share 40% 35% 30% 25% 20% 15% 10% 5% 0% Oct-19 Dec-19 Feb-20 Apr-20 Jun-20 Apr-19 Aug-19 Issuance Month FNM -FHL

As of October 18, 2021 Source: Fannie Mae, Freddie Mac, eMBS via Nomura Securities International

Appraisal Waiver Share by Agency and Loan Purpose



As of October 18, 2021 Source: Fannie Mae, Freddie Mac, eMBS via Nomura Securities International

On December 28, 2020, the FHFA published a request for information (RFI) to invite industry input on the broader appraisal modernization efforts and, more specifically, on the risks posed by appraisal waivers and automated valuation models (AVMs). Industry participants have <u>submitted</u> comments and the FHFA is now considering how best to ensure that the use of appraisal waivers and AVMs do not negatively impact the Enterprises' safety and soundness.

Some of the risks, as identified by the FHFA, stem from property condition and input data. A mortgage originated with an appraisal waiver on a property in poor condition presents risk of increasing loss severity, while a decline in both accuracy and volume of input data could lead to increased modelling error. In a 2018 review of appraisal waivers, the FHFA cautioned that AVMs may be less reliable in areas where properties do not share similar characteristics, such as age and size, or where insufficient data exists for a particular area, such as a rural area. For now, credit risk appears benign. In an October report, Nomura Research observed that "loans with prior appraisal waivers have lower delinquency rates vs loans that do not have them, even after controlling for collateral characteristics."

SFA Research Corner: November 18, 2021



The FHFA's RFI also sought input on the impact of waivers and AVMs on MBS prepayment speeds as faster-than-expected prepayment speeds could impact an investor's ability to accurately value RMBS and manage risk. Year-end 2020 data shows that waiver usage is higher for non-cash-out refis and particularly higher for non-cash-out refis with lower LTVs. Nearly 70% of non-cash-out refis with LTVs below 70% use waivers while only 55% of non-cash-out refis with LTVs between 81-90% use waivers. The FHFA posits that driving the refis are "financially sophisticated borrowers with significant home equity" who have been incentivized in the "exceptionally" low interest rate environment. We hypothesize lower monthly debt obligations may have become particularly appealing to consumers in the face of heightened uncertainty around timing and strength of the recovery, pushing usage rates to the highs reached in 2020.

Comments were also solicited on the disparities in appraisals impacting racial and ethnic minority borrowers and communities of color, as the FHFA seeks to incorporate solutions in the appraisal modernization process. The Agency pointed to articles and studies that identified a link between valuation gaps and racial composition. In a September 2021 paper based on "exploratory research," Freddie Mac found "substantial appraisal valuation gaps for minority versus White tracts" and that "minority applicants are more likely to receive an appraisal value lower than the contract price." Moreover, the Enterprise found that "differences in comparable sale (or comp) distances, comp reconciliation, variances in sale prices of comps, and possible systematic overpayment for properties by minorities cannot explain the appraisal gaps for minority tracts" and that "a property is more likely to receive an appraisal lower than the contract price if it is in a minority tract." In closing the Freddie Mac urged the industry to explore potential solutions which may include "a review of appraisal best practices, defining uniform standards for AVMs, addressing consumer disclosure and reconsideration of value processes, and revising fair lending exam procedures and risk assessments." In a December 2020 paper on the same topic, the Urban Institute contended that "[d]isparities in home value appraisals ... have important repercussions for both the racial homeownership gap and racial wealth gap, as low appraisals for Black families can further limit their ability to build wealth." The Institute suggests that expanding the AVMs' underlying variables could be effective.

MARKET SUMMARY

With six weeks remaining on the year, issuance stands at \$800 billion, surpassing 2019's full year volume by 13%. CLO volume, at \$154 billion, has been particularly robust, already exceeding 2019's full year volume by 31%. Similarly, non-agency RMBS issuance, at \$169 billion, has already eclipsed 2019's tally by 27%. As a testament to the still-hearty demand for securitized products, bond prices and secondary market spreads have remained firm in the face of increased supply.

The securitization markets saw the first CLO and auto ABS tranches benchmarked to SOFR this period. The first CLO tranche was the \$84 million class A2/R2 from OCP CLO 2015-10, a refinancing. The second was the \$24.75 million class A2B from Marathon CLO XVII, a new issue with a total offering size of \$429.6 million. Hyundai Capital became the first issuer to sell an auto ABS with a SOFR tranche – the \$100 million class A2b from the \$1.5 billion Hyundai Auto Receivables Trust 2021-C. SOFR issuance in the securitized space has reached \$94 billion with over 60% of the volume coming from agency CMBS and Ginnie Mae REMICs.

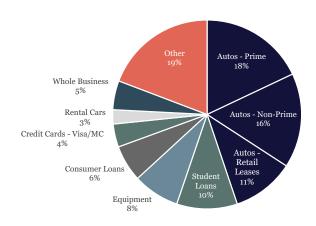


Issuance for Non-Agency RMBS, CMBS, ABS, and CLO 2021 (\$800 Billion) Versus 2019, 2020

300 243 232 250 212 \$ Billions 183 200 171 164 157 149 150 100 50 Q1 Q1 Q2 Q3 Oct Nov Q1 Q2 Q3 Q2 Q3 '19 '19 '19 20 '20 '20 21 '21 '21 ■ Non-Agency RMBS ■ CMBS ■ ABS ■ CLO

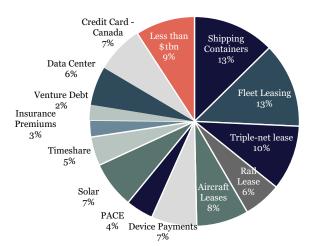
Source: Deutsche Bank, Market Compilation

ABS Only 2021 YTD: \$230 Billion



Source: Deutsche Bank, Market Compilation

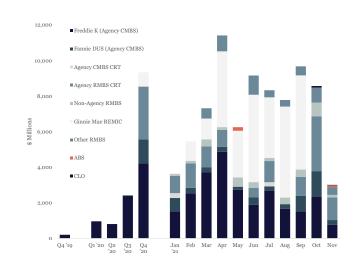
Other ABS Only 2021 YTD: \$44 Billion



ABS with YTD volume less than \$1 bn YTD include ABS backed by venture debt, data centers loans, auto dealer floorplan loans, small business loans, tax liens, commercial loans, secured fund fee, oil contracts, UK credit cards, litigation funding, retail credit cards and rate reduction bonds.

Source: Deutsche Bank, Market Compilation

SOFR (30 Day Average) Securitizations 2019 to 2021 YTD: \$94 Billion



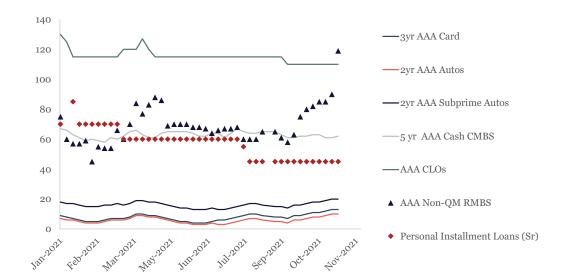
Other RMBS includes mortgage insurance-linked securities.

Data begins Q3 2019. Ginnie Mae data as of September 2021. Source:

Market Compilation



Secondary Market Bid-Ask Spreads (BP)



Source: Market Compilation

Secondary Market Bid-Ask Spreads		
(bps)	5-Nov	1-Oct
3yr AAA Card	13	10
2yr AAA Prime Autos	10	7
2yr AAA Subprime Autos	20	17
5yr AAA Cash CMBS	62	62
AAA CLOs	110	110

Source: Market Compilation