

Global Markets Analysis Report

A MONTHLY PUBLICATION OF GINNIE MAE'S
OFFICE OF CAPITAL MARKETS

FEBRUARY
2022



 **GinnieMae**
Our Guaranty Matters



Global Markets Analysis Report

Table of Contents

Table of Contents	i
Highlights	2
1.0 Relative Attractiveness of US Fixed Income and Ginnie Mae MBS	5
2.0 State of the US Housing Market	11
2.1 National HPI	11
2.2 Size and Value of the US Housing Market	13
2.3 Serious Delinquency Rates	14
2.4 Characteristics of Ginnie Mae Loans in Forbearance	15
2.5 Ginnie Mae Agency Issuance and Agency Outstanding by State	18
2.6 Outstanding Single-Family Agency MBS	19
2.7 Outstanding Ginnie Mae MBS Volume by Coupon and Vintage Over Time	20
2.8 Origination Volume and Share Over Time	21
3.0 US Agency Market, Single-Family Issuance	22
3.1 Percent Refi at Issuance	25
4.0 High LTV Loans: Ginnie Mae vs. GSEs	26
5.0 Prepayments	27
5.1 Aggregate Prepayments	27
6.0 Holders of Ginnie Mae Mortgage Servicing Rights	28
7.0 MBS Ownership	29
7.1 Commercial Bank Holdings of Agency MBS	29
7.2 Bank and Thrift Residential MBS Holdings	30
7.3 Foreign Ownership of MBS	32
7.4 Foreign Ownership of Agency Debt and Agency MBS	33

Highlights

In our August 2021 edition, *Global Market Analysis Report* discussed Ginnie Mae’s introduction of state-of-the-art ESG investment data disclosures to the pool level Single-Family Supplemental File. The new data indicates the percentage of loans within a pool originated in low-to-moderate income (LMI) areas. In November 2021, the *Global Market Analysis Report* described how investors may integrate the LMI data published by Ginnie Mae into an ESG-focused investment framework within the MBS market. The November 2021 *Global Market Analysis Report* also documented and displayed the upwards trend in the number of Ginnie Mae Single-Family pools that contain LMI area loans.

Ginnie Mae continues to act as a leader in ESG disclosure. While investors are incorporating more ESG factors into their investment decisions, Ginnie Mae is seeking to provide more ESG data to facilitate decision making and lead the Agency mortgage-backed securities (MBS) market.

The latest advance in Ginnie Mae’s ESG data disclosure efforts involves Multifamily MBS. In November 2021, with [Bulletin 2021-068](#), Ginnie Mae announced “an enhancement to its Combined Multifamily Pool and Loan Disclosure Files for both daily/monthly new issuance and monthly portfolio data. This enhancement adds a new data field, Green Status (field L43), to the Loan section of the disclosure record.”¹

The new data field will denote whether properties collateralizing a Multifamily pool qualify as green properties under FHA’s Multifamily Green and Energy Efficient Housing program. By qualifying as a green property, property owners are eligible for a lower Mortgage Insurance Premium (MIP), known as a Green MIP rate. **Table 1**, shown below, demonstrates the decrease in MIP for mortgages that are collateralized by properties that qualify as green properties. The FHA’s Green MIP rates became effective in on April 1, 2016.

FHA Multifamily Mortgage Insurance Program	Upfront Capitalized MIP Basis Points (Prior to April 1, 2016)	Upfront Capitalized MIP Basis Points (Post April 1, 2016)	Annual MIP Basis Points (Prior to April 1, 2016)	Annual MIP Basis Points (Post April 1, 2016)
Green/Energy Efficient Housing		25		25
207 Multifamily New Construction/Sub Rehab w Green	45 to 70	25	45 to 70	25
207 Manufactured Home Parks with Green	45 to 70	25	45 to 70	25
221(d)(4) New Constr/Sub Rehab w Green	45 to 65	25	45 to 65	25
220 Urban Renewal Housing w Green	45 to 70	25	45 to 70	25
207/223(f) Refi or Purchase for Apts. w Green	100	25	45 to 60	25
223(a)(7) Refi of Apts. w Green	50	25	45 to 50	25
231 Elderly Housing w Green	45 to 70	25	45 to 70	25
241(a) Supplemental Loans for Apts./coop w Green	45 to 95	25	45 to 95	25

Table 1. FHA Multifamily Green MIP Rates²

To qualify and “maintain continual compliance for a Green MIP rate, properties must achieve and maintain an ENERGY STAR® score of 75 or higher as evidenced by a report from ENERGY STAR Portfolio Manager® (Portfolio

¹ https://www.ginniemae.gov/investors/disclosures_and_reports/Pages/BulletinsDispPage.aspx?ParamID=545&Ident=2021-068

² <https://www.govinfo.gov/content/pkg/FR-2016-03-31/pdf/2016-07405.pdf>

Manager), an Environmental Protection Agency (EPA) online platform for owners to upload and report energy performance for properties. The system measures and tracks energy and water consumption and greenhouse gas emissions on a 1-100 index score.”³ With these green property requirements, owners “are incentivized to implement measures that result in projects with greater energy and water efficiency, reduced operating costs, improved indoor air quality and resident comfort, and reduced overall impact on the environment. For properties that have already achieved a green building standard and that are refinancing with this lower MIP premium, proceeds may be used to complete further efficiency upgrades, and/or to retrofit to the next-level green certification standards.”⁴

The new Green Status field in the Multifamily data disclosure file provides investors with additional transparency that allows for granular ESG investment decisions in the Ginnie Mae MBS market. The implementation timeline for the new data field began on February 1, 2022, with the addition of the Green Status field to the Multifamily Pool and Loan New Issuance Daily file.

The Green Status field will be fully implemented into data disclosure files by March 1, 2022 when the data is aggregated into the Multifamily Pool and Loan New Issuance Monthly Disclosure. Within the file, investors will be able to identify pools with green properties by looking at the final entry in each row. The entry will contain one of five MIP indicators which are combinations of the four FHA mortgage categories: GRA (Green/Affordable); GRB (Green/Broadly Affordable); GRM (Green/Market); NGR (Not Green); or blank (Unknown). **Table 2**, shown below, describes the four categories of FHA mortgages (Green, Affordable, Broadly Affordable, and Market) in further detail.

FHA Mortgage Category	MIP Basis Points	FHA Mortgage Category Description
Green	25	Projects must use a green building standard and must ultimately achieve and maintain an Energy Star score of 75 or better using EPA's Portfolio Manager (annual reporting is required after completion of construction/rehab projects). Properties under 20 units are exempt from the Portfolio Manager scoring requirement.
Affordable	35	Owners must accept Section 8 vouchers. Section 8 based projects include: <ul style="list-style-type: none"> ➤ Inclusionary Zoning, Density Bonus Set-Asides, and Other Local Affordability Restriction projects with at least 10% of units at 80% area median income or less, for at least 30 years, or ➤ 10%-90% Section 8 Project Based contract (15 years or more remaining), or ➤ 10%-100% Low Income Housing Tax Credit (LIHTC) or similarly restricted (15 years or more remaining)
Broadly Affordable	25	Broadly Affordable is defined as either: <ul style="list-style-type: none"> ➤ 90% or more Section 8 Project Based contract (15 years or more remaining), or ➤ 90% or more LIHTC/restricted and rents at least 10% below market (15 years or more remaining)
Market	50 to 95	Market FHA mortgages are broadly defined as mortgages that do not fall into one, or more, of the categories above.

Table 2. FHA MIP Indicators⁵

With the new data disclosure field, Ginnie Mae presents information to investors on Multifamily pools within the Ginnie Mae MBS portfolio that are collateralized by green properties. So, how might Ginnie Mae Multifamily

³ <https://www.hud.gov/sites/dfiles/OCHCO/documents/2020-1hsgml.pdf>

⁴ https://www.hud.gov/program_offices/housing/mfh/green

⁵ https://static1.squarespace.com/static/5e3882db4b0f9a3409a88c46/t/5eb44fb32703075822680bcb/1588875187968/AGM_MIP_Description-2018.pdf



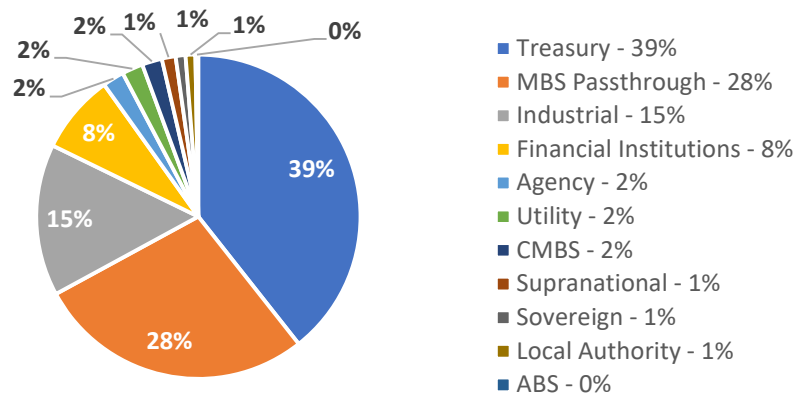
Highlights

MBS investors use this new ESG data disclosure field? According to the U.S. Department of Housing and Urban Development's (HUD's) office of Housing, "For investors in Ginnie Mae MBS, green building disclosure provides additional transparency of loan collateral quality. Further, such disclosure—along with HUD's underwriting policies—provides investors with the facts needed to assess environmental, social, and governance ("ESG") factors. ESG investing has grown in popularity in recent years, and this disclosure supports investment selection for buildings that are certified to be energy efficient during HUD's loan underwriting process."²

1.0 Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

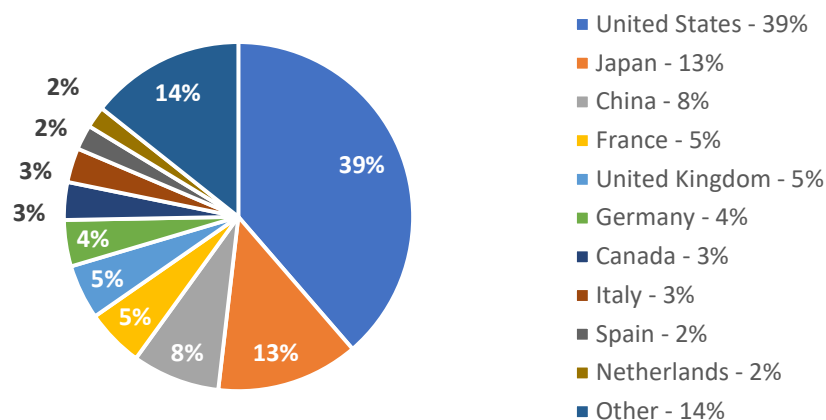
1.1 Barclays US Aggregate and Global Indices

Barclays US Aggregate Index



US Treasuries contribute approximately 39% to the Barclays US Aggregate Index. US MBS (Ginnie Mae, Fannie Mae, and Freddie Mac) contribute approximately 28% to the Barclays US Aggregate Index. For the US Aggregate Index, the month over month (MoM) changes to the index components were no larger than 1%.

Barclays Global Aggregate Index by Country



In the Barclays Global Aggregate Index by Country, the US share of fixed income still represents the largest share of total outstanding issuance, representing approximately 39% of the total Barclays Global Aggregate Index. The US share of fixed income increased by 1% from the previous month. Canada's share of fixed income decreased by 1% from the previous month. All the other categories remained stable when compared to the previous month.

Sources: Bloomberg. Note: Data as of January 2022. Figures in charts may not add to 100% due to rounding.

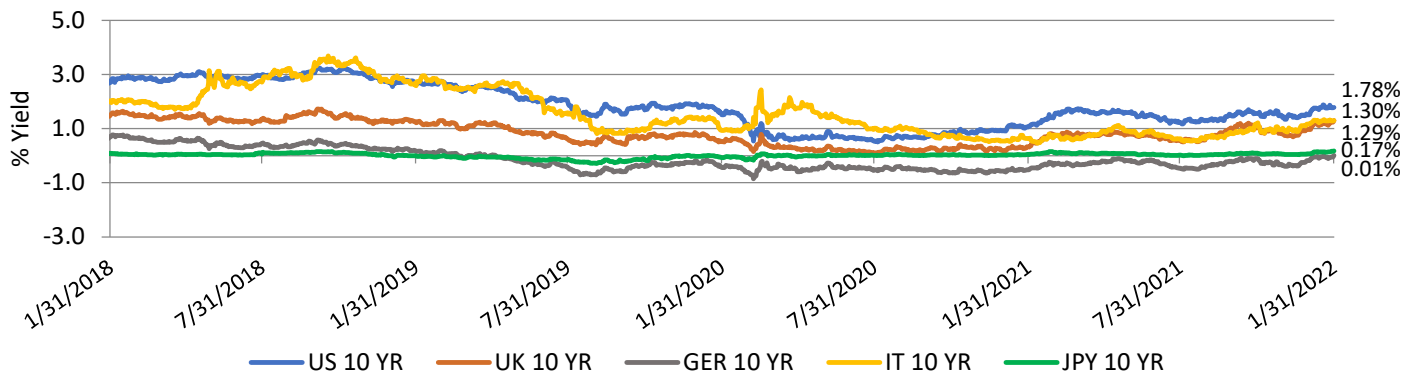
Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

1.2 Global 10-Year Treasury Yields

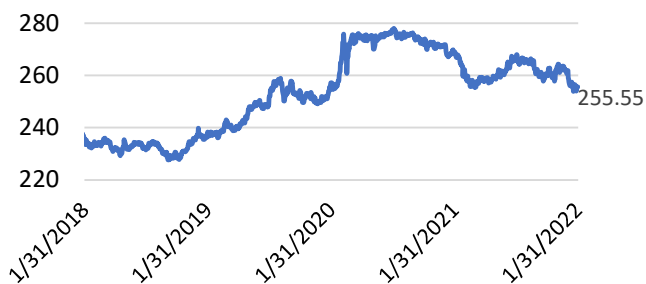
The US 10-year Treasury yield moved to 1.78% at month end January 2022, a MoM increase of 27 bps. At month end January 2022, US Treasury yields remain the highest of all the government treasury yields depicted in the figure below.

- The yield on the UK 10-year government notes increased to 1.30% in January, a MoM increase of 33 bps.
- The yield on the German 10-year note increased to 0.01% in January, a MoM increase of 19 bps. This is the first time since March 2019 that the German yield has crossed back into positive territory.
- The yield on the Italian 10-year note increased to 1.29% in January, a MoM increase of 12 bps.
- The yield on the Japanese 10-year government notes increased to 0.17% in January, a MoM increase of 11 bps.
- At the end of January 2021, the hedged yield for the 10-year Treasury JPY shifted to 2.56%, a decrease of 6 bps from the previous month.
- The hedged yield for the 10-year Treasury EUR shifted to 1.46%, a slight decrease of 4 bps from the previous month.

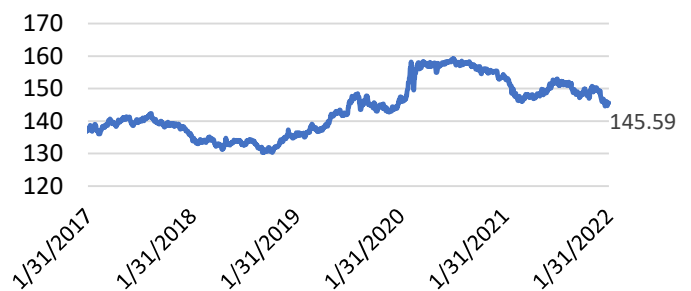
Global 10-Year Treasury Yields



7–10yr Total Return Hedged Index, JPY



7–10yr Total Return Hedged Index, EUR



Sources: Bloomberg. Note: Data as of January 2021

1.3 Ginnie Mae Yields– USD

Ginnie Mae fixed rate MBS yields increased MoM in January 2022. Ginnie Mae II yields were at 2.33% on January 31, 2022, up by 45 bps from the prior month. Ginnie Mae I yields were at 2.45%, up by 36 bps from the prior month. On January 31, Ginnie Mae II SF yields were 55 bps higher than the US 10-year Treasury yield, representing an increase in spread of 36 bps since December 31, 2021. The yields on the Ginnie Mae I SF were 67 bps higher than the US 10-year Treasury yield on January 31, 2022, representing an increase in spread of 9 bps since December 31, 2021.

Ginnie Mae II SF Yield, USD



Ginnie Mae I SF Yield, USD



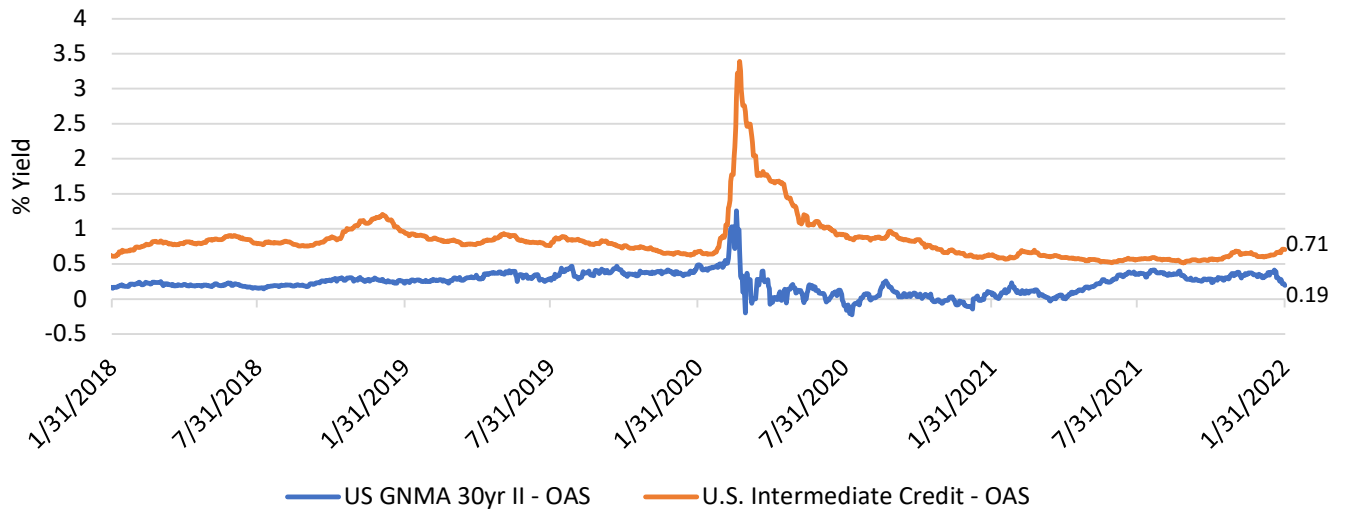
Sources: Bloomberg. Note: Data as of January 2021

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

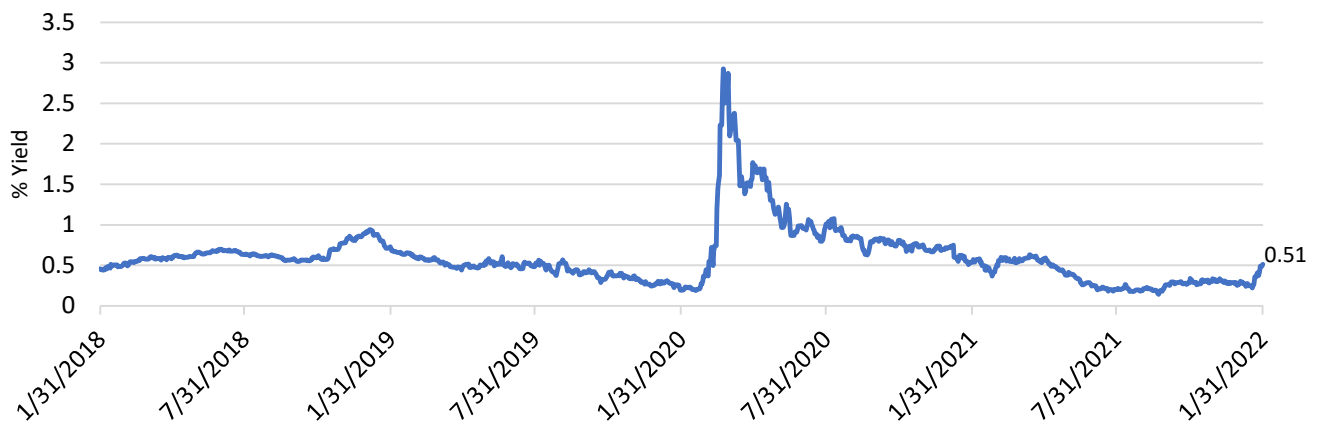
1.4 Ginnie Mae Yield Spreads – Intermediate Credit

The yield differential between US Intermediate Credit and GNMA II 30-year OAS increased 24 bps from month-end December to month-end January, ending at 51 bps. The Ginnie Mae II 30-year OAS decreased by 14 bps since the previous month. The US Intermediate Credit OAS has increased by 10 bps since last month.

US GNMA II 30yr MBS OAS versus US Intermediate Credit OAS



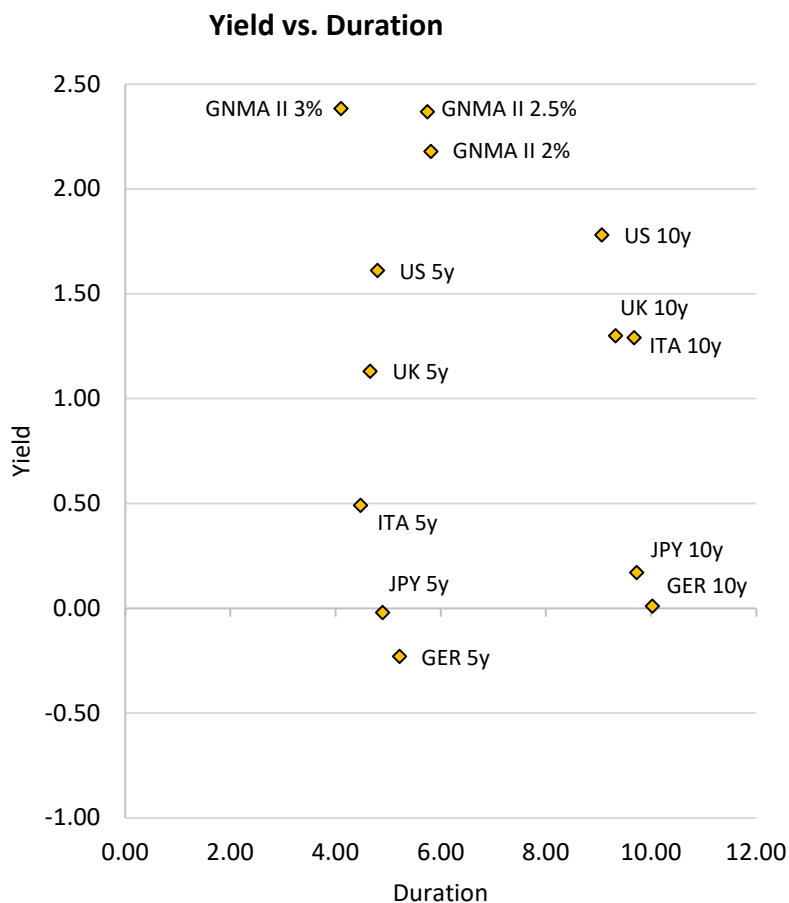
Spread between US Intermediate Credit and US GNMA II 30yr MBS OAS



Sources: Bloomberg. Note: Data as of January 2021.

1.5 Global Treasury Yield Per Duration

GNMA MBS continue to offer higher yields in comparison to other government fixed income securities of various tenors with similar or longer duration. Prepayment risk is a feature of MBS. In January, the GNMA II 2.5% securities duration and yield increased MoM by 0.51 units and 38 bps, respectively. In January, the GNMA II 3% securities duration and yield increased MoM by 0.41 units and increased by 38 bps, respectively.



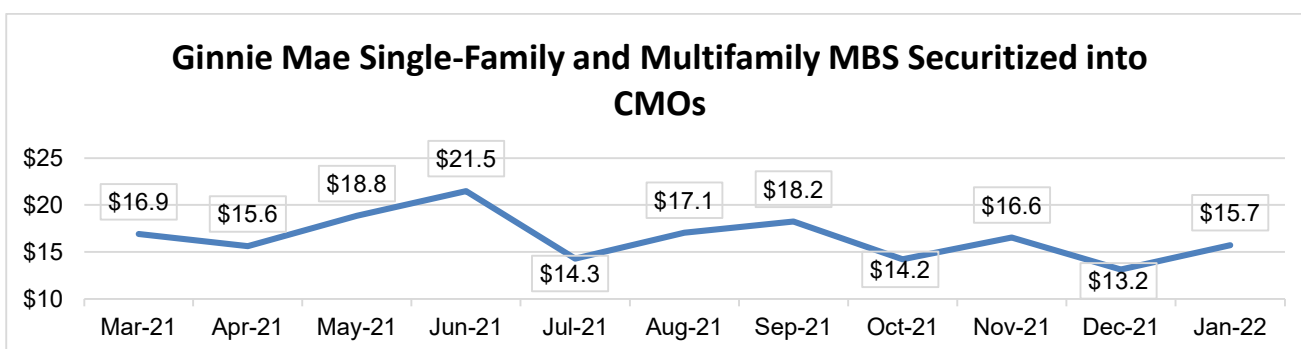
Security	Duration	Yield
US 5y	4.79	1.61
US 10y	9.06	1.78
JPY 5y	4.89	-0.02
JPY 10y	9.72	0.17
GER 5y	5.21	-0.23
GER 10y	10.02	0.01
ITA 5y	4.47	0.49
ITA 10y	9.67	1.29
UK 5y	4.65	1.13
UK 10y	9.32	1.30
GNMA II 2%	5.81	2.18
GNMA II 2.5%	5.74	2.37
GNMA II 3%	4.10	2.38

Sources: Bloomberg. Note: Yield and modified duration for GNMA II securities is from illustrative TBA using base prepayment assumptions and an assumed settlement of 1/20. All other data is as of December 2021. Yields are in base currency of security and unhedged.

1.6 Monthly CMO Demand for Ginnie Mae MBS

In January 2022, \$15.7 billion of Ginnie Mae MBS were securitized into Collateralized Mortgage Obligations (CMOs) as underlying collateral, a 20% MoM increase. Of that, approximately \$4 billion were Multifamily MBS, all having coupons between 2% and 3%. \$11.2 billion were Single-Family MBS with over 90-percent of the Single-Family MBS having coupons between 2% and 3.5%.

Through the first four months of Fiscal Year 2022 approximately \$60 billion of Ginnie Mae Single-Family and Multifamily MBS were securitized into Ginnie Mae CMO transactions. This represents a roughly 8% decrease over the same period in Fiscal Year 2021.



January 2022 CMO Collateral Coupon Distribution

Net Coupon (%)	Approx. Ginnie Mae MBS amount securitized into CMO Deals (\$MM) ⁶	% Breakdown of CMO Collateral by coupon ¹
Multifamily		
2.01-2.50	1,794.6	45%
2.51-3.00	2,166.4	55%
Subtotal	3,961.0	100%
Single Family		
≤2.00	510.2	4%
2.01-2.50	2,245.5	19%
2.51-3.00	5,366.2	46%
3.01-3.50	3,366.2	29%
3.51-4.00	115.6	1%
4.01-4.50	100.0	1%
4.51-5.00	25.3	0%
5.01-5.50	29.5	0%
5.51-6.00	23.7	0%
Subtotal	11,243.3	100%
Grand Total	15,743.2	

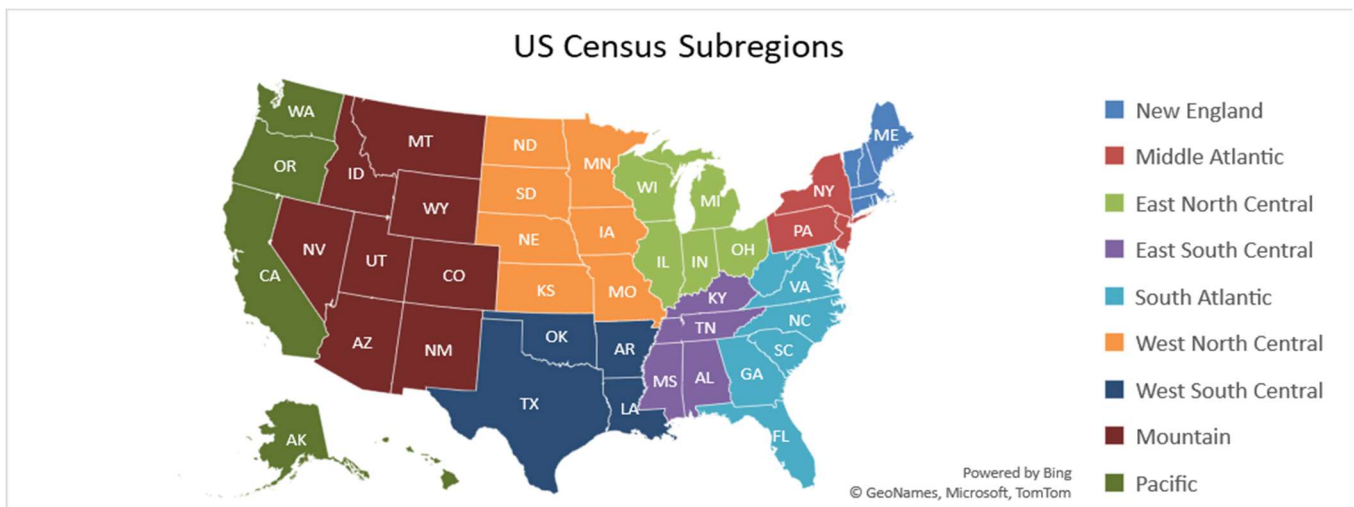
⁶Totals may not sum due to rounding.

2.0 State of the US Housing Market

2.1 National HPI

Home prices have increased rapidly during the pandemic, with Compound Annual Growth Rate (CAGR) for HPI at 17.4% between March 2020 to November 2021. March 2020 to October 2021 national HPI CAGR was approximately 90 bps lower, at 16.5%, suggesting a continued trend in November of accelerating HPI increases. Over that period, the Mountain region has had the greatest home price appreciation (21.7% CAGR), while in the West North Central region, increases in home values have been slowest (14.2%). The rapid home price appreciation has led to recent sharp increases in both conventional conforming and government loan limits.

U.S. Census Subregion	New England	Middle Atlantic	East North Central	East South Central	South Atlantic	West North Central	West South Central	Mountain	Pacific	National
2000 to Peak CAGR	10.5%	8.7%	4.0%	4.6%	8.7%	5.0%	4.3%	8.3%	13.9%	7.1%
Peak to Trough CAGR	-8.3%	-5.3%	-9.7%	-5.5%	-14.1%	-5.7%	-2.1%	-15.1%	-17.9%	-9.7%
Trough to Pandemic CAGR	3.7%	3.6%	4.8%	4.5%	5.9%	4.7%	5.1%	8.3%	8.1%	5.5%
Pandemic CAGR	16.9%	15.2%	14.7%	18.5%	19.5%	14.2%	16.7%	21.7%	18.9%	17.4%
12-Month Period of Max HPI Growth During Pandemic	7-2020 to 6-2021	8-2020 to 7-2021	7-2020 to 6-2021	12-2020 to 11-2021	9-2020 to 8-2021	6-2020 to 5-2021	12-2020 to 11-2021	9-2020 to 8-2021	8-2020 to 7-2021	8-2020 to 7-2021
Max 12-Month Period Change, During Pandemic	21.7%	18.1%	17.1%	19.5%	20.6%	16.3%	18.0%	25.8%	22.1%	19.2%
12-Month Period of Max HPI Growth, Pre-Pandemic	12-2001 to 11-2002	12-2003 to 11-2004	2-2017 to 1-2018	2-2005 to 1-2006	9-2004 to 8-2005	4-1993 to 3-1994	3-2005 to 2-2006	11-2004 to 10-2005	5-2004 to 4-2005	10-2004 to 9-2005
Max 12-Month HPI Growth, Pre-Pandemic	14.0%	12.4%	6.9%	8.5%	15.3%	7.4%	7.5%	18.0%	22.4%	10.7%



Sources: HPI data from FHFA. US Census Subregions as defined by the US Census Bureau.

Notes: HPI data as of October 2021. Peak refers to the month when HPI reached the highest level for each state/US during the housing boom period, ranging from 2005 to 2008. Trough represents the month when HPI fell to the lowest level for each region/US after the housing bust, ranging from 2009 to 2012. Pandemic Period refers to March 2020 to the current period, 10/2021. $CAGR = (End\ Value/Starting\ Value)^{(1/n)} - 1$

Nationally, home prices exceed their pre-crisis peak on a nominal basis by 48.6% through September 2021. As shown in both the tables above and below, the extent of HPI increases since the trough has varied from region to region and state to state. Nationally, home prices exceed the trough by 88.4%. As shown in the regional HPI table above, much of this asset appreciation has taken place during the pandemic.

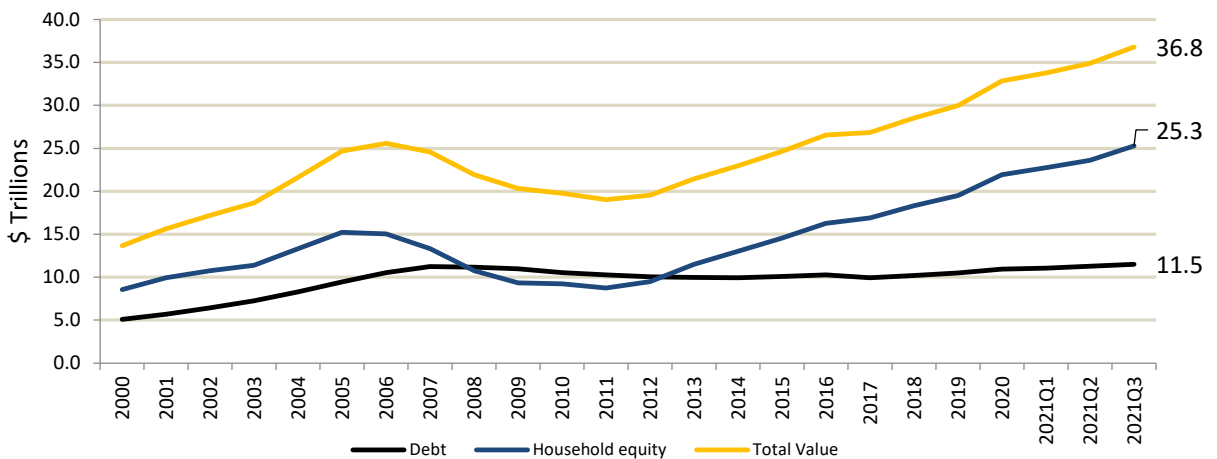
State	2000 to Peak	Peak to Trough	Trough to Current	YOY	Current HPI % Above Peak
National	59.6%	-21.1%	88.4%	12.7%	48.6%
AK	66.9%	-5.2%	40.3%	9.0%	33.0%
AL	41.6%	-15.0%	64.7%	13.1%	40.0%
AR	39.8%	-11.0%	56.3%	13.1%	39.1%
AZ	110.2%	-49.5%	178.2%	20.8%	40.5%
CA	144.8%	-47.0%	137.5%	16.6%	25.8%
CO	32.3%	-10.3%	140.3%	16.1%	115.6%
CT	72.9%	-19.6%	36.9%	15.6%	10.0%
DC	162.5%	-11.7%	115.1%	10.8%	90.0%
DE	88.5%	-23.5%	52.0%	13.4%	16.3%
FL	130.0%	-46.5%	144.6%	17.2%	30.8%
GA	35.9%	-27.1%	112.7%	14.7%	55.1%
HI	139.0%	-27.0%	96.0%	11.9%	43.0%
IA	27.8%	-5.4%	54.2%	9.9%	45.8%
ID	73.3%	-32.2%	201.0%	28.4%	104.0%
IL	49.9%	-23.8%	46.4%	10.7%	11.6%
IN	19.1%	-8.7%	76.9%	13.3%	61.6%
KS	31.0%	-7.8%	66.2%	12.6%	53.2%
KY	28.9%	-5.4%	64.3%	12.6%	55.4%
LA	51.6%	-6.7%	45.0%	8.3%	35.2%
MA	69.8%	-18.2%	76.7%	14.4%	44.5%
MD	126.4%	-26.5%	51.8%	11.5%	11.6%
ME	72.0%	-12.4%	76.8%	18.3%	54.8%
MI	18.4%	-31.5%	110.8%	13.7%	44.3%
MN	52.5%	-23.0%	83.7%	12.0%	41.5%
MO	39.2%	-15.0%	74.2%	13.4%	48.1%
MS	38.9%	-12.8%	43.6%	9.9%	25.3%
MT	79.3%	-13.6%	98.1%	19.3%	71.2%
NC	39.7%	-14.1%	83.9%	16.2%	57.9%
ND	51.7%	-0.9%	69.8%	7.9%	68.3%
NE	24.3%	-5.9%	77.3%	13.0%	66.7%
NH	72.7%	-21.9%	81.1%	17.4%	41.4%
NJ	102.2%	-22.7%	50.2%	14.6%	16.2%
NM	66.6%	-17.9%	55.7%	12.8%	27.8%
NV	117.4%	-59.3%	203.6%	17.1%	23.6%
NY	75.7%	-10.5%	56.5%	13.5%	40.1%
OH	19.6%	-16.6%	77.4%	13.1%	48.0%
OK	36.8%	-4.6%	60.2%	11.9%	52.7%
OR	85.6%	-28.6%	129.9%	16.3%	64.1%
PA	68.9%	-10.9%	57.3%	12.6%	40.1%
RI	108.1%	-28.0%	79.2%	17.0%	29.0%
SC	40.6%	-16.0%	84.6%	14.3%	55.1%
SD	40.2%	-2.4%	72.9%	15.1%	68.7%
TN	38.4%	-12.6%	100.0%	17.2%	74.7%
TX	35.8%	-3.0%	96.9%	14.4%	91.0%
UT	65.1%	-26.1%	152.8%	23.1%	86.9%
VA	95.1%	-18.8%	59.7%	12.7%	29.8%
VT	78.1%	-10.3%	55.3%	16.8%	39.3%
WA	83.4%	-27.3%	144.1%	17.3%	77.5%
WI	38.6%	-14.2%	69.8%	12.6%	45.6%
WV	39.2%	-5.7%	40.8%	11.6%	32.8%
WY	84.7%	-9.7%	52.8%	10.7%	38.1%

Source: FHFA Notes: HPI State-level data is provided quarterly by FHFA and presented here as of September 2021. Peak refers to the month when HPI reached the highest level for each state/US during the housing boom period, ranging from 2005 to 2008. Trough represents the month when HPI fell to the lowest level for each state/US after the housing bust, ranging from 2009 to 2012.

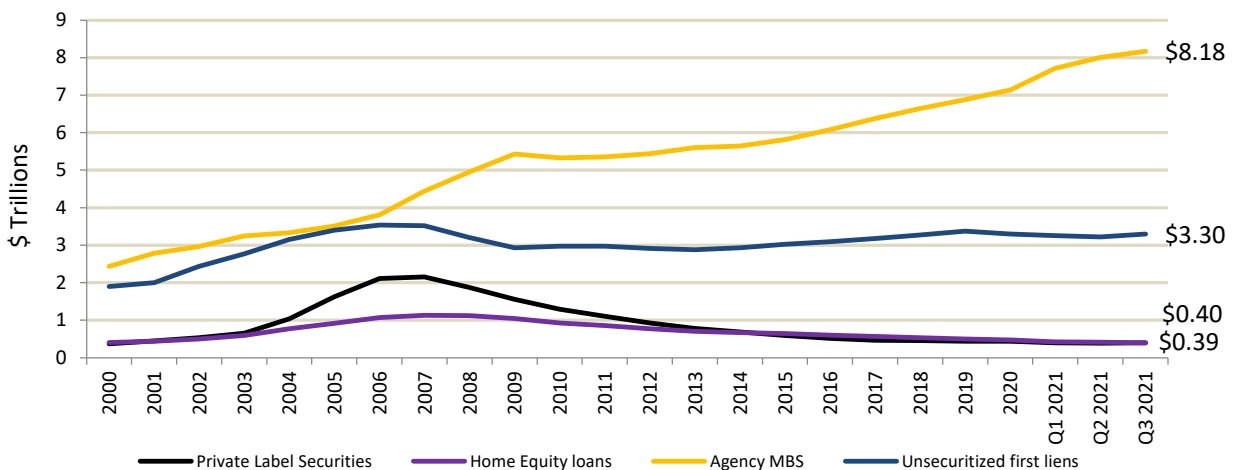
2.2 Size and Value of the US Housing Market

The total value of the single-family housing market reached \$36.8 trillion in Q3 2021. The value of household equity has continued to trend upward into Q3 2021. As mentioned in Section 2.1 above, the unprecedented pace of asset appreciation during the pandemic is driving much of the increase in the overall value of real estate as an asset class, as debt remains relatively flat. The total value of the US housing market is up 93.4% from its trough in 2011. Conversely, mortgage debt outstanding has increasing slightly from \$11.3 trillion in Q2 2021 to \$11.5 trillion in Q3 2021. Agency MBS account for a growing percentage of the total mortgage debt outstanding, up to 67% of total mortgage debt.

Value of the US Housing Market



Size of the US Residential Mortgage Market

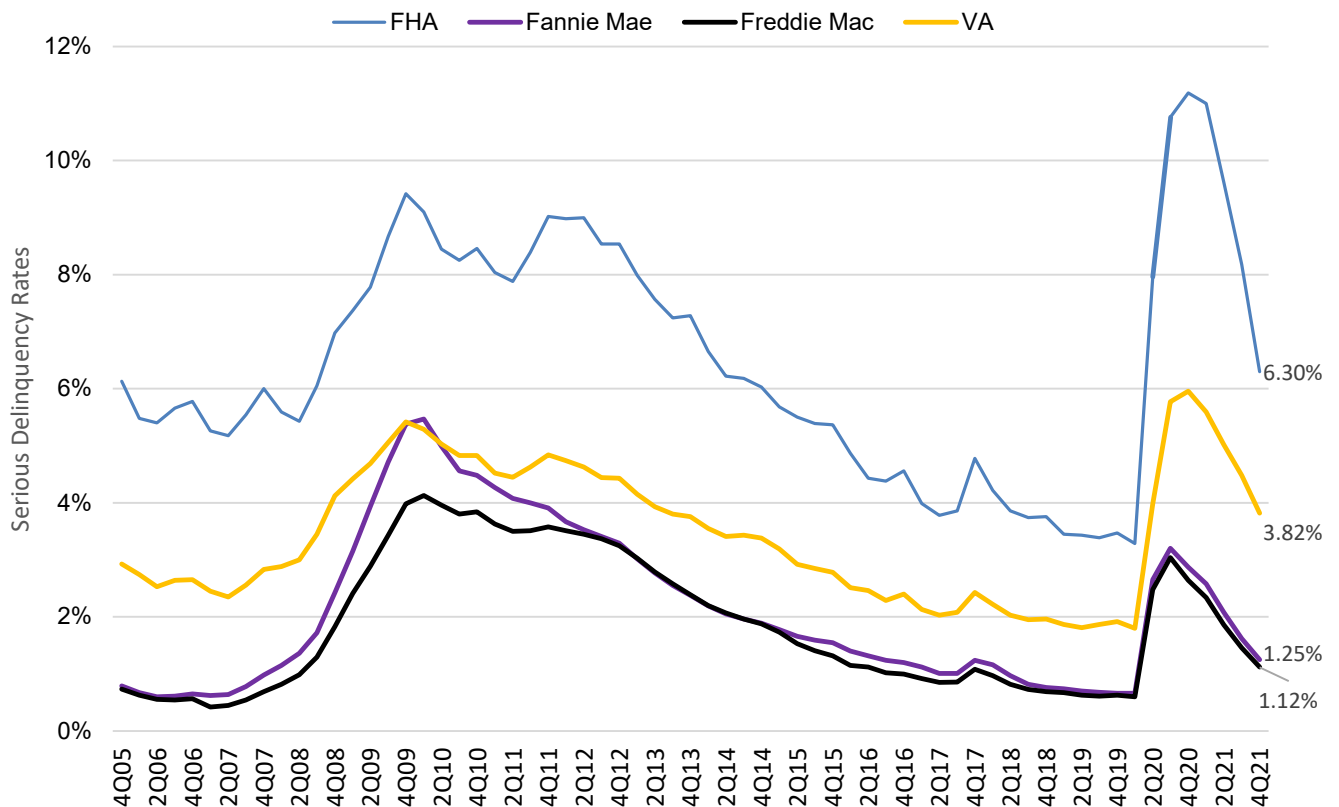


Source: Federal Reserve Flow of Funds Data. Notes: Data as of Q3 2021.

2.3 Serious Delinquency Rates

Serious delinquency rates for single-family GSE, FHA, and VA loans all fell sharply in Q4 2021. From Q3 2021 to Q4 2021, Fannie and Freddie serious delinquencies decreased 37 and 34 bps, respectively, or 23% each, as a percentage change. Ginnie Mae collateral's serious delinquency rates decreased more than the GSE rates in absolute terms, with FHA and VA dropping 188 and 66 bps respectively. This decline in serious delinquency rates is consistent with the decrease in the number of loans in forbearance captured in [Section 2.4 below](#).

Serious Delinquency Rates: Single-Family Loans



Sources: Fannie Mae and Freddie Mac Monthly Summary Reports, and MBA Delinquency Survey.

Note: Serious delinquency is defined as 90 days or more past due or in the foreclosure process. Data as of Q4 2021.

2.4 Characteristics of Ginnie Mae Loans in Forbearance

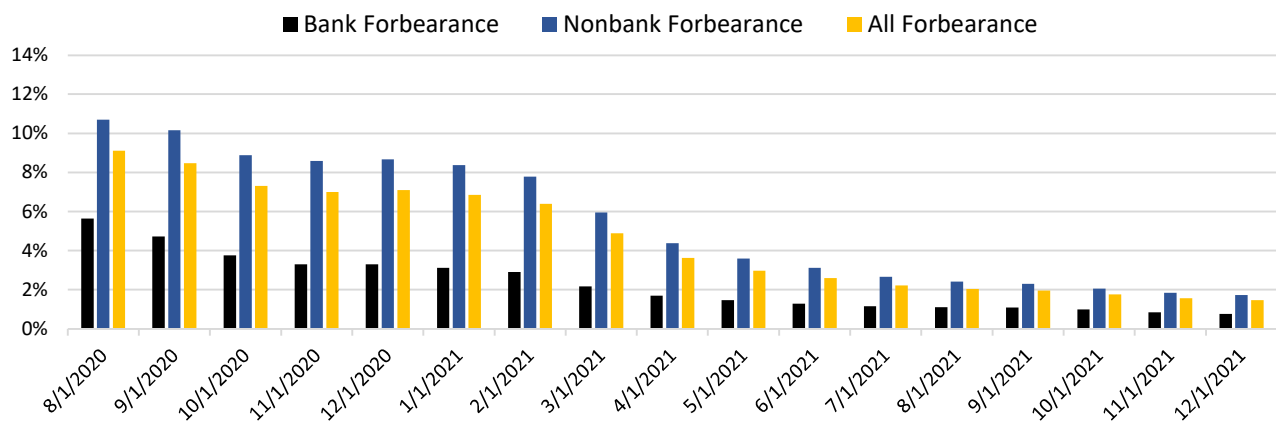
157,070 Ginnie Mae loans were in forbearance as of the end of December 2021. This represents 6% decrease MoM, lower than the 11% MoM pace observed in October and November. 8,292 of loans in forbearance were removed from MBS pools and 148,778 still actively remain in pools. Most liquidated loans (5,986) were FHA and within that subset, 3,482 of those loans were originated by nonbanks. Approximately 96% of the loans that were in forbearance at the end of December were due to COVID-19 circumstances.

All Loans in Forbearance – December 2021						
	FICO Score*	Note Rate*	Current Principal Balance Median	First Time Homebuyer Share (%)	Purchase Share (%)	Loan Count
Ginnie	658	3.5	\$175,734.67	76.8	68.1	157,070
Bank	672	3.9	\$123,815.27	76.7	79.6	22,232
Nonbank	657	3.5	\$184,420.90	76.8	67.0	134,838
FHA	653	3.6	\$169,235.76	79.8	74.6	109,504
Bank	665	4.0	\$114,549.62	80.1	82.7	16,508
Nonbank	652	3.6	\$179,134.36	79.7	73.8	92,996
VA	669	3.2	\$227,893.35	63.8	47.3	34,405
Bank	684	3.6	\$178,300.44	66.3	70.2	4,321
Nonbank	667	3.2	\$234,000.00	63.4	44.8	30,084
Loans in Forbearance and Removed from Pools – December 2021						
	FICO Score*	Note Rate*	Current Principal Balance Median	First Time Homebuyer Share (%)	Purchase Share (%)	Loan Count
Ginnie	660	3.9	\$141,684.94	75.1	69.5	8,292
Bank	676	3.9	\$110,038.61	78.4	81.7	3,111
Nonbank	655	3.9	\$162,797.00	73.8	65.6	5,181
FHA	654	3.9	\$134,288.10	78.0	74.1	5,986
Bank	674	4.0	\$104,501.31	79.9	82.2	2,504
Nonbank	646	3.9	\$158,246.43	77.1	70.8	3,482
VA	673	3.7	\$192,883.20	63.1	53.7	1,659
Bank	683	3.6	\$151,864.04	67.9	73.0	404
Nonbank	671	3.7	\$211,028.68	62.0	50.5	1,255
Loans in Forbearance that Remain in Pools – December 2021						
	FICO Score*	Note Rate*	Current Principal Balance Median	First Time Homebuyer Share (%)	Purchase Share (%)	Loan Count
Ginnie	658	3.5	\$177,643.50	76.9	68.1	148,778
Bank	671	3.9	\$126,525.15	76.5	79.4	19,121
Nonbank	657	3.4	\$185,260.68	77.0	67.0	129,657
FHA	653	3.6	\$171,187.00	79.8	74.6	103,518
Bank	664	4.0	\$116,270.49	80.2	82.8	14,004
Nonbank	652	3.5	\$180,000.00	79.8	73.9	89,514
VA	668	3.2	\$229,272.33	63.8	47.0	32,746
Bank	684	3.6	\$182,491.46	66.2	70.0	3,917
Nonbank	667	3.1	\$235,000.00	63.4	44.6	28,829

Sources: Ginnie Mae loan level MBS disclosure and forbearance file and Ginnie Mae Issuer Operational Performance Profile (IOPP) -Peer Group Listings.
Notes: Data as of December 2021; *Averages weighted by remaining principal balance of the loans.

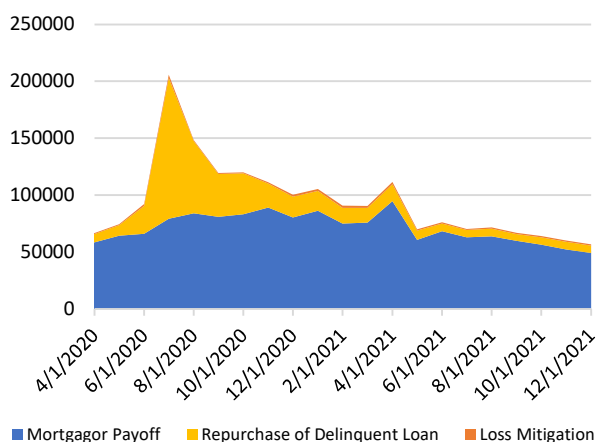
The current share of Ginnie Mae loans in forbearance stands at 1.47% as of the end of December, down approximately a tenth of a percent MoM from 1.57% at the end of November. This approximately 10 bps decline is roughly half the decrease observed in each of the prior two months, during which the total forbearance percentage dropped approximately 20 bps each month. The forbearance rate remains significantly higher than the forbearance rate prevailing in the period prior to the pandemic between Jan 2019 and February 2020 (approximately 0.1%), and, as stated above, the rate of convergence to pre-pandemic rates has slowed in December.

Share of Ginnie Mae Loans in Forbearance

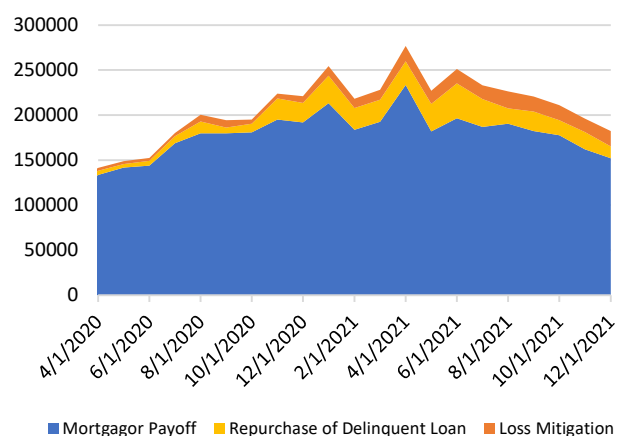


Sources: eMBS and Urban Institute. Data beginning May 2021 sourced from Ginnie Mae forbearance disclosure files and IOPP Peer Group list. Notes: Data as of December 2021.

Number of Loans Removed from Pools: Bank



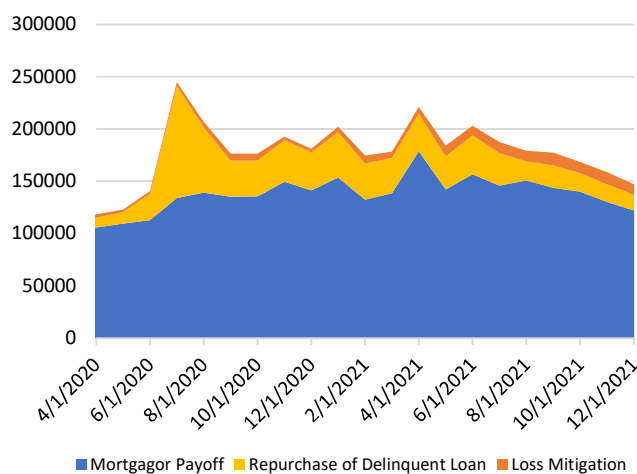
Number of Loans Removed from Pools: Nonbank



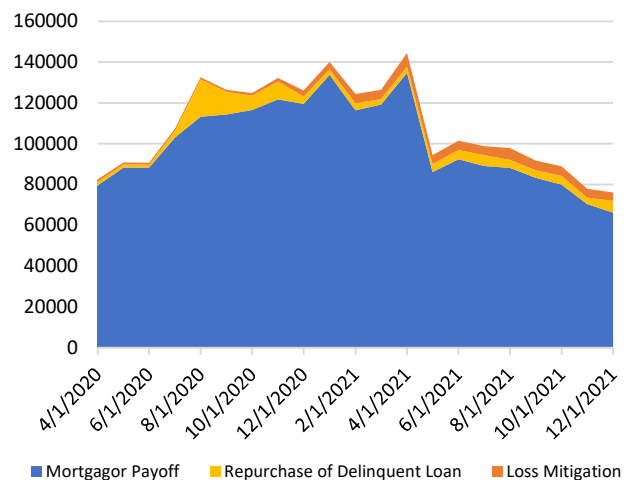
Sources: eMBS and Urban Institute. Data beginning June 2021 sourced from Ginnie Mae Loan Level MBS disclosure files and IOPP Peer Group list. Notes: Data as of December 2021.

Of the Ginnie Mae loans that were liquidated from pools due to mortgage delinquency (these counts include all delinquent buyouts, regardless of forbearance status), a higher share of the loans were FHA versus VA loans (top charts, yellow areas). Liquidated loans across FHA and VA are also more likely to have coupons greater than or equal to 3.5% (bottom charts: “Number of Loans Removed from Pools by Coupon”), as refinancing is likelier among these higher coupon loans. In December 2021, the number of loans repurchased due to delinquency decreased 12% to 14,956 for FHA and 52% to 2,716 for VA loans. High refinance activity (blue areas) continues to drive the repurchase activity for both FHA and VA, but total removal volume is trending downward.

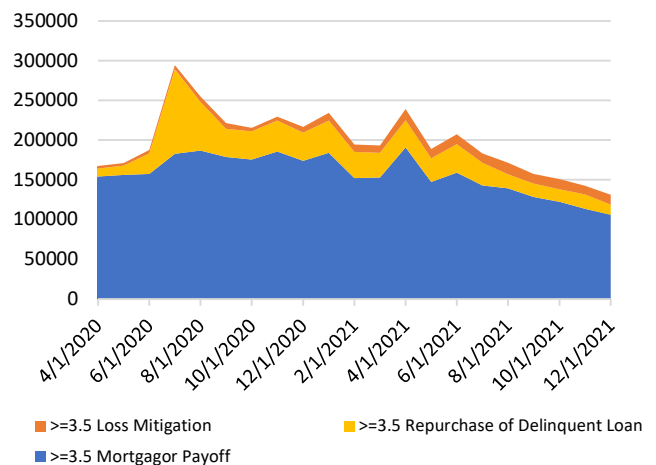
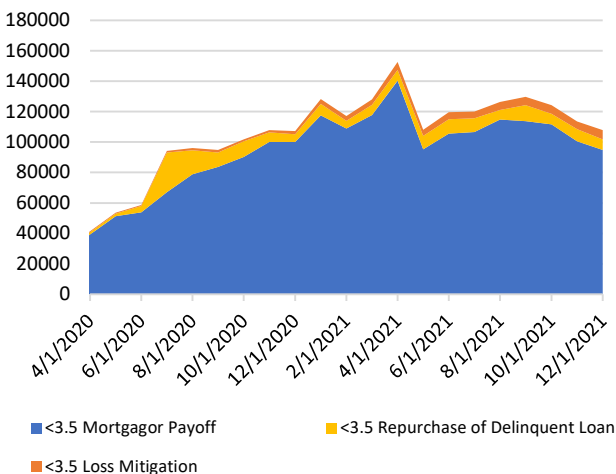
Number of Loans Removed from Pools: FHA



Number of Loans Removed from Pools: VA



Number of Loans Removed from Pools by Coupon



Sources: eMBS and Urban Institute. Data beginning June 2021 sourced from Ginnie Mae Loan Level MBS disclosure files, Ginnie Mae Pool Level MBS disclosure files and IOPP Peer Group list. Notes: Data as of December 2021.

Additionally, a small number of loans were removed due to ‘Foreclosure with Claim’ and ‘Other’ reasons in November 2021.



State of the US Housing Market

2.5 Ginnie Mae Agency Issuance and Agency Outstanding by State

Ginnie Mae MBS represent approximately 24% of new Agency issuance over the past year. The share of Ginnie Mae collateral outstanding varies across states, with the highest Ginnie Mae share in Alaska (47%) and the lowest in the District of Columbia (12%). The difference between Ginnie Mae share of Agency Issuance (24%) over the past year and Ginnie Mae's share of overall outstanding Agency MBS (26%) is reflective of ebbs and flows in FHA and VA first lien origination market share, discussed in [Section 2.8 below](#).

	Agency Issuance (past 1 year)				Agency Outstanding			
	GNMA Share	GNMA Loan Count	GNMA Avg. Loan Size (000)	GSE Avg. Loan Size (000)	GNMA Share by UPB	GNMA Loan Count	GNMA Avg. Loan Size (000)	GSE Avg. Loan Size (000)
National	24%	2,957,558	273.57	293.21	26%	10,611,120	186.89	217.03
AK	49%	10,581	304.93	288.76	47%	36,948	254.48	218.55
AL	37%	58,761	215.19	227.73	40%	231,762	147.38	172.72
AR	35%	31,244	183.82	206.35	39%	135,562	125.05	155.77
AZ	23%	95,711	279.21	281.77	25%	273,817	201.58	215.20
CA	16%	240,876	426.71	415.08	16%	670,676	311.59	316.71
CO	24%	79,248	363.20	344.07	23%	213,609	273.28	268.62
CT	23%	26,272	262.09	276.87	25%	103,430	195.30	207.29
DC	12%	2,653	470.08	456.22	12%	8,577	365.06	350.80
DE	29%	14,188	261.93	268.76	32%	50,192	196.72	206.22
FL	30%	252,363	270.26	267.45	32%	831,131	197.58	200.95
GA	31%	135,038	239.74	264.51	34%	489,860	167.46	198.02
HI	36%	12,779	588.53	465.86	31%	32,769	452.75	352.38
IA	18%	17,967	171.32	196.98	22%	81,793	128.14	148.03
ID	22%	19,636	295.77	285.57	23%	64,726	198.58	213.27
IL	19%	86,619	214.89	241.16	21%	350,953	154.22	177.24
IN	26%	65,546	185.95	196.86	30%	277,063	126.10	146.48
KS	26%	22,722	197.64	217.06	29%	96,432	133.95	160.64
KY	30%	40,245	193.66	204.55	34%	161,456	136.18	152.32
LA	38%	46,502	209.49	231.53	39%	190,130	152.10	174.92
MA	15%	34,521	364.38	355.92	15%	110,997	271.52	267.48
MD	32%	87,510	347.15	323.67	33%	282,749	256.95	247.06
ME	23%	10,310	230.56	250.45	26%	37,641	169.40	187.72
MI	17%	64,712	186.46	208.28	20%	273,508	127.06	154.34
MN	16%	38,379	249.33	256.88	18%	159,445	175.46	195.36
MO	25%	57,599	195.77	211.05	29%	243,545	134.99	158.86
MS	43%	26,214	199.33	209.62	47%	117,872	135.93	157.43
MT	20%	9,479	237.48	280.44	24%	33,070	197.55	208.59
NC	26%	114,594	236.22	261.21	29%	412,659	164.70	194.27
ND	20%	4,886	190.94	237.66	23%	16,629	188.11	184.01
NE	23%	14,283	214.57	208.25	27%	65,419	141.40	157.65
NH	20%	10,955	293.28	280.99	23%	38,729	216.76	210.63
NJ	19%	61,968	314.00	331.84	21%	224,915	229.92	251.88
NM	34%	22,387	231.39	234.97	38%	94,187	158.29	173.10
NV	30%	45,507	314.08	293.92	31%	130,545	232.75	225.41
NY	17%	55,458	314.65	342.18	20%	302,033	199.26	243.32
OH	24%	92,657	180.99	200.43	29%	417,815	124.29	146.19
OK	38%	40,091	197.41	210.24	43%	187,850	134.02	157.12
OR	19%	36,852	323.14	323.49	19%	110,671	240.20	245.62
PA	21%	80,724	206.74	243.51	26%	385,055	144.68	178.84
RI	28%	10,204	299.99	274.47	29%	34,639	220.79	209.21
SC	32%	68,060	235.20	245.64	34%	227,632	172.07	185.51
SD	27%	7,433	228.88	225.90	29%	29,144	164.48	174.19
TN	28%	71,206	241.75	258.18	32%	273,153	163.41	195.23
TX	29%	267,675	251.89	273.81	32%	1,062,415	171.15	202.37
UT	18%	33,551	331.03	323.09	19%	97,285	239.54	252.61
VA	35%	137,389	339.68	325.23	36%	435,485	247.57	248.19
VT	18%	3,029	236.69	249.07	19%	12,101	176.44	177.56
WA	21%	78,933	370.73	370.52	22%	234,175	269.10	282.08
WI	15%	32,874	205.06	217.46	17%	122,651	150.15	161.63
WV	40%	13,879	195.86	196.26	43%	57,036	138.50	142.90
WY	34%	7,714	258.02	252.48	35%	24,980	198.91	197.77

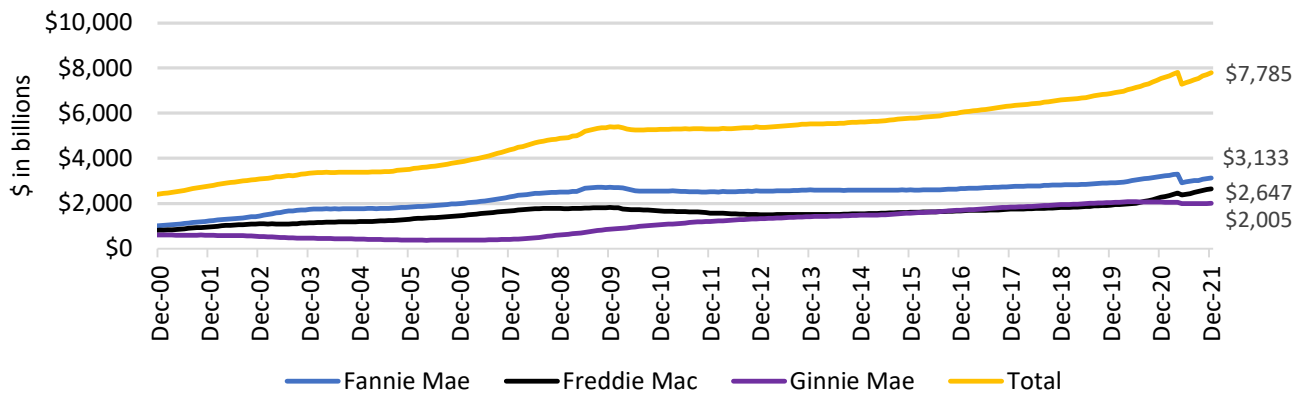
Sources: eMBS, Ginnie Mae/Freddie Mac/Fannie Mae Loan Level MBS Disclosure Files. Notes: Outstanding balance is based on loan balance as of October 2021. Ginnie Mae issuance is based on the last 12 months, from November 2020 to November 2021.

2.6 Outstanding Single-Family Agency MBS

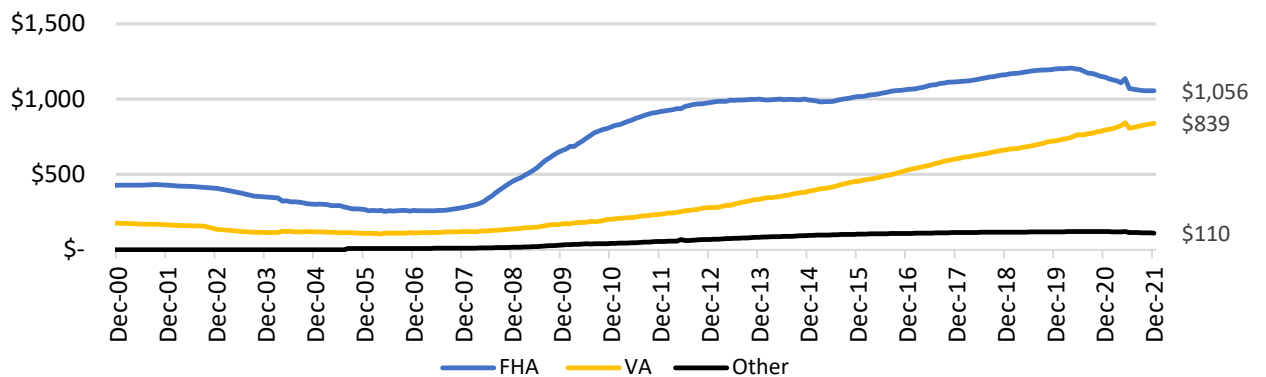
As of December 2021, outstanding single-family securities in the Agency market totaled \$7.79 trillion: 40.2% Fannie Mae, 34.0% Freddie Mac, and 25.8% Ginnie Mae MBS. Over the past twelve months, Freddie Mac’s total outstanding issuance has increased by approximately 17%, while Fannie and Ginnie have decreased outstanding issuance by 2% and 3% respectively. Despite this, Fannie outstanding remains larger than either Freddie or Ginnie by approximately \$0.5 trillion and \$1.1 trillion, respectively.

Ginnie Mae MBS collateral composition has changed dramatically over the past ten years. In December 2011, 76% of Ginnie Mae outstanding collateral was FHA and 19.5% was VA. In December 2021, FHA collateral comprised 53% of Ginnie Mae MBS outstanding and VA collateral comprised 42% of Ginnie Mae MBS outstanding.

Outstanding Agency Mortgage-Backed Securities



Composition of Outstanding Ginnie Mae Mortgage-Backed Securities

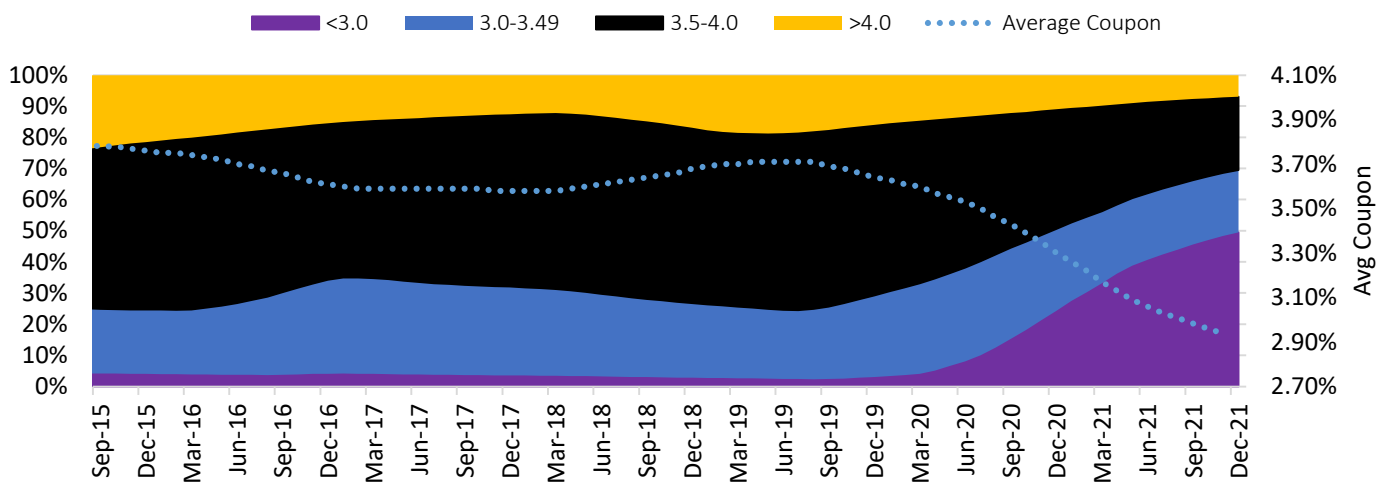


Sources: Data beginning in May 21 is based on outstanding balances in the Ginnie Mae/Freddie Mac/Fannie Mae Loan Level MBS Disclosure Files. Note: Data as of November 2021. Beginning with the October 2021 GMAR, the Fannie Mae and Freddie Mac data within the Outstanding Agency MBS graph have been updated to reflect the Current UPB of the portfolio. July 2021 through November 2021 GMAR reflect the UPB at Security issuance for Fannie Mae and Freddie Mac for data from May 2021 through July 2021.

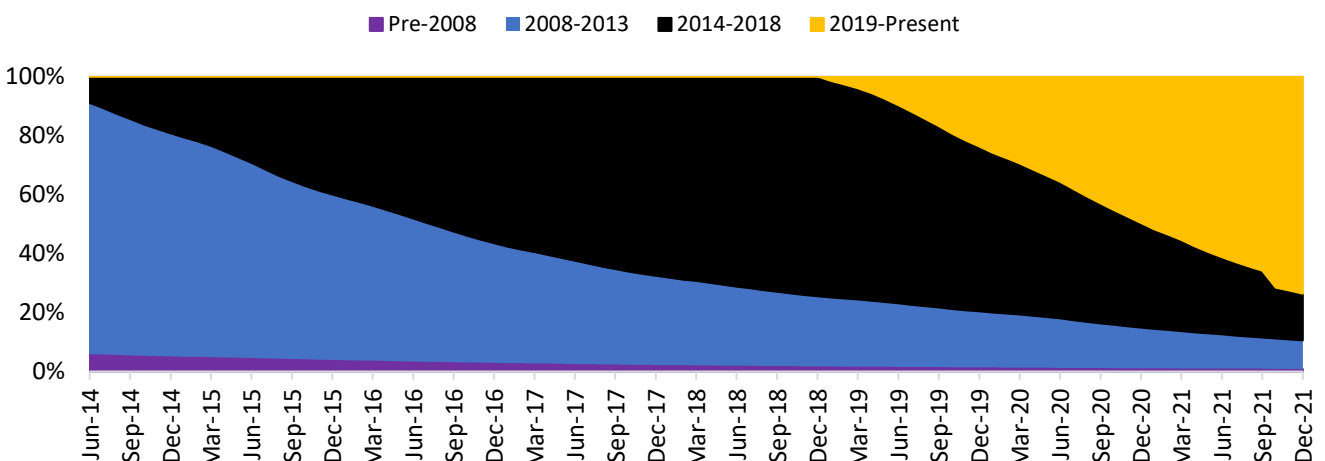
2.7 Outstanding Ginnie Mae MBS Volume by Coupon and Vintage Over Time

As of December 2021, the weighted average coupon on outstanding Ginnie Mae pools was 2.92%, down 2 bps since December 2021 and 38 bps since December 2020. The share of outstanding MBS pools with coupons below 3.0% (49% as of December 2021) began a rapid expansion in 2020. Approximately 26% of the outstanding MBS coupons are between 2.5 and 3.0%, 23% have coupons between 2.0 and 2.5%, while approximately half a percent (0.57%) have coupons under 2.0%. The bottom chart illustrates that loans originated since 2019 accounting for 74% of Ginnie MBS collateral outstanding.

Outstanding Ginnie Mae MBS Balance, by Coupon



Outstanding Ginnie Mae MBS Balance, by Vintage

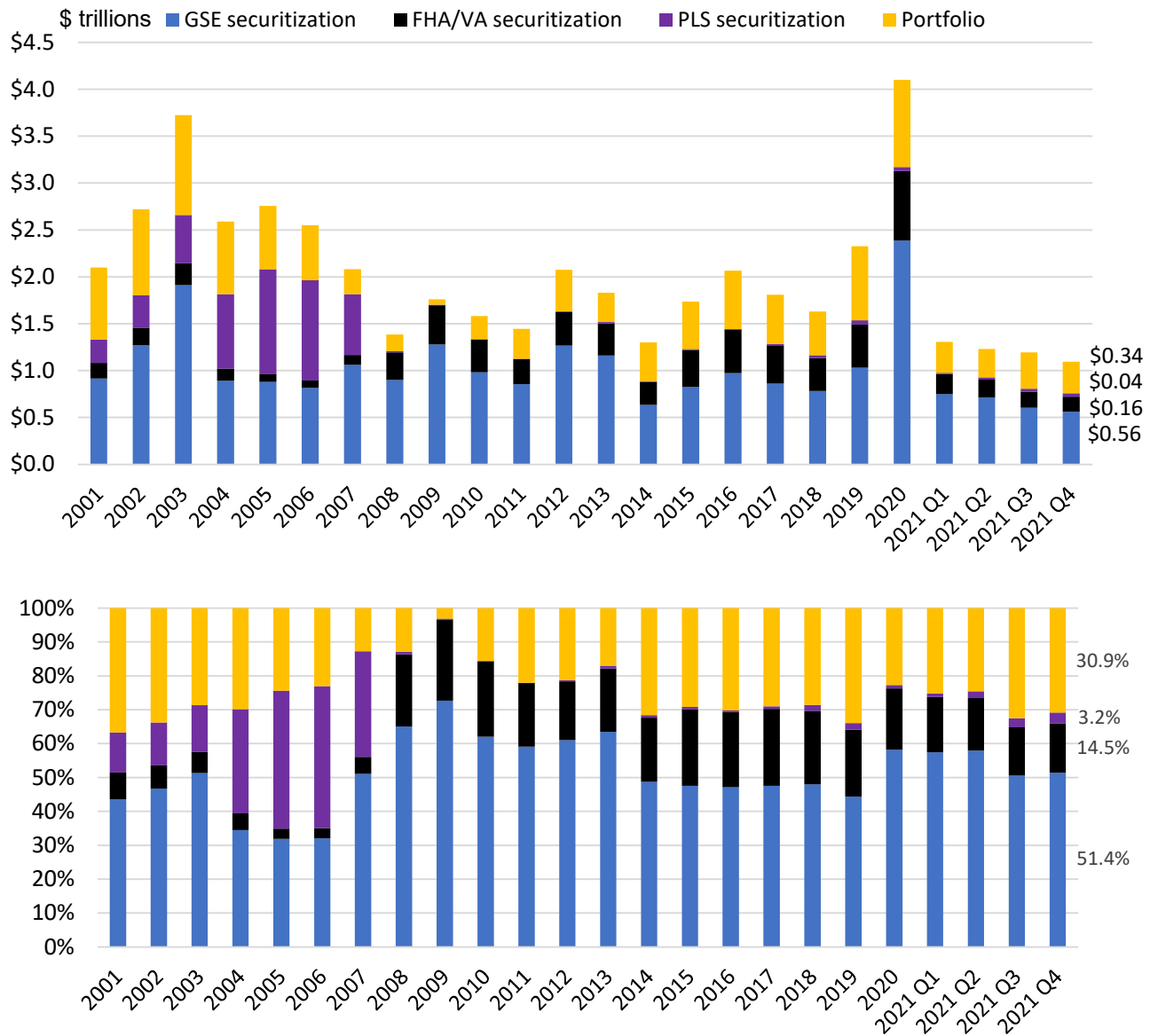


Sources: Ginnie Mae Pool Level MBS Disclosure Files. Note: December 2021 data points reflect the current composition of balances by coupon and vintage; factor data is not applied to prior date balance compositions. Average coupon is weighted by remaining principal balance.

2.8 Origination Volume and Share Over Time

Strong origination volume trends have continued in Q4 2021, with \$3.73 trillion in originations year to date, which outpaces Q1-Q4 2020 issuance by approximately 32%. Ginnie Mae collateral continued to decrease as a percentage of total originations, with Ginnie Mae’s share of total origination declining to under 15% in Q4 2021.

First Lien Origination Volume & Share



Source: Inside Mortgage Finance. Note: Data as of Q4 2021.

3.0 US Agency Market, Single-Family Issuance

MoM, Agency gross MBS issuance decreased just 1% (from November to December). Each of the Agencies had relatively flat gross issuance as compared to November. Ginnie Mae gross Single-Family issuance for 2021 outpaced 2020 by approximately 8.1%, \$838.3 billion to \$775.4 billion.

Agency Gross Issuance (\$ in billions)					
Issuance Year	Fannie Mae	Freddie Mac	GSE Total	Ginnie Mae	Total
2001	\$506.9	\$378.2	\$885.1	\$171.5	\$1,056.6
2002	\$710.0	\$529.0	\$1,238.9	\$169.0	\$1,407.9
2003	\$1,174.4	\$700.5	\$1,874.9	\$213.1	\$2,088.0
2004	\$517.5	\$355.2	\$872.6	\$119.2	\$991.9
2005	\$514.1	\$379.9	\$894.0	\$81.4	\$975.3
2006	\$500.2	\$352.9	\$853.0	\$76.7	\$929.7
2007	\$633.0	\$433.3	\$1,066.2	\$94.9	\$1,161.1
2008	\$562.7	\$348.7	\$911.4	\$267.6	\$1,179.0
2009	\$817.1	\$462.9	\$1,280.0	\$451.3	\$1,731.3
2010	\$626.6	\$377.0	\$1,003.5	\$390.7	\$1,394.3
2011	\$578.2	\$301.2	\$879.3	\$315.3	\$1,194.7
2012	\$847.6	\$441.3	\$1,288.8	\$405.0	\$1,693.8
2013	\$749.9	\$426.7	\$1,176.6	\$393.6	\$1,570.2
2014	\$392.9	\$258.0	\$650.9	\$296.3	\$947.2
2015	\$493.9	\$351.9	\$845.7	\$436.3	\$1,282.0
2016	\$600.5	\$391.1	\$991.6	\$508.2	\$1,499.8
2017	\$531.3	\$345.9	\$877.3	\$455.6	\$1,332.9
2018	\$480.9	\$314.1	\$795.0	\$400.6	\$1,195.6
2019	\$597.4	\$445.2	\$1,042.6	\$508.6	\$1,551.2
2020	\$1,343.4	\$1,064.1	\$2,407.5	\$775.4	\$3,182.9
2021	\$1,388.7	\$1,244.9	\$2,633.7	\$838.3	\$3,471.9

Ginnie Mae Gross Issuance Collateral Composition (\$ in billions)				
Issuance Year	FHA	VA	Other	Total
2001	\$133.8	\$34.7	\$3.1	\$171.5
2002	\$128.6	\$37.9	\$2.5	\$169.0
2003	\$147.9	\$62.7	\$2.5	\$213.1
2004	\$85.0	\$31.8	\$2.5	\$119.2
2005	\$55.7	\$23.5	\$2.1	\$81.4
2006	\$51.2	\$23.2	\$2.3	\$76.7
2007	\$67.7	\$24.2	\$3.0	\$94.9
2008	\$221.7	\$39.0	\$6.9	\$267.6
2009	\$359.9	\$74.6	\$16.8	\$451.3
2010	\$304.9	\$70.6	\$15.3	\$390.7
2011	\$216.1	\$82.3	\$16.9	\$315.3
2012	\$253.4	\$131.3	\$20.3	\$405.0
2013	\$239.2	\$132.2	\$22.2	\$393.6
2014	\$163.9	\$111.4	\$21.0	\$296.3
2015	\$261.5	\$155.6	\$19.2	\$436.3
2016	\$281.8	\$206.5	\$19.9	\$508.2
2017	\$257.6	\$177.8	\$20.2	\$455.6
2018	\$222.6	\$160.8	\$17.2	\$400.6
2019	\$266.9	\$225.7	\$16.0	\$508.6
2020	\$327.0	\$423.5	\$24.9	\$775.4
2021	\$389.7	\$370.9	\$175.7	\$614.5

Agency net issuance in December was approximately \$73.9 billion, which represents a 9.4% MoM decrease in net issuance. Ginnie Mae net issuance has increased above zero for the year 2021, at \$2.7 billion. As noted in Section 2.6, VA production continues to outpace FHA.

Agency Net Issuance (\$ in billions)					
Issuance Year	Fannie Mae	Freddie Mac	GSE	Ginnie Mae	Total
2000	\$92.0	\$67.8	\$159.8	\$29.3	\$189.1
2001	\$216.6	\$151.8	\$368.4	-\$9.9	\$358.5
2002	\$218.9	\$138.3	\$357.2	-\$51.2	\$306.1
2003	\$293.7	\$41.1	\$334.9	-\$77.6	\$257.3
2004	\$32.3	\$50.2	\$82.5	-\$40.1	\$42.4
2005	\$62.5	\$111.7	\$174.2	-\$42.2	\$132.0
2006	\$164.3	\$149.3	\$313.6	\$0.2	\$313.8
2007	\$296.1	\$218.8	\$514.9	\$30.9	\$545.7
2008	\$213.0	\$101.8	\$314.8	\$196.4	\$511.3
2009	\$208.1	\$42.5	\$250.6	\$257.4	\$508.0
2010	-\$156.4	-\$146.8	-\$303.2	\$198.3	-\$105.0
2011	-\$32.6	-\$95.8	-\$128.4	\$149.6	\$21.2
2012	\$32.9	-\$75.3	-\$42.4	\$119.1	\$76.8
2013	\$53.5	\$11.8	\$65.3	\$89.6	\$154.9
2014	-\$4.0	\$30.0	\$26.0	\$61.6	\$87.7
2015	\$3.5	\$65.0	\$68.4	\$97.3	\$165.7
2016	\$60.5	\$66.8	\$127.4	\$126.1	\$253.5
2017	\$83.7	\$77.0	\$160.7	\$132.3	\$293.0
2018	\$81.9	\$67.6	\$149.4	\$112.0	\$261.5
2019	\$87.4	\$110.3	\$197.7	\$95.7	\$293.5
2020	\$289.3	\$343.5	\$632.8	\$19.9	\$652.7
2021	\$384.9	\$498.0	\$882.9	\$2.7	\$885.6

Ginnie Mae Net Issuance Collateral Composition (\$ in billions)				
Issuance Year	FHA	VA	Other	Total
2000	\$29.0	\$0.3	\$0.0	\$29.3
2001	\$0.7	-\$10.6	\$0.0	-\$9.9
2002	-\$22.5	-\$28.7	\$0.0	-\$51.2
2003	-\$56.5	-\$21.1	\$0.0	-\$77.6
2004	-\$45.2	\$5.1	\$0.0	-\$40.1
2005	-\$37.3	-\$12.1	\$7.2	-\$42.2
2006	-\$4.7	\$3.8	\$1.2	\$0.2
2007	\$20.2	\$8.7	\$2.0	\$30.9
2008	\$173.3	\$17.7	\$5.4	\$196.4
2009	\$206.4	\$35.1	\$15.8	\$257.4
2010	\$158.6	\$29.6	\$10.0	\$198.3
2011	\$102.8	\$34.0	\$12.8	\$149.6
2012	\$58.9	\$45.9	\$14.3	\$119.1
2013	\$20.7	\$53.3	\$13.9	\$87.9
2014	-\$4.8	\$53.9	\$12.5	\$61.6
2015	\$22.5	\$66.9	\$7.9	\$97.3
2016	\$45.6	\$73.2	\$6.0	\$124.9
2017	\$50.1	\$76.1	\$5.0	\$131.2
2018	\$49.2	\$61.2	\$3.5	\$113.9
2019	\$35.9	\$58.0	\$1.9	\$95.7
2020	-\$52.5	\$71.0	\$1.3	\$19.9
2021	-\$64.2	\$74.2	-\$7.3	\$2.7



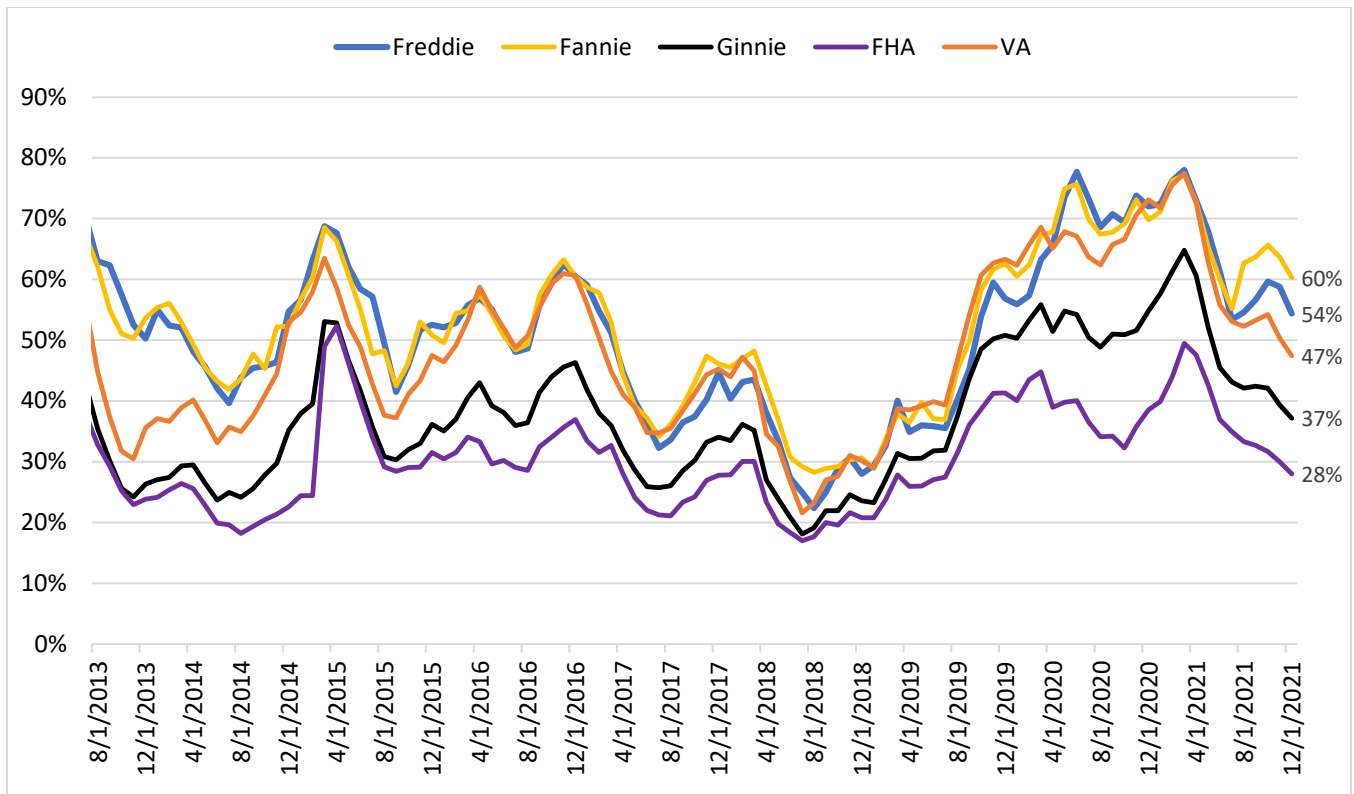
US Agency Market, Issuance

Agency Gross Issuance Amount (in \$ Billions)						Agency Net Issuance Amount (in \$ Billions)				
Month	Fannie Mae	Freddie Mac	Ginnie Mae	GSEs	Total	Fannie Mae	Freddie Mac	Ginnie Mae	GSEs	Total
Aug-17	\$49.1	\$29.3	\$42.8	\$78.4	\$121.1	\$12.0	\$6.7	\$15.4	\$18.7	\$34.1
Sep-17	\$47.3	\$27.9	\$40.2	\$75.3	\$115.5	\$7.7	\$3.8	\$10.6	\$11.4	\$22.0
Oct-17	\$42.9	\$34.6	\$38.4	\$77.6	\$115.9	\$5.5	\$12.5	\$11.0	\$17.9	\$28.9
Nov-17	\$43.5	\$37.2	\$37.8	\$80.7	\$118.5	\$3.9	\$13.6	\$8.3	\$17.5	\$25.8
Dec-17	\$45.3	\$30.0	\$36.2	\$75.3	\$111.5	\$9.2	\$8.1	\$7.0	\$17.4	\$24.4
Jan-18	\$47.4	\$21.4	\$35.4	\$68.8	\$104.2	\$12.1	\$0.2	\$7.7	\$12.3	\$20.0
Feb-18	\$40.3	\$21.5	\$32.0	\$61.8	\$93.8	\$8.3	\$2.2	\$7.1	\$10.5	\$17.6
Mar-18	\$35.6	\$21.3	\$29.1	\$56.9	\$86.0	\$4.9	\$3.0	\$6.3	\$7.9	\$14.1
Apr-18	\$36.3	\$26.2	\$32.8	\$62.5	\$95.3	\$1.7	\$6.0	\$8.8	\$7.7	\$16.5
May-18	\$38.9	\$27.5	\$33.8	\$66.4	\$100.2	\$5.1	\$7.2	\$10.5	\$12.3	\$22.8
Jun-18	\$38.2	\$28.8	\$35.6	\$67.0	\$102.6	\$2.5	\$6.8	\$10.3	\$9.3	\$19.6
Jul-18	\$40.3	\$26.2	\$35.6	\$66.5	\$102.2	\$4.2	\$3.7	\$10.4	\$7.8	\$18.3
Aug-18	\$50.4	\$29.9	\$37.5	\$80.3	\$117.8	\$15.8	\$7.9	\$12.5	\$23.6	\$36.1
Sep-18	\$41.8	\$30.1	\$34.8	\$71.8	\$106.6	\$5.9	\$6.2	\$9.0	\$12.1	\$21.1
Oct-18	\$39.8	\$27.4	\$33.2	\$67.1	\$100.3	\$9.7	\$7.1	\$11.4	\$16.8	\$28.2
Nov-18	\$35.1	\$30.1	\$32.4	\$65.2	\$97.6	\$3.6	\$11.0	\$9.8	\$14.6	\$24.4
Dec-18	\$36.9	\$23.9	\$28.4	\$60.7	\$89.1	\$8.2	\$6.4	\$8.2	\$14.6	\$22.8
Jan-19	\$33.3	\$19.2	\$29.0	\$52.6	\$81.6	\$5.9	\$2.5	\$9.2	\$8.3	\$17.6
Feb-19	\$27.3	\$19.9	\$23.5	\$47.2	\$70.7	\$1.4	\$3.4	\$4.6	\$4.7	\$9.3
Mar-19	\$29.6	\$27.3	\$26.6	\$56.9	\$83.5	\$1.8	\$10.3	\$5.6	\$12.0	\$17.6
Apr-19	\$33.1	\$30.8	\$32.9	\$63.9	\$96.8	\$1.3	\$10.8	\$8.3	\$12.0	\$20.4
May-19	\$44.5	\$34.3	\$38.8	\$78.8	\$117.6	\$6.7	\$9.8	\$9.4	\$16.6	\$26.0
Jun-19	\$44.6	\$34.0	\$43.3	\$78.6	\$121.9	\$1.9	\$5.9	\$9.0	\$7.8	\$16.8
Jul-19	\$51.7	\$36.9	\$45.9	\$88.6	\$134.5	\$10.9	\$10.1	\$11.0	\$21.0	\$32.0
Aug-19	\$71.1	\$50.4	\$51.2	\$121.4	\$172.6	\$20.8	\$17.1	\$8.7	\$37.9	\$46.6
Sep-19	\$67.1	\$43.0	\$52.0	\$110.1	\$162.1	\$14.1	\$7.5	\$6.5	\$21.5	\$28.0
Oct-19	\$65.0	\$46.2	\$58.4	\$111.2	\$169.6	\$7.4	\$7.1	\$11.9	\$14.6	\$26.5
Nov-19	\$68.1	\$50.7	\$54.3	\$118.7	\$173.1	\$5.2	\$8.6	\$4.1	\$13.8	\$18.0
Dec-19	\$62.1	\$52.5	\$52.7	\$114.6	\$167.3	\$10.1	\$17.3	\$7.4	\$27.3	\$34.7
Jan-20	\$61.7	\$51.4	\$56.0	\$113.1	\$169.0	\$9.1	\$16.5	\$8.6	\$25.6	\$34.2
Feb-20	\$56.5	\$39.5	\$51.2	\$96.0	\$147.2	\$9.4	\$7.9	\$7.1	\$17.4	\$24.4
Mar-20	\$69.5	\$41.4	\$53.0	\$110.8	\$163.9	\$17.9	\$6.3	\$8.8	\$24.2	\$33.0
Apr-20	\$101.6	\$76.3	\$61.4	\$177.9	\$239.3	\$30.5	\$27.5	\$10.2	\$58.0	\$68.2
May-20	\$124.3	\$70.6	\$60.8	\$194.9	\$255.7	\$35.2	\$8.2	\$5.7	\$43.4	\$49.1
Jun-20	\$118.9	\$78.1	\$58.5	\$197.0	\$255.4	\$30.0	\$15.9	\$1.3	\$45.9	\$47.2
Jul-20	\$125.0	\$108.1	\$66.5	\$233.1	\$299.5	\$23.4	\$38.0	-\$15.5	\$61.4	\$45.9
Aug-20	\$137.6	\$113.6	\$73.6	\$251.3	\$324.8	\$34.2	\$43.4	-\$4.1	\$77.6	\$73.5
Sep-20	\$122.9	\$102.1	\$72.4	\$225.0	\$297.5	\$16.5	\$29.9	\$1.0	\$46.5	\$47.5
Oct-20	\$142.3	\$124.8	\$72.6	\$267.1	\$339.7	\$28.9	\$48.3	-\$0.3	\$77.2	\$76.9
Nov-20	\$152.4	\$131.5	\$72.6	\$283.9	\$356.5	\$31.4	\$48.4	-\$4.5	\$79.8	\$75.3
Dec-20	\$130.8	\$126.7	\$76.9	\$257.5	\$334.4	\$22.8	\$53.1	\$1.7	\$75.8	\$77.5
Jan-21	\$141.6	\$117.3	\$78.2	\$258.9	\$337.1	\$25.9	\$37.9	-\$6.5	\$63.8	\$57.3
Feb-21	\$118.8	\$115.5	\$72.3	\$234.3	\$306.6	\$16.8	\$44.3	-\$0.9	\$61.1	\$60.2
Mar-21	\$143.9	\$118.9	\$76.9	\$262.8	\$339.7	\$37.6	\$44.0	\$1.0	\$81.6	\$82.6
Apr-21	\$148.0	\$142.3	\$85.6	\$290.3	\$375.9	\$26.2	\$57.0	-\$4.2	\$83.3	\$79.0
May-21	\$132.3	\$91.4	\$71.7	\$223.7	\$295.4	\$64.9	\$38.8	-\$3.1	\$103.7	\$100.6
Jun-21	\$108.5	\$91.2	\$67.7	\$199.7	\$267.4	\$34.0	\$33.7	\$2.6	\$67.8	\$70.4
Jul-21	\$95.4	\$84.6	\$69.0	\$180.0	\$249.0	\$27.6	\$31.9	-\$1.4	\$59.5	\$58.0
Aug-21	\$104.8	\$109.3	\$66.6	\$214.1	\$280.8	\$27.5	\$48.5	\$1.4	\$76.1	\$77.4
Sep-21	\$102.9	\$105.3	\$68.0	\$208.3	\$276.3	\$26.4	\$45.6	\$3.1	\$72.0	\$75.1
Oct-21	\$105.1	\$102.7	\$62.5	\$207.8	\$270.3	\$34.6	\$46.9	\$1.9	\$81.5	\$83.4
Nov-21	\$93.6	\$81.1	\$60.8	\$174.7	\$235.5	\$29.5	\$34.9	\$3.1	\$64.4	\$67.6
Dec-21	\$93.7	\$85.4	\$58.9	\$179.1	\$238.0	\$33.8	\$34.4	\$5.7	\$68.3	\$73.9

Source: Beginning May 2021, data for Gross and Net Issuance was sourced from Fannie Mae, Freddie Mac, and Ginnie Mae loan level disclosure files. Net issuance is defined here as the difference between prior period UPB and current period UPB. Data as of December 2021. Beginning with the October 2021 GMAR, the Fannie Mae and Freddie Mac net issuance data have been updated to reflect the current UPB of the portfolios. July 2021 through September 2021 GMAR net issuance data reflect the UPB at security issuance for Fannie Mae and Freddie Mac.

3.1 Percent Refi at Issuance

The Ginnie Mae refinance share stood at 37% in December, down 6% MoM. The FHA refinance share stood at 28% in December 2021, below the 60% share for Fannie, the 54% refi share for Freddie originations, and the 47% share for the VA. Refinances as a share of all Agency originations decreased 6% to 53% in December.



Sources: eMBS and Urban Institute; Beginning January 2021 data sourced from Ginnie Mae loan level disclosure files and IOPP. Notes: Data as of December 2021.

4.0 High LTV Loans: Ginnie Mae vs. GSEs

The share of high-LTV Agency loans going to borrowers with FICO scores above 750 has increased by approximately 4% between periods November 2019 - January 2020 and November 2021 - January 2022. The share of borrowers with DTIs below 35% has decreased by approximately 2.7% over the same period. The share of high-LTV loans decreased in both the Ginnie Mae guarantee book and the GSE portfolios by approximately 4% and 32%, respectively, from November 2019 - January 2020 and November 2021 - January 2022. Still, Ginnie Mae maintains its key role of expanding credit access to low-to-moderate income borrowers as it continues to dominate high-LTV lending, with 62.34% of its issuances between November 2021 to January 2022 having LTVs of 95 or above, compared to 4.47% for the GSEs.

Share of Loans with LTV \geq 95

	Ginnie Mae	GSE	All
Nov 2019-Jan 2019	64.72%	6.54%	26.47%
Nov 2021 - Jan 2022	62.34%	4.47%	20.79%

Agency Market Share by DTI and FICO for Loans with LTV \geq 95

Nov 2019-Jan 2020

DTI	FICO				NA	All
	<650	650-700	700-750	\geq 750		
<35	4.53%	6.17%	3.40%	5.04%	1.29%	20.42%
35-45	6.72%	8.70%	4.24%	4.29%	0.21%	24.15%
\geq 45	5.36%	8.06%	4.04%	3.44%	0.13%	21.02%
NA	5.51%	7.02%	4.24%	5.91%	11.73%	34.41%
All	22.11%	29.95%	15.91%	18.67%	13.35%	100.00%

Nov 2021-Jan 2022

DTI	FICO				NA	All
	<650	650-700	700-750	\geq 750		
<35	4.40%	6.00%	3.15%	5.20%	1.13%	19.88%
35-45	6.57%	8.58%	3.86%	4.00%	0.23%	23.23%
\geq 45	5.33%	8.07%	3.74%	3.20%	0.15%	20.50%
NA	4.85%	6.38%	4.16%	7.04%	13.95%	36.39%
All	21.25%	29.03%	14.92%	19.44%	15.46%	100.00%

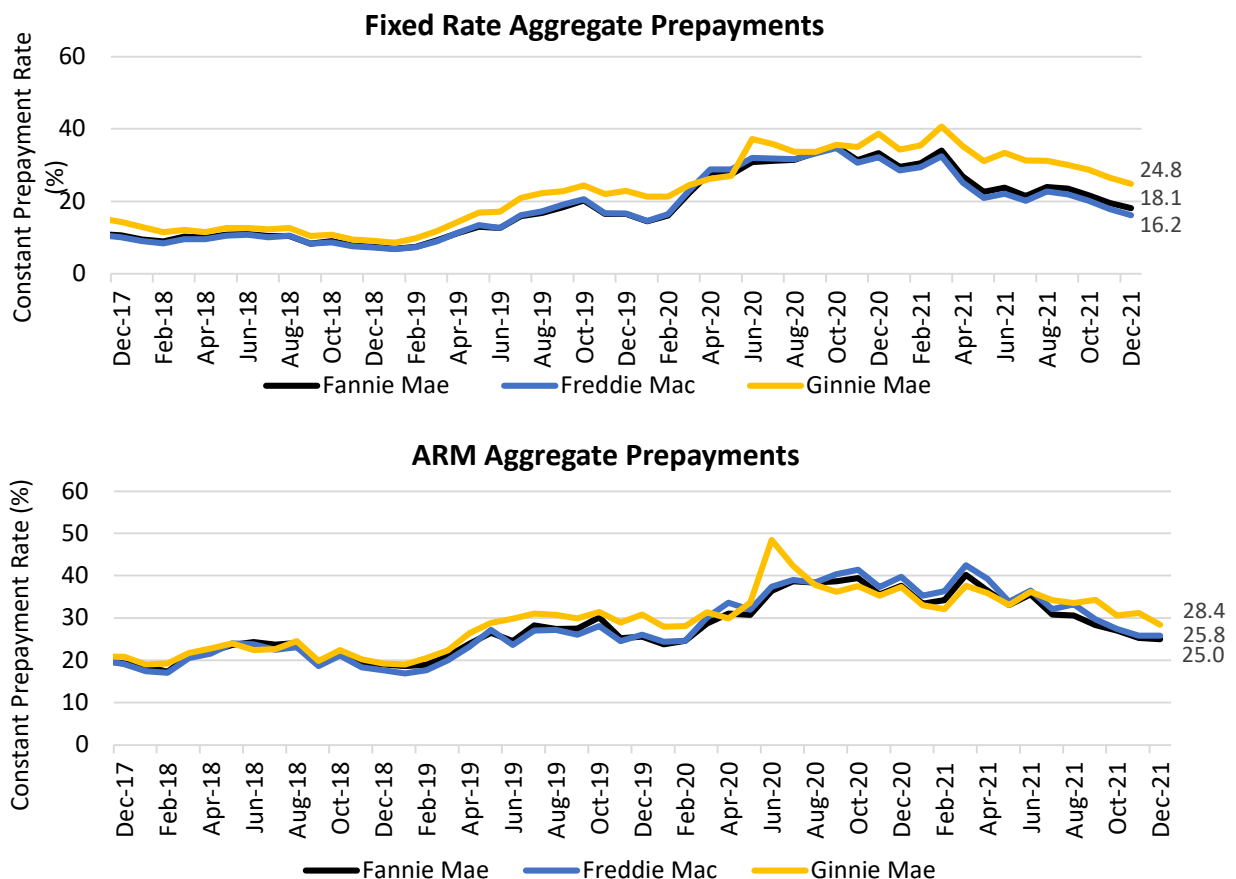
Sources: eMBS, Recursion and Ginnie Mae. Data as of December 2021

5.0 Prepayments

In December 2021, Ginnie Mae fixed rate prepayment speed decreased by 6%, to 24.8 CPR. The slowdown was driven by both voluntary prepayment and buyout rate decreases. In contrast with the overall voluntary speed slowdown, Ginnie Mae II 2% coupon cohort and Ginnie Mae I 2%-2.5% coupon cohorts posted faster voluntary prepayment rates as they move further into the seasoning ramp.⁵

In December 2021, Fannie Mae and Freddie Mac fixed rate prepayment speeds both continued to decrease by 7% and 9%, respectively. ARM MBS prepayments for Ginnie Mae decreased by 9%. Fannie Mae ARM prepayment speeds posted a decline of 1% while Freddie Mac ARM prepayment speeds remained stable MoM.

5.1 Aggregate Prepayments



Source: eMBS; Note: Data as of December 2021.

⁵ Ahlgren R and Ichaso M (2021, December 7). *US Structured Products Trading Desk Strategy | RMBS Strategy | Drop in VPRs Only Post Modest Slowdown, Buyouts Fall*, pp. 1.



Holders of Ginnie Mae Mortgage Servicing Rights

6.0 Holders of Ginnie Mae Mortgage Servicing Rights

This table shows the 30 largest owners of mortgage servicing rights (MSR) by UPB for Ginnie Mae MBS. The top 30 firms collectively own 82.5% of Ginnie Mae MSRs (see Cumulative Share). Twenty-two of these top 30 are non-depository institutions, the remaining 8 are depository institutions. As of January 2022, over half (51.2%) of the Ginnie Mae MSRs are owned by the top six firms.

Top 30 Holders of Ginnie Mae Mortgage Servicing Rights (MSRs), by UPB

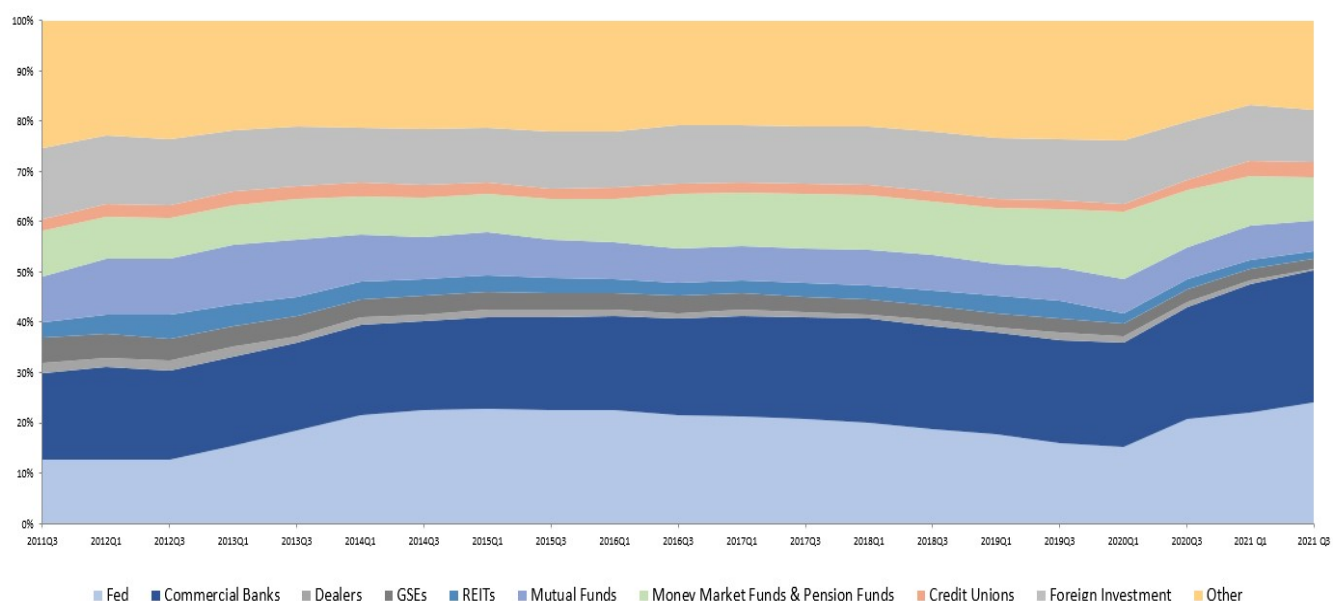
Rank	MSR Holder	UPB (\$ millions)	Share	Cumulative Share
1	Freedom Home Mortgage	\$ 257,950,192,110	13.2%	13.2%
2	PennyMac	\$ 217,828,512,956	11.2%	24.4%
3	Lakeview	\$ 202,103,272,417	10.4%	34.8%
4	Wells Fargo	\$ 125,388,164,216	6.4%	41.2%
5	Rocket Mortgage	\$ 98,806,039,820	5.1%	46.3%
6	Nationstar	\$ 94,669,501,431	4.9%	51.1%
7	Newrez	\$ 59,160,038,561	3.0%	54.2%
8	Caliber Home Loans	\$ 49,156,042,010	2.5%	56.7%
9	US Bank	\$ 47,845,386,500	2.5%	59.1%
10	Carrington Mortgage	\$ 43,440,179,609	2.2%	61.4%
11	United Wholesale Mortgage	\$ 41,998,536,697	2.2%	63.5%
12	USAA Federal Savings Bank	\$ 33,284,700,804	1.7%	65.2%
13	Loan Depot	\$ 32,833,327,073	1.7%	66.9%
14	Mortgage Research Center	\$ 29,750,203,202	1.5%	68.4%
15	Navy Federal Credit	\$ 28,256,606,708	1.4%	69.9%
16	Planet Home Lending	\$ 28,250,152,965	1.4%	71.3%
17	Truist Bank	\$ 22,379,871,676	1.1%	72.5%
18	The Money Source	\$ 21,350,402,455	1.1%	73.6%
19	Guild Mortgage	\$ 20,310,211,215	1.0%	74.6%
20	Home Point Financial	\$ 17,926,353,480	0.9%	75.5%
21	Crosscountry Mortgage	\$ 15,181,485,493	0.8%	76.3%
22	New American Funding	\$ 14,510,150,983	0.7%	77.1%
23	Village Capital	\$ 14,016,932,444	0.7%	77.8%
24	Midfirst Bank	\$ 13,680,019,669	0.7%	78.5%
25	Citizens Bank	\$ 13,067,675,935	0.7%	79.2%
26	Idaho Housing and Finance	\$ 12,600,325,575	0.6%	79.8%
27	CMG Mortgage	\$ 12,201,791,553	0.6%	80.4%
28	Amerihome Mortgage Company	\$ 12,146,193,752	0.6%	81.0%
29	PHH Mortgage Corporation	\$ 11,749,656,423	0.6%	81.7%
30	JP Morgan Chase Bank	\$ 11,714,172,000	0.6%	82.3%

Source: Deloitte and Ginnie Mae. Data as of January 2021.

7.0 MBS Ownership

As of Q3 2021, the largest holders of Agency debt (Agency MBS + Agency notes and bonds) included commercial banks (26%), the Federal Reserve (24%), and foreign investors (11%). The Federal Reserve's share increased to 24% in the third quarter of 2021, the highest it has been since 2015. Despite large Federal Reserve purchases, commercial banks continue to be the largest holders of Agency MBS. Out of their \$2.9 trillion in holdings as of the end of December 2021, \$2.1 trillion was held by the top 25 domestic banks.

Who Owns Total Agency Debt?



Source: Federal Reserve Flow of Funds. Note: The "other" category includes primarily life insurance companies, state and local governments, households and nonprofits. Data as of Q3 2021.

7.1 Commercial Bank Holdings of Agency MBS

	Commercial Bank Holdings (\$Billions)							Week Ending				
	Jan-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	12-Jan	19-Jan	26-Jan	2-Feb
Largest 25 Domestic Banks	1,956.8	2,109.5	2,127.5	2,133.3	2,146.2	2,129.6	2,142.4	2,177.1	2,170.3	2,174.2	2,177.0	2,177.5
Small Domestic Banks	581.1	674.6	689.3	704.4	721.6	730.1	739.1	752.4	749.0	753.0	755.5	757.7
Foreign Related Banks	49.0	47.7	49.1	48.6	48.7	45.8	43.3	42.7	45.1	40.6	41.9	42.2
Total, Seasonally Adjusted	2,586.9	2,831.8	2,865.9	2,886.3	2,916.5	2,905.5	2,924.8	2,972.2	2,964.4	2,967.8	2,974.4	2,977.4

Source: Federal Reserve Bank. Note: Small domestic banks include all domestically chartered commercial banks not included in the top 25. Data as of February 2022.

7.2 Bank and Thrift Residential MBS Holdings

In Q3 2021, MBS holdings at banks and thrifts increased for the twelfth consecutive quarter. The increase was driven by both GSE pass-throughs and Private CMO holdings, with the increase in GSE pass-throughs making the larger contribution. Total bank and thrift MBS holdings increased by 3% from Q2 2021. Out of the \$2.9 trillion in MBS holdings at banks and thrifts as of Q3 2021, \$2.2 trillion were Agency pass-throughs, including \$1.9 trillion of GSE pass-throughs and \$353 billion of Ginnie Mae pass-throughs. In addition, another \$566 billion in bank and thrift holdings were Agency CMOs, while holdings of Private MBS and Private CMOs totaled \$53 billion.

Bank and Thrift Residential MBS Holdings

Year	All Banks & Thrifts (\$ in billions)						All MBS (\$ in billions)	
	Total	GSE PT	GNMA PT	Private MBS	Agency CMO	Private CMO	Banks	Thrifts
2000	683.90	234.01	84.26	21.57	198.04	71.43	470.47	212.65
2001	810.50	270.59	109.53	37.62	236.91	76.18	606.91	203.37
2002	912.36	376.11	101.46	20.08	244.98	89.88	702.44	209.66
2003	982.08	461.72	75.11	19.40	236.81	106.86	775.66	206.45
2004	1,113.89	572.40	49.33	20.55	208.18	160.55	879.75	234.31
2005	1,033.77	566.81	35.92	29.09	190.70	211.25	897.06	242.69
2006	1,124.46	628.52	31.13	42.32	179.21	243.28	983.49	223.42
2007	1,149.10	559.75	31.58	26.26	174.27	357.24	971.42	264.59
2008	1,218.77	638.78	100.36	12.93	207.66	259.04	1,088.00	211.73
2009	1,275.52	629.19	155.00	7.53	271.17	212.64	1,161.67	184.07
2010	1,433.38	600.80	163.13	7.34	397.30	181.61	1,233.28	200.09
2011	1,566.88	627.37	214.81	3.28	478.82	167.70	1,359.24	207.64
2012	1,578.86	707.87	242.54	17.16	469.27	138.67	1,430.63	148.22
2013	1,506.60	705.97	231.93	26.11	432.60	114.15	1,363.65	142.94
2014	1,539.32	733.71	230.45	20.33	449.90	104.94	1,409.84	129.48
2015	1,643.56	823.10	292.30	11.14	445.39	71.63	1,512.67	130.89
2016	1,736.93	930.67	323.46	7.40	419.80	55.60	1,576.07	160.86
2017	1,844.15	1,010.83	367.70	4.63	413.97	47.01	1,672.93	171.22
1Q18	1,809.98	991.57	360.71	3.92	412.41	41.37	1,635.52	174.46
2Q18	1,806.58	976.92	368.88	7.45	414.41	38.92	1,631.65	174.93
3Q18	1,794.39	966.52	373.21	2.42	416.20	36.04	1,618.29	176.10
4Q18	1,814.97	980.56	380.43	2.69	416.59	34.69	1,634.99	179.98
1Q19	1,844.99	1,001.61	383.49	3.06	422.18	34.65	1,673.40	171.59
2Q19	1,907.13	1,037.93	407.97	2.90	421.56	36.76	1,727.65	179.47
3Q19	1,975.78	1,079.82	427.10	4.74	428.69	35.44	1,786.74	189.04
4Q19	1,985.38	1,089.41	426.85	4.62	428.99	35.52	1,796.29	189.09
1Q20	2,107.66	1,173.36	448.34	4.65	443.73	37.57	1,907.02	200.64
2Q20	2,195.19	1,228.87	441.06	5.00	478.11	42.14	1,946.36	248.83
3Q20	2,310.42	1,349.48	415.24	4.43	499.50	41.78	2,040.61	269.81
4Q20	2,520.90	1,537.54	390.66	3.94	548.65	40.10	2,210.22	310.68
1Q21	2,690.92	1,713.78	374.63	4.88	555.35	42.28	2,350.94	339.98
2Q21	2,781.91	1,825.80	352.77	4.77	555.45	43.12	2,431.76	350.15
3Q21	2,858.59	1,886.78	353.12	4.24	565.51	48.95	2,487.32	371.27
Change:								
2Q21-3Q21	3%	3%	0%	-11%	2%	14%	2%	6%
3Q20-3Q21	24%	40%	-15%	-4%	13%	17%	22%	38%

Source: Inside Mortgage Finance. Notes: Data as of Q3 2021.

Bank and Thrift Residential MBS Holdings

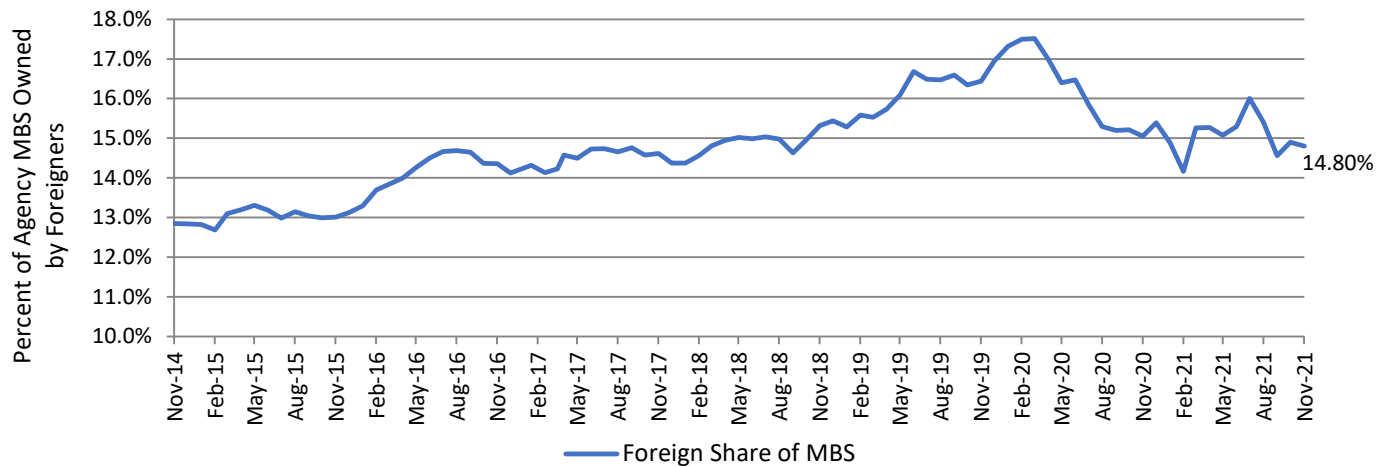
Top Bank & Thrift Residential MBS Investors (\$ in millions)	Institution	Total	GSE PT	GNMA PT	Agency CMO	Non-Agency	Share
1	BANK OF AMERICA CORPORATION	618,309.0	526,541.0	80,915.0	10,635.0	218.0	22%
2	WELLS FARGO & COMPANY	278,377.0	207,309.0	66,166.0	4,520.0	382.0	10%
3	CHARLES SCHWAB	226,430.0	118,676.0	10,350.0	97,404.0	-	8%
4	JPMORGAN CHASE & CO.	166,473.0	94,815.0	58,178.0	125.0	13,355.0	6%
5	Truist Bank	135,894.0	61,801.0	16,031.0	55,216.0	2,846.0	5%
6	U.S. BANCORP	112,695.5	78,394.8	19,927.3	14,373.0	0.4	4%
7	CITIGROUP INC.	96,349.0	89,399.0	2,199.0	3,650.0	1,101.0	3%
8	CAPITAL ONE FINANCIAL CORPORATION	75,144.4	42,773.2	11,089.7	20,769.3	512.2	3%
9	Silicon Valley Bank	66,093.3	55,853.5	7,456.8	2,783.0	-	2%
10	PNC Bank, National Association	56,449.2	48,265.0	5,989.7	953.2	1,241.2	2%
11	BANK OF NEW YORK MELLON CORP	55,558.0	42,485.0	2,105.0	8,322.0	2,646.0	2%
12	USAA Federal Savings Bank	47,396.6	39,988.7	2,382.4	5,025.4	-	2%
13	State Street Bank and Trust Company	40,967.1	16,759.0	4,101.0	17,597.1	2,510.0	1%
14	MORGAN STANLEY	34,094.0	23,254.0	3,964.0	6,876.0	-	1%
15	E*TRADE Bank	32,484.8	25,934.8	4,672.5	1,877.5	-	1%
16	The Huntington National Bank	28,050.4	16,846.6	4,597.7	6,486.7	119.5	1%
17	HSBC Bank USA, National Association	24,992.4	8,560.0	8,449.1	7,981.7	1.6	1%
18	BMO Harris Bank National Association	24,283.5	3,978.7	406.9	19,892.2	5.7	1%
19	KeyBank National Association	24,257.5	5,265.4	333.7	18,658.4	-	1%
20	Ally Bank	23,610.0	16,871.0	888.0	2,463.0	3,388.0	1%
Total Top 20		2,167,908.6	1,523,770.8	310,202.8	305,608.5	28,326.5	76%

Source: Inside Mortgage Finance. Notes: Data as of Q3 2021.

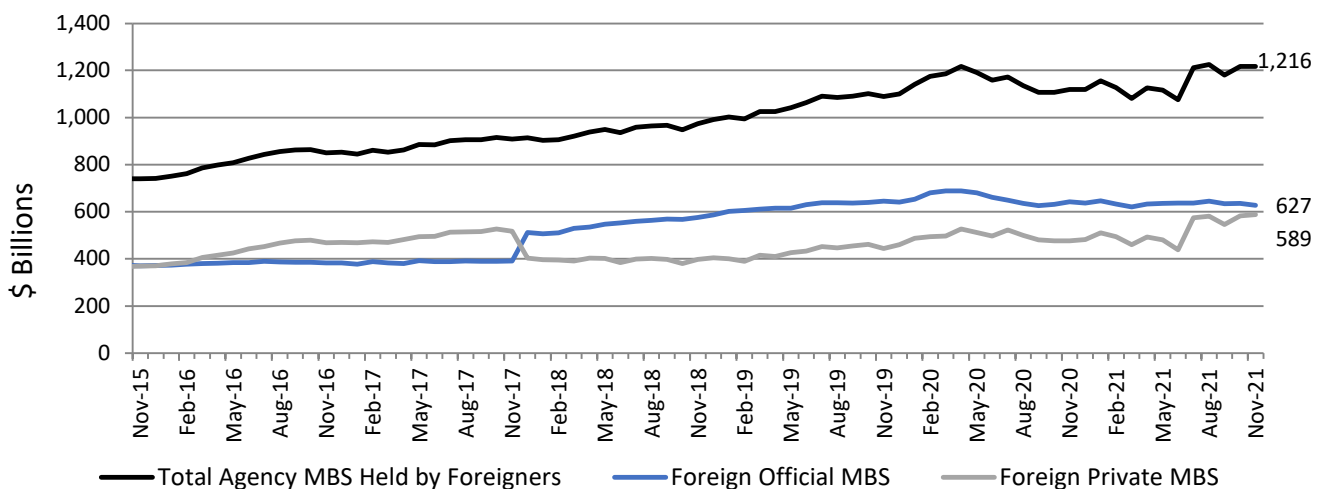
7.3 Foreign Ownership of MBS

For the month of November 2021, foreign ownership of MBS represents \$1.22 trillion in Agency MBS, which includes \$589 billion held by foreign private institutions and \$627 billion held by foreign official institutions. This represents a 9% overall increase in foreign holdings of Agency MBS YoY.

Foreign Share of Agency MBS Market



Monthly Foreign MBS Holdings



Sources: eMBS [Top Chart], Treasury International Capital (TIC) [Bottom Chart] Notes: In December 2017, there was a data correction that moved about \$120 billion from privately held U.S. Agency bonds to officially held U.S. Agency bonds; this resulted in a series break at December 2017 in the split between the portion held by foreign private and the portion held by foreign official. Data as of November 2021.

7.4 Foreign Ownership of Agency Debt and Agency MBS

The largest non-US holders of Agency MBS are in Japan, Taiwan, and China. These three own 70% of all US MBS held by investors outside of the United States. Between June 2020 and June 2021, these top three have decreased their Agency MBS holdings by over \$4.6 billion. Japan has decreased their holdings by \$1.4 billion, Taiwan has decreased their holdings by \$208 million and China has decreased their holdings by \$3.0 billion.

All Agency Debt

Country	Level of Holdings (\$ Millions)				Change in Holdings (\$ Millions)			
	12/1/2020	3/1/2021	6/1/2021	9/1/2021	Q4 2020	Q1 2021	Q2 2021	Q3 2021
Japan	308,033	319,771	311,375	311,892	2,969	11,738	-8,396	517
Taiwan	262,453	253,036	250,081	247,341	-1,817	-9,417	-2,955	-2,740
China	212,317	200,972	217,842	215,102	5,456	-11,345	16,870	-2,740
Luxembourg	36,223	34,371	35,497	33,339	597	-1,852	1,126	-2,158
Ireland	31,064	26,965	21,453	22,617	2,778	-4,099	-5,512	1,164
South Korea	42,628	43,032	43,201	43,208	2,325	404	169	7
Cayman Islands	34,264	37,111	36,027	36,160	-231	2,847	-1,084	133
Bermuda	27,988	26,443	23,806	24,411	-7,763	-1,545	-2,637	605
Netherlands	12,344	13,049	12,544	17,435	1,380	705	-505	4,891
Malaysia	19,147	19,047	19,089	19,445	-661	-100	42	356
Other	197,462	173,905	166,009	268,746	7,287	-23,557	-7,896	102,737
Total	1,183,923	1,147,702	1,136,924	1,239,696	12,320	-36,221	-10,778	102,772

Agency MBS

Country	Level of Holdings (\$ Millions)		
	6/1/2020	6/1/2021	YoY Change in Holdings (\$ Millions)
Japan	306,963	305,580	-1,383
Taiwan	267,700	267,492	-208
China	235,078	232,076	-3,002
Luxembourg	40,207	34,255	-5,952
Ireland	21,091	25,336	4,245
South Korea	28,743	34,313	5,570
Cayman Islands	28,431	29,682	1,251
Bermuda	25,111	24,245	-866
Netherlands	12,739	13,351	612
Malaysia	20,028	19,949	-79
Other	173,716	170,062	-3,654
Total	1,159,809	1,156,341	-3,468

Sources: Treasury International Capital (TIC). Notes: Level of Agency debt Holdings by month data as of Q3 2021. Agency MBS as of June 2021. Revised to include top 10 holders of Agency debt listed as of June 2018.



Disclosure:

“The data provided in the Global Markets Analysis Report (hereinafter, the “report”) should be considered as general information only and is current only as of its specified date, unless otherwise noted. No information contained herein is, and should not be construed to be, investment advice. Nor does any information contained herein constitute an offer to sell, or is a solicitation of an offer to buy, securities.

The information contained herein is based upon information generally available to the public from sources believed to be reliable as of the specified date. The accuracy of the information contained herein is based on the corresponding accuracy of the issuer data as reported to the Government National Mortgage Association (hereinafter, “Ginnie Mae”).

Therefore, if there is insufficient or inaccurate data to support calculations of any specific disclosure information, Ginnie Mae disclaims any and all liability relating to that information, including, without limitation, any express or implied representations or warranties for statements or errors contained in, or omissions from, the report.

The forward-looking statements, and underlying assumptions, speak only as of the date of October 20, 2021. Ginnie Mae expressly disclaims any obligation or undertaking to update or revise any forward-looking statement or underlying assumption contained in the report to reflect any change in its expectations or any change in circumstances upon which such statement is based.

Past performance is not a guarantee of future results. Accordingly, there are no assurances given, nor representations or warranties made, that all estimated returns or projections will be realized, or that actual returns or performance results will not materially differ from those estimated herein.”