

# Global Markets Analysis Report

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

MARCH  
2022





# Global Markets Analysis Report

## Table of Contents

<b>Table of Contents</b> .....	<b>i</b>
<b>Highlights</b> .....	<b>2</b>
<b>1.0 Relative Attractiveness of US Fixed Income and Ginnie Mae MBS</b> .....	<b>5</b>
1.1 Barclays US Aggregate and Global Indices.....	5
1.2 Global 10-Year Treasury Yields.....	6
1.3 Ginnie Mae Yields – USD.....	7
1.4 Ginnie Mae Yield Spreads – Intermediate Credit.....	8
1.5 Global Treasury Yield Per Duration.....	9
1.6 Monthly CMO Demand for Ginnie Mae MBS.....	10
<b>2.0 State of the US Housing Market</b> .....	<b>11</b>
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
<b>3.0 US Agency Market, Single-Family Issuance</b> .....	<b>22</b>
3.1 Percent Refi at Issuance.....	25
<b>4.0 High LTV Loans: Ginnie Mae vs. GSEs</b> .....	<b>26</b>
<b>5.0 Holders of Ginnie Mae Mortgage Servicing Rights</b> .....	<b>27</b>
<b>6.0 Prepayments</b> .....	<b>28</b>
<b>7.0 MBS Ownership</b> .....	<b>29</b>
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

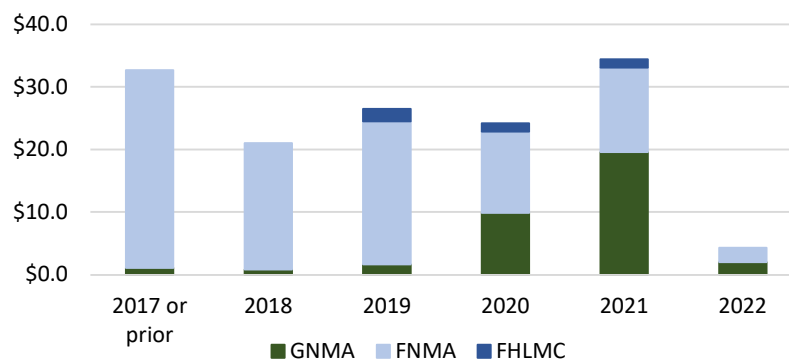
## Highlights

On March 8<sup>th</sup>, 2022, Ginnie Mae published the latest [Multifamily Pool and Loan Monthly Portfolio Disclosure file](#), which, for the second month ever, contained data on Ginnie Mae guaranteed “Green” Multifamily MBS. Last month, the *Global Market Analysis Report* discussed the fundamentals behind the “Green Status” data field that was introduced to the Ginnie Mae Multifamily disclosure files. The data field denotes whether properties collateralizing a Multifamily MBS qualify as green properties under FHA’s Multifamily Green and Energy Efficient Housing program. Within the data field, MBS are classified into one of five indicators: GRA (Green/Affordable); GRB (Green/Broadly Affordable); GRM (Green/Market); NGR (Not Green); or blank (Unknown).

The new “Green Status” field in the Multifamily data disclosure file provides investors with additional transparency that allows for tailored Environmental, Social, and Governance (ESG) investment decisions in the Multifamily MBS market. For instance, the Ginnie Mae data shows that as of February 2022, roughly 28% of Ginnie Mae guaranteed Multifamily unpaid principal balance (UPB) is associated with MBS whose underlying assets are classified as green properties. When broken down by number of pools, there are 1,670 pools that are classified as “Green Market”, “Green Affordable”, or “Green Broadly Affordable”. By analyzing this data, investors can gain an understanding of the options available while pursuing their own ESG investment strategies within the fixed income market.

Agency	2017 or Prior	2018	2019	2020	2021	2022	Total
<b>GNMA<sup>1</sup></b>	\$1.1	\$0.8	\$1.7	\$9.9	\$19.6	\$2.0	<b>\$35.0</b>
<b>FNMA<sup>1</sup></b>	\$31.6	\$20.2	\$22.8	\$13.0	\$13.5	\$2.3	<b>\$103.4</b>
<b>FHLMC<sup>2</sup></b>	\$0.0	\$0.0	\$2.0	\$1.3	\$1.3	\$0.0	<b>\$4.6</b>
<b>Total</b>	<b>\$32.7</b>	<b>\$21.0</b>	<b>\$26.5</b>	<b>\$24.2</b>	<b>\$34.4</b>	<b>\$4.3</b>	<b>\$143.0</b>

**Table 1. Agency Multifamily “Green” MBS Issuance Volume by Year**



**Figure 1. Agency Multifamily “Green” MBS Issuance Volume by Year**

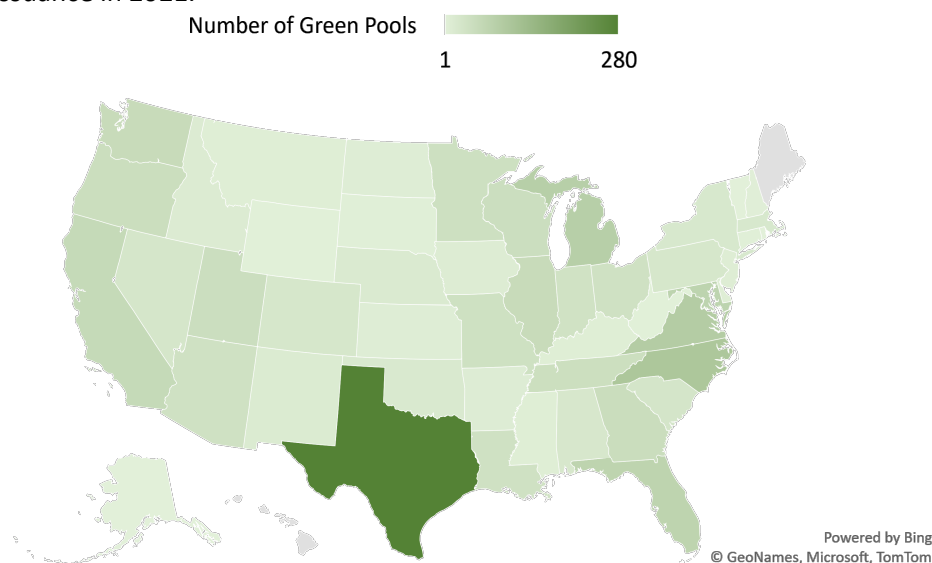
Analysis of this new Ginnie Mae disclosure data, alongside the Government Sponsored Enterprises’ (GSE) data, can provide a broader glimpse into the “Green” Multifamily MBS market. As shown in **Table 1**, above, Agency issuance of “Green” Multifamily MBS has increased each year, with the exception of calendar year 2020. Ginnie Mae’s issuance of “Green” Multifamily MBS has at least doubled almost every year since 2018,

<sup>1</sup> <https://capitalmarkets.fanniemae.com/sustainable-bonds/green-bonds/multifamily-green-mbs>

<sup>2</sup> <https://mf.freddiemac.com/investors/impact-bonds.html>

demonstrating the fastest increase in “Green” Multifamily MBS issuance among the Agencies. In fact, in calendar year 2021, Ginnie Mae’s issuance of “Green” Multifamily MBS surpassed both Fannie Mae and Freddie Mac issuance of “Green” Multifamily MBS combined. **Figure 1**, above, demonstrates Ginnie Mae’s market share progression from less than 5% of total Agency “Green” Multifamily MBS issuance in 2018 to roughly 57% of total Agency “Green” Multifamily MBS issuance in 2021.

Diving into the Ginnie Mae Multifamily Data Disclosure file allows investors to view the “Green Status” data in concert with existing data fields, such as property location. Investors can summarize “Green” pools based on geography to gain an understanding of the geographical disbursement of the properties underlying the Multifamily pools classified as “Green”. The heat map displayed in **Figure 2** shows that the largest concentration of Ginnie Mae guaranteed “Green” Multifamily pools is found in Texas, with 280 pools. In terms of UPB, there are 11 states with over \$1 billion in “Green” Multifamily UPB (in order from largest to smallest: Texas, Virginia, North Carolina, Florida, Maryland, California, Michigan, Washington, Utah, Illinois, and Montana). These 11 states consist of roughly 57% of the Multifamily pools and 61% of the Multifamily UPB that are classified as “Green”. There are two states, Hawaii and Maine, that do not contain Ginnie Mae guaranteed “Green” Multifamily pools.



**Figure 2. Heat Map of Ginnie Mae Guaranteed Multifamily Pools with Green Status**

In addition to understanding the geographical location of the FHA designated green properties that are underlying Ginnie Mae guaranteed Multifamily pools, investors can use the “Green Status” data field to identify the Ginnie Mae approved issuers of “Green” Ginnie Mae Multifamily MBS. Currently, there are 56 Ginnie Mae approved Multifamily Issuers<sup>3</sup> and the Multifamily Portfolio data as of March 8<sup>th</sup>, 2022, indicates that 42 of those issuers have outstanding pools with the underlying properties classified as “Green”. **Table 2**, below, lists the top five issuers of Ginnie Mae guaranteed “Green” Multifamily pools based upon the number of pools outstanding. These issuers make up over 50% of the outstanding “Green” pools and “Green” UPB in Ginnie Mae’s Multifamily portfolio.

<sup>3</sup> [https://www.ginniemae.gov/issuers/issuer\\_tools/Pages/aidcreport.aspx?cat=Multifamily](https://www.ginniemae.gov/issuers/issuer_tools/Pages/aidcreport.aspx?cat=Multifamily)

Issuer	Green Multifamily Pools with UPB	Percentage of pools that are Green	Green Multifamily UPB (\$B)	Percentage of UPB that is Green
Dwight Capital LLC	266	52%	\$5.6	69%
Greystone Funding Company LLC	190	27%	\$4.2	38%
Berkadia Commercial Mortgage, LLC	179	14%	\$4.4	40%
ORIX Real Estate Capital, LLC	170	7%	\$3.4	16%
Walker & Dunlop, LLC	149	14%	\$3.8	39%

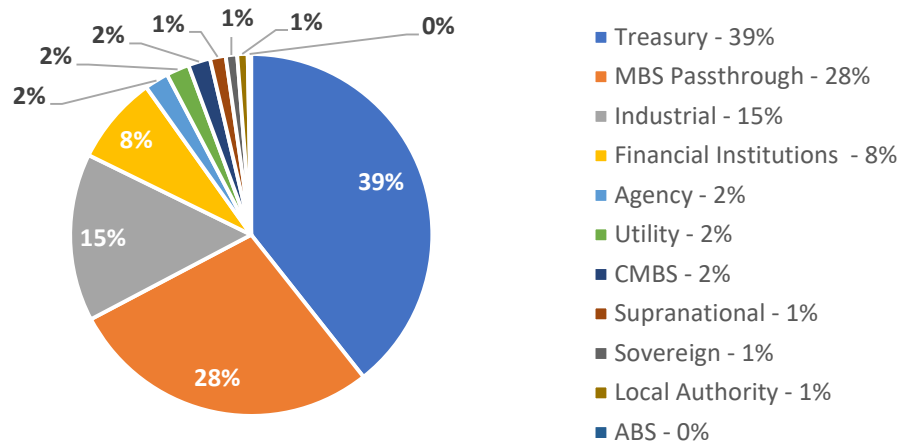
**Table 2. Ginnie Mae "Green" Multifamily Issuance by Issuer**

With the introduction of the new "Green Status" field in Ginnie Mae's Multifamily data disclosure file, Ginnie Mae MBS investors have more information available to evaluate investments that may fall into their overall ESG investment strategy. Ginnie Mae will continue to serve as a market leader for ESG data disclosure in the MBS market by bringing innovative data to global investors.

## 1.0 Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

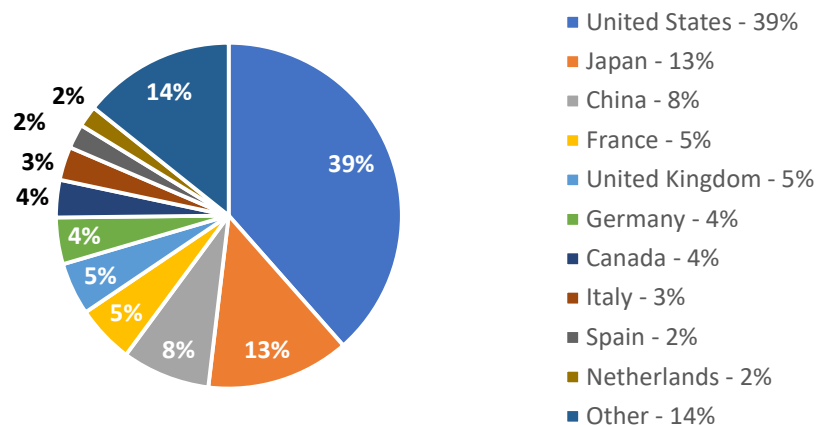
### 1.1 Barclays US Aggregate and Global Indices

**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. Canada's share of fixed income increased by 1% from the previous month. All of the other country shares remained stable when compared to the previous month.

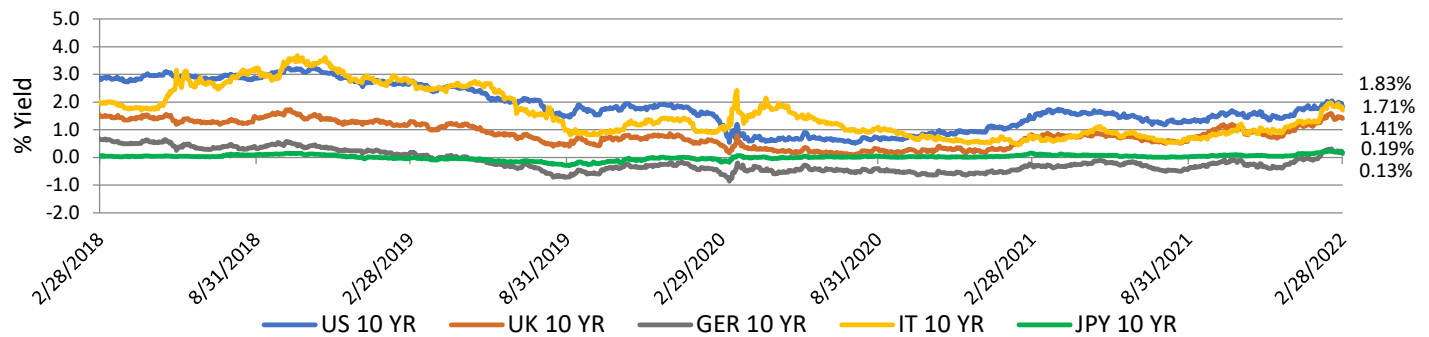
*Sources: Bloomberg. Note: Data as of February 2022. Figures in charts may not add to 100% due to rounding.*

## 1.2 Global 10-Year Treasury Yields

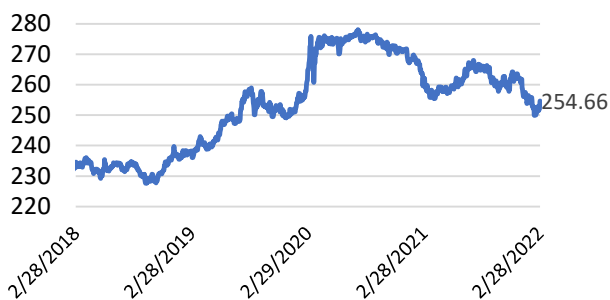
The US 10-year Treasury yield moved to 1.83% at month end February 2022, a MoM increase of 5 bps. US Treasury yields remain the highest of all the government treasury yields depicted in the figure below.

- The yield on the UK 10-year government notes increased to 1.41% at month-end February, a MoM increase of 11 bps.
- The yield on the German 10-year note increased to 0.13% at month-end February, a MoM increase of 12 bps.
- The yield on the Italian 10-year note increased to 1.71% at month-end February, a MoM increase of 41 bps.
- The yield on the Japanese 10-year government notes increased to 0.19% at month-end February, a MoM increase of 1 bp.
- The hedged yield for the 10-year Treasury JPY decreased to 2.55% at month-end February, a MoM decrease of 1 bp.
- The hedged yield for the 10-year Treasury EUR decreased to 1.45% at month-end February, a MoM decrease of 1 bp.

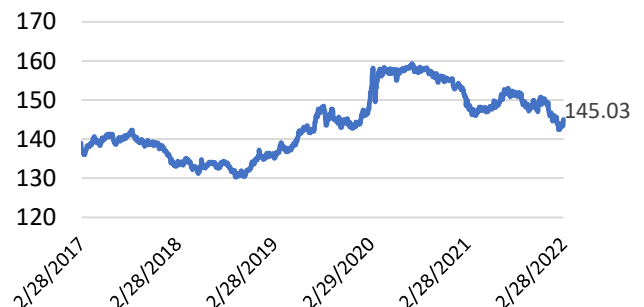
Global 10-Year Treasury Yields



7–10yr Total Return Hedged Index, JPY



7–10yr Total Return Hedged Index, EUR



Sources: Bloomberg. Note: Data as of February 2022



# Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

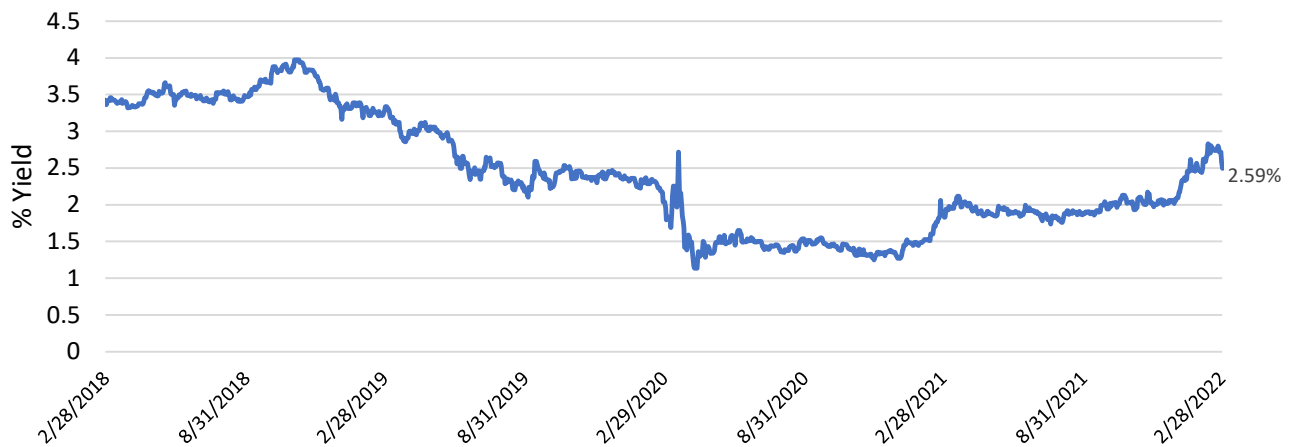
## 1.3 Ginnie Mae Yields – USD

Ginnie Mae fixed rate MBS yields increased MoM in February 2022. Ginnie Mae II yields were at 2.52% at month-end February, up 20 bps MoM. Ginnie Mae I yields were at 2.59%, up 13 bps MoM. At month-end February, Ginnie Mae II SF yields were 69 bps higher than the US 10-year Treasury yield, an increase in spread of 15 bps MoM. The yields on the Ginnie Mae I SF were 76 bps higher than the US 10-year Treasury yield at month-end February, an increase in spread of 9 bps MoM.

Ginnie Mae II SF Yield, USD



Ginnie Mae I SF Yield, USD



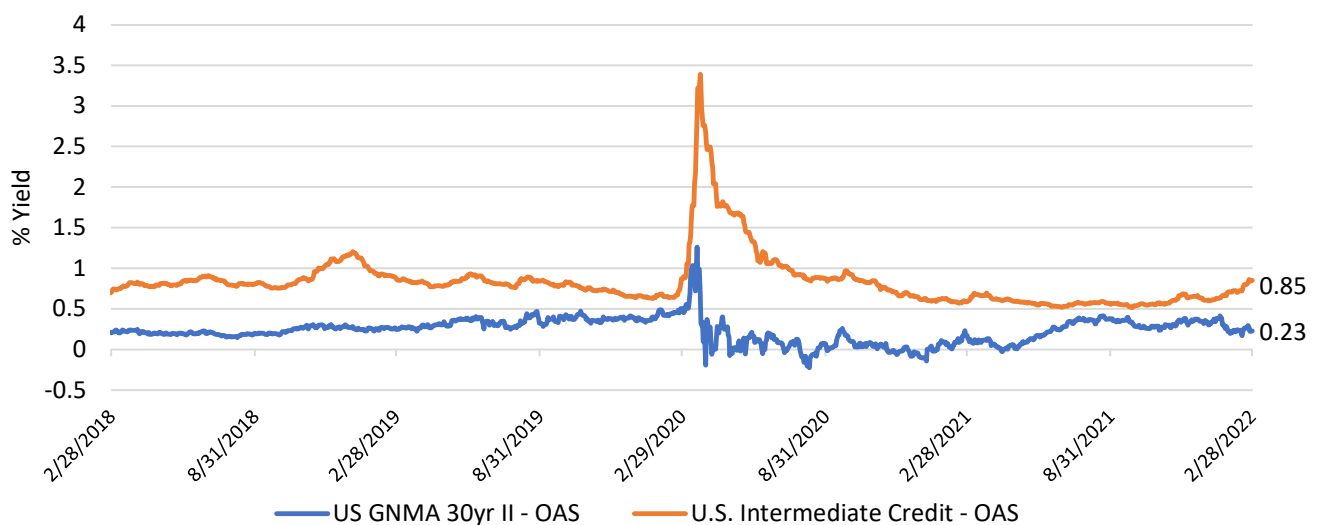
Sources: Bloomberg. Note: Data as of February 2022



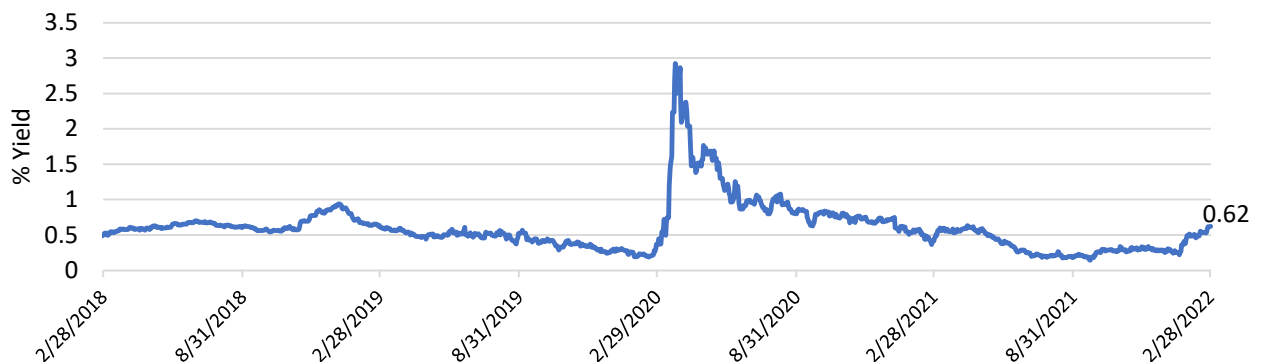
## 1.4 Ginnie Mae Yield Spreads – Intermediate Credit

The yield differential between US Intermediate Credit and GNMA II 30-year OAS increased 11 bps at month-end February MoM, ending at 0.62%. The Ginnie Mae II 30-year OAS increased 3 bps MoM. The US Intermediate credit OAS has increased 14 bps MoM.

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



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



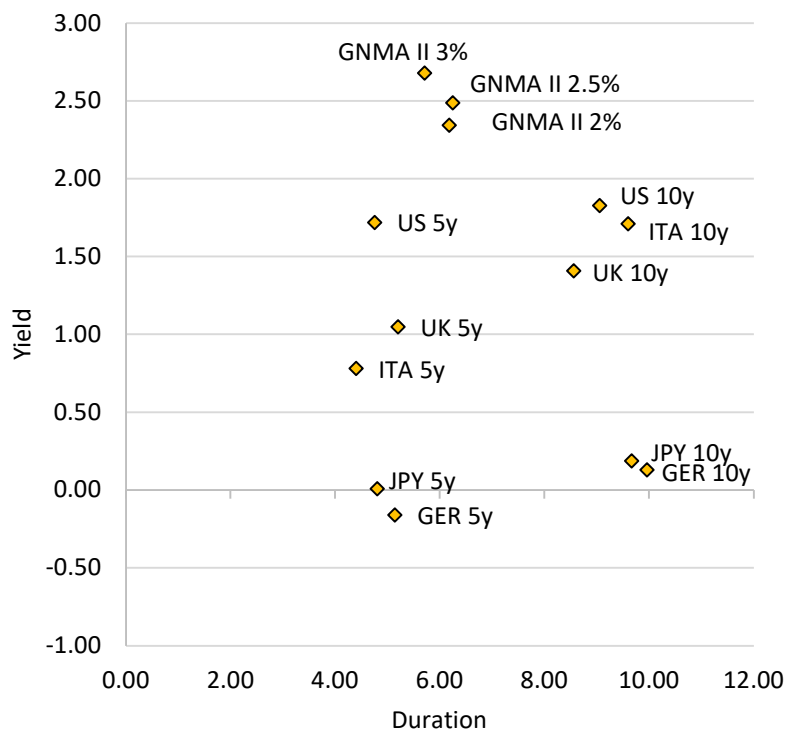
Sources: Bloomberg. Note: Data as of February 2022.

# Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

## 1.5 Global Treasury Yield Per Duration

GNMA MBS continue to offer a higher yield in comparison to other government fixed income securities of various tenors with similar or longer duration. Prepayment risk is a feature of MBS. In February, the GNMA II 2.5% securities duration increased MoM by 0.51 units and yield increased MoM by 12 bps. In February, the GNMA II 3% securities duration increased MoM by 1.61 units and yield increased MoM by 30 bps.

**Yield vs. Duration**



Security	Duration	Yield
US 5y	4.76	1.72
US 10y	9.05	1.83
JPY 5y	4.81	0.01
JPY 10y	9.67	0.19
GER 5y	5.14	-0.16
GER 10y	9.96	0.13
ITA 5y	4.40	0.78
ITA 10y	9.60	1.71
UK 5y	5.20	1.05
UK 10y	8.56	1.41
GNMA II 2%	6.18	2.34
GNMA II 2.5%	6.25	2.49
GNMA II 3%	5.71	2.68

Sources: Bloomberg. Note: Yield and modified duration for GNMA II securities is from illustrative TBA using base prepayment assumptions and an assumed settlement of 3/20. All other data is as of February 2022. Yields are in base currency of security and unhedged.

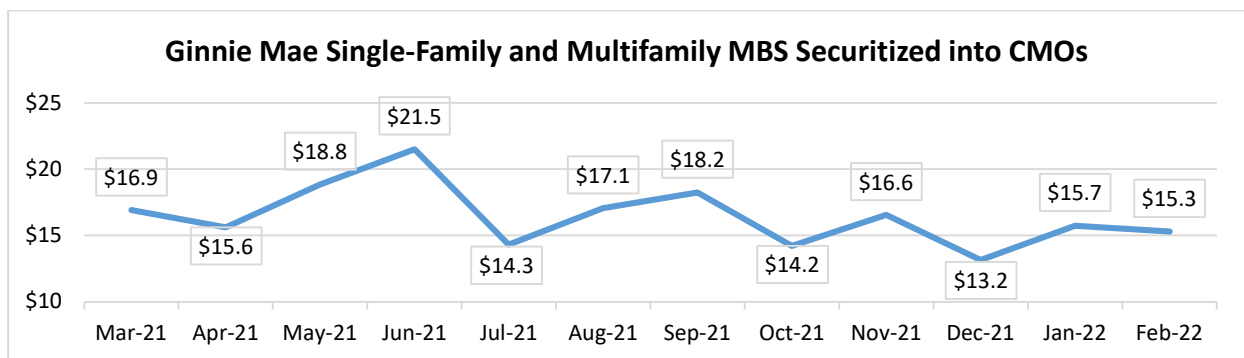


# Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

## 1.6 Monthly CMO Demand for Ginnie Mae MBS

In February 2022, \$15.3 billion of Ginnie Mae MBS were securitized into Collateralized Mortgage Obligations (CMOs) as underlying collateral. Of that \$15.3 billion, approximately \$3.8 billion were Multifamily MBS, all having coupons between 2% and 3%. \$11.4 billion were Single-Family MBS with over 80-percent of the Single-Family MBS having coupons between 2.5% and 3.5%.

Through the first two months of calendar year 2022 approximately \$31 billion of Ginnie Mae Single-Family and Multifamily MBS were securitized into Ginnie Mae CMO transactions. This represents a roughly 6% increase over the same period in calendar year 2021 and a 75% increase over the same period in calendar year 2020.



### February 2022 CMO Collateral Coupon Distribution

Net Coupon (%)	Approx. Ginnie Mae MBS amount securitized into CMO Deals (\$MM) <sup>4</sup>	% Breakdown of CMO Collateral by coupon <sup>1</sup>
<b>Multifamily</b>		
2.01-2.50	1,454.2	38%
2.51-3.00	2,377.0	62%
<b>Subtotal</b>	<b>3,831.2</b>	<b>100%</b>
<b>Single Family</b>		
<2.00	285.3	2%
2.01-2.50	591.9	5%
2.51-3.00	6,617.7	58%
3.01-3.50	2,949.2	26%
3.51-4.00	562.6	5%
4.01-4.50	107.9	1%
4.51-5.00	183.1	2%
5.01-5.50	84.0	1%
5.51-6.00	49.3	0%
<b>Subtotal</b>	<b>11,431.0</b>	<b>100%</b>
<b>Grand Total</b>	<b>15,262.2</b>	

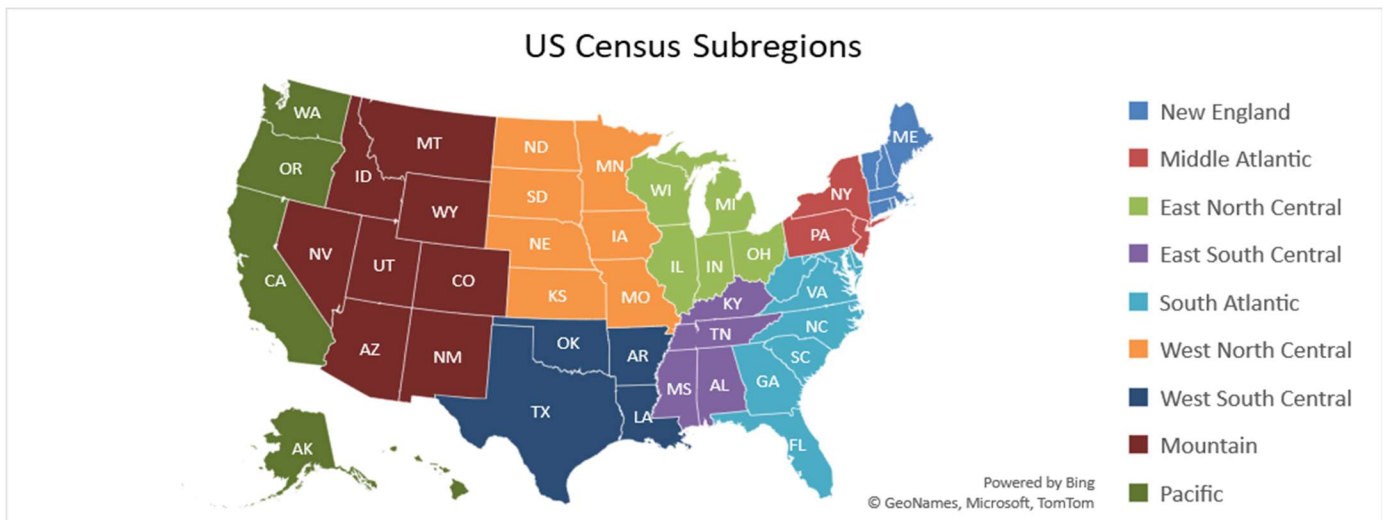
<sup>4</sup>Totals may not sum due to rounding.

## 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 18.4% between March 2020 to December 2021. March 2020 to November 2021 national HPI CAGR was approximately 100 bps lower, at 17.4%, suggesting a continued trend in November of accelerating HPI increases. Over that period, the Mountain region has had the greatest home price appreciation (23.0% CAGR), while in the West North Central region, increases in home values have been slowest (15.4%).

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	18.5%	15.8%	15.8%	19.0%	20.5%	15.4%	17.5%	23.0%	20.2%	18.4%
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 November 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 51.4% 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 92%. As shown in the regional HPI table above, much of this asset appreciation has taken place during the pandemic.

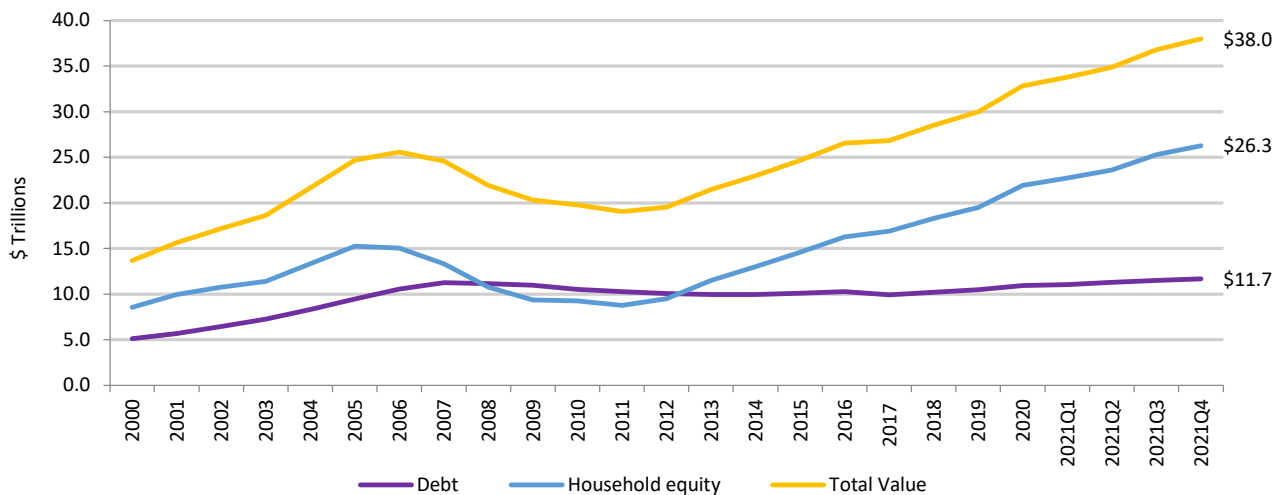
State	2000 to Peak	Peak to Trough	Trough to Current	YOY	Current HPI % Above Peak
<b>National</b>	59.6%	-21.1%	92.0%	14.4%	51.4%
AK	66.9%	-5.2%	42.3%	10.6%	35.0%
AL	41.8%	-15.0%	68.0%	15.7%	42.8%
AR	39.8%	-11.0%	60.4%	16.0%	42.8%
AZ	110.1%	-49.5%	186.6%	24.6%	44.8%
CA	145.0%	-47.0%	142.0%	19.0%	28.2%
CO	32.4%	-10.3%	144.4%	18.2%	119.2%
CT	72.7%	-19.6%	38.5%	17.0%	11.3%
DC	162.4%	-11.7%	113.4%	10.1%	88.5%
DE	88.6%	-23.5%	53.9%	15.3%	17.7%
FL	130.0%	-46.5%	152.2%	21.0%	34.9%
GA	36.0%	-27.1%	118.4%	18.0%	59.2%
HI	138.7%	-27.0%	101.3%	14.8%	46.9%
IA	28.0%	-5.4%	56.2%	11.5%	47.7%
ID	73.2%	-32.2%	206.7%	30.9%	107.9%
IL	49.9%	-23.8%	48.2%	12.3%	13.0%
IN	19.1%	-8.7%	79.6%	15.1%	64.0%
KS	31.0%	-7.8%	68.2%	14.2%	55.2%
KY	29.0%	-5.4%	66.7%	14.4%	57.6%
LA	51.6%	-6.7%	46.6%	9.6%	36.8%
MA	69.8%	-18.2%	79.0%	16.1%	46.4%
MD	126.4%	-26.5%	53.3%	12.7%	12.7%
ME	72.2%	-12.4%	79.9%	20.7%	57.5%
MI	18.4%	-31.5%	113.8%	15.6%	46.4%
MN	52.5%	-23.0%	85.7%	13.4%	43.0%
MO	39.2%	-15.0%	76.8%	15.3%	50.3%
MS	38.6%	-12.8%	47.4%	12.8%	28.6%
MT	80.0%	-13.6%	102.5%	22.5%	75.0%
NC	39.8%	-14.1%	88.4%	19.2%	61.7%
ND	51.3%	-0.9%	72.2%	9.4%	70.8%
NE	24.3%	-5.9%	79.8%	14.8%	69.2%
NH	72.7%	-21.9%	84.4%	19.4%	44.0%
NJ	102.3%	-22.7%	52.3%	16.5%	17.8%
NM	66.7%	-17.9%	58.2%	14.8%	29.8%
NV	117.4%	-59.3%	211.5%	20.1%	26.9%
NY	75.7%	-10.5%	58.3%	14.9%	41.6%
OH	19.5%	-16.6%	79.8%	14.8%	50.1%
OK	36.9%	-4.6%	63.1%	14.2%	55.5%
OR	85.6%	-28.6%	133.5%	18.3%	66.7%
PA	68.8%	-10.9%	59.3%	14.2%	41.9%
RI	108.0%	-28.0%	82.1%	18.9%	31.1%
SC	40.5%	-16.0%	89.6%	17.4%	59.2%
SD	40.2%	-2.4%	76.8%	17.7%	72.6%
TN	38.4%	-12.6%	105.6%	20.5%	79.6%
TX	35.8%	-3.0%	101.2%	17.1%	95.1%
UT	65.1%	-26.1%	158.9%	26.3%	91.4%
VA	95.1%	-18.8%	61.6%	14.3%	31.3%
VT	77.9%	-10.3%	58.7%	19.2%	42.4%
WA	83.4%	-27.3%	149.2%	19.9%	81.2%
WI	38.6%	-14.2%	72.0%	14.2%	47.5%
WV	38.7%	-5.7%	42.5%	12.8%	34.4%
WY	85.1%	-9.7%	55.8%	13.4%	40.8%

Source: FHFA Notes: HPI State-level data is provided quarterly by FHFA and presented here as of December 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.

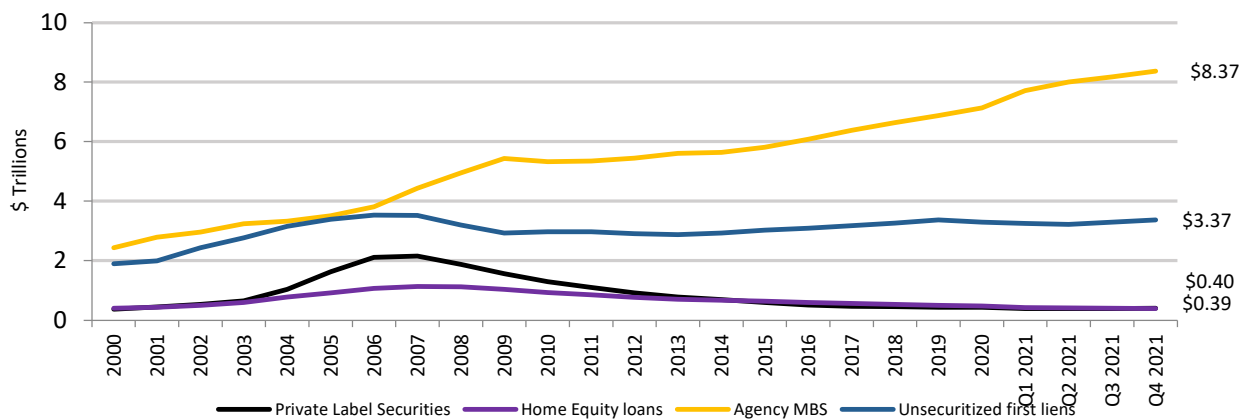
## 2.2 Size and Value of the US Housing Market

The total value of the single-family housing market reached \$38 trillion in Q3 2021. The value of household equity has continued to trend upward into Q4 2021. As mentioned in Section 2.1 above, the 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 100% from its trough in 2011. Over that same period, mortgage debt outstanding has increased just 14%, approximately seven times less rapidly. From Q3 2021 to Q4 2021 mortgage debt outstanding has increased from \$11.5 trillion to \$11.7. Agency SF MBS account for a growing percentage of the total mortgage debt outstanding, up to 67% of total mortgage debt from just 52% in 2011.

### Value of the US Housing Market



### Size of the US Residential Mortgage Market

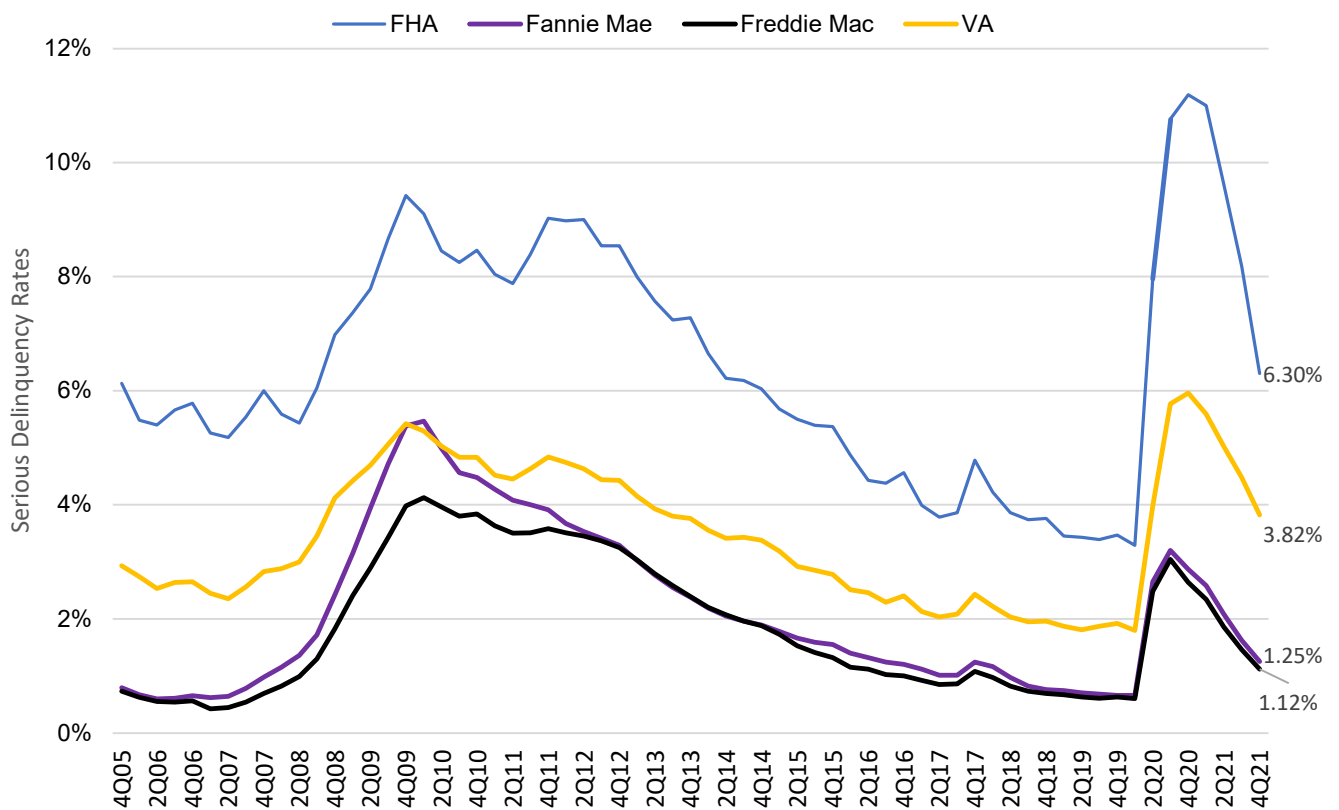


Source: Federal Reserve Flow of Funds Data. Notes: Data as of Q4 2021.

## 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

157,109 Ginnie Mae loans were in forbearance as of the end of January 2022. This represents less than a 1% decrease MoM, significantly lower than the 11% and 6% MoM paces observed in November and December respectively. 9,134 of loans in forbearance were removed from MBS pools and 147,975 loans in forbearance still actively remain in pools. Most liquidated loans (6,657) were FHA and within that subset, 4,406 of those loans were originated by nonbanks. Approximately 96% of the loans that were in forbearance at the end of January were due to COVID-19 circumstances.

All Loans in Forbearance – January 2022						
	FICO Score*	Note Rate*	Current Principal Balance Median	First Time Homebuyer Share (%)	Purchase Share (%)	Loan Count
<b>Ginnie</b>	658	3.4	\$178,347.63	77.1	69.3	157,109
<b>Bank</b>	671	3.9	\$126,969.77	77.2	80.1	21,218
<b>Nonbank</b>	656	3.4	\$186,578.88	77.0	68.3	135,891
<b>FHA</b>	653	3.5	\$173,004.72	79.8	75.5	110,340
<b>Bank</b>	666	4.0	\$118,431.10	80.5	83.3	15,768
<b>Nonbank</b>	652	3.5	\$182,352.59	79.7	74.8	94,572
<b>VA</b>	668	3.1	\$229,796.89	64.1	48.0	33,238
<b>Bank</b>	683	3.5	\$177,520.74	66.1	69.8	4,057
<b>Nonbank</b>	667	3.1	\$236,429.22	63.8	45.7	29,181
Loans in Forbearance and Removed from Pools – January 2022						
	FICO Score*	Note Rate*	Current Principal Balance Median	First Time Homebuyer Share (%)	Purchase Share (%)	Loan Count
<b>Ginnie</b>	653	3.9	\$144,721.85	77.6	69.2	9,134
<b>Bank</b>	672	4.0	\$117,697.49	78.0	78.6	2,908
<b>Nonbank</b>	648	3.8	\$158,946.78	77.5	66.6	6,226
<b>FHA</b>	651	4.0	\$137,941.61	80.2	75.5	6,657
<b>Bank</b>	670	4.1	\$113,128.81	80.3	81.4	2,251
<b>Nonbank</b>	646	4.0	\$152,076.17	80.1	73.6	4,406
<b>VA</b>	659	3.4	\$199,128.74	66.1	46.4	1,722
<b>Bank</b>	679	3.7	\$151,467.11	64.9	62.2	453
<b>Nonbank</b>	654	3.4	\$220,903.39	66.4	43.2	1,269
Loans in Forbearance that Remain in Pools – January 2022						
	FICO Score*	Note Rate*	Current Principal Balance Median	First Time Homebuyer Share (%)	Purchase Share (%)	Loan Count
<b>Ginnie</b>	658	3.4	\$180,433.51	77.0	69.3	147,975
<b>Bank</b>	671	3.8	\$128,776.74	77.1	80.3	18,310
<b>Nonbank</b>	657	3.4	\$187,906.69	77.0	68.3	129,665
<b>FHA</b>	653	3.5	\$175,468.67	79.8	75.5	103,683
<b>Bank</b>	665	4.0	\$119,439.76	80.5	83.5	13,517
<b>Nonbank</b>	652	3.5	\$183,862.09	79.7	74.8	90,166
<b>VA</b>	669	3.1	\$231,361.35	64.0	48.1	31,516
<b>Bank</b>	683	3.5	\$181,226.99	66.2	70.5	3,604
<b>Nonbank</b>	667	3.1	\$237,187.57	63.7	45.8	27,912

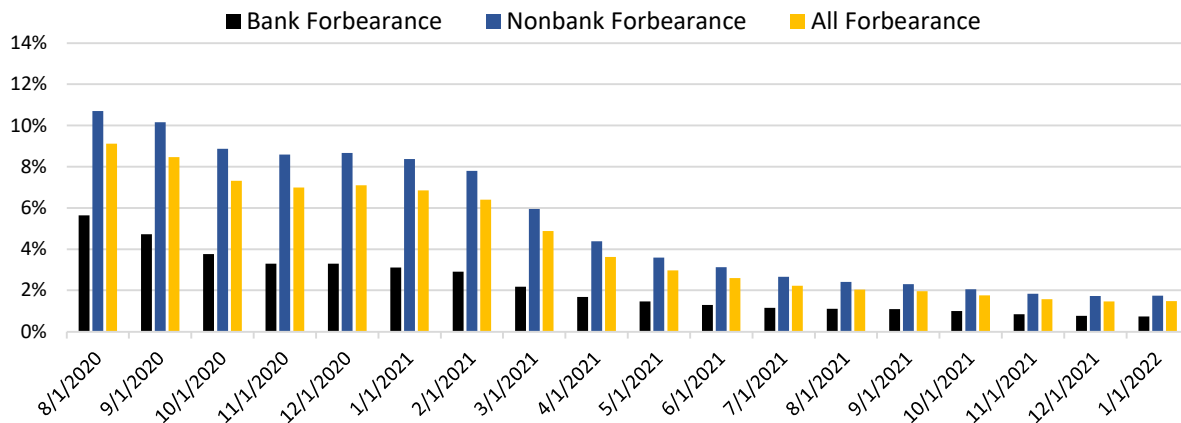
Sources: Ginnie Mae loan level MBS disclosure and forbearance file and Ginnie Mae Issuer Operational Performance Profile (IOPP) -Peer Group Listings.

Notes: Data as of January 2022; \*Averages weighted by remaining principal balance of the loans.



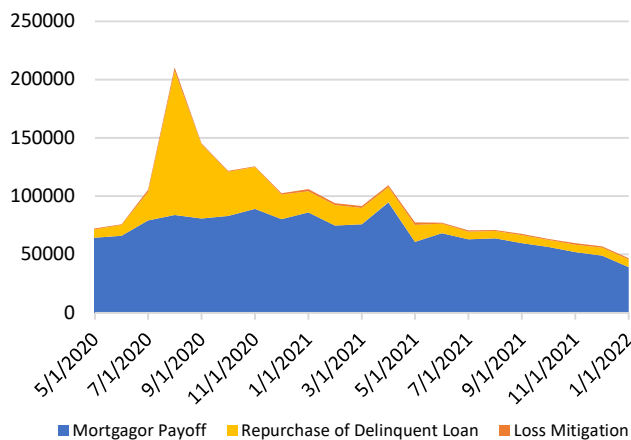
The current share of Ginnie Mae loans in forbearance stands at 1.47% as of the end of January, the same share observed as of the end of December. These stable forbearance share numbers go against the trend of decreasing forbearance share observed in prior months. The forbearance rate remains significantly higher than the forbearance rate prevailing in the period prior to the pandemic between Jan 2019 and February 2020 (approximately 0.1%), and the rate of convergence to pre-pandemic rates has all but halted in January.

## Share of Ginnie Mae Loans in Forbearance

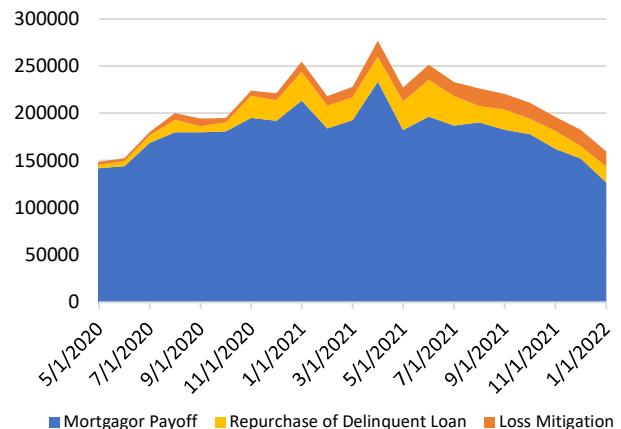


Sources: eMBS and Urban Institute. Data beginning May 2021 sourced from Ginnie Mae forbearance disclosure files and IOPP Peer Group list. Notes: Data as of January 2022.

## Number of Loans Removed from Pools: Bank



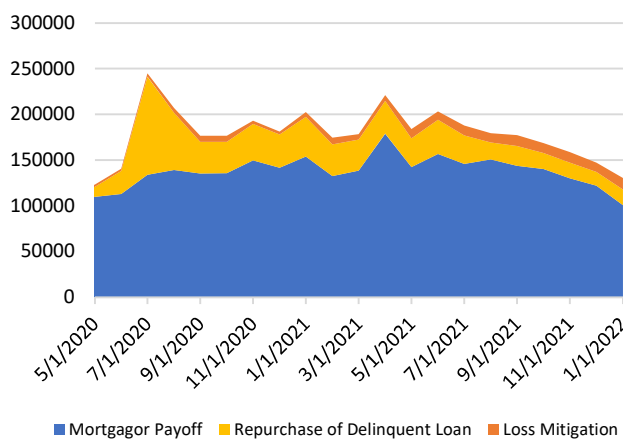
## Number of Loans Removed from Pools: Nonbank



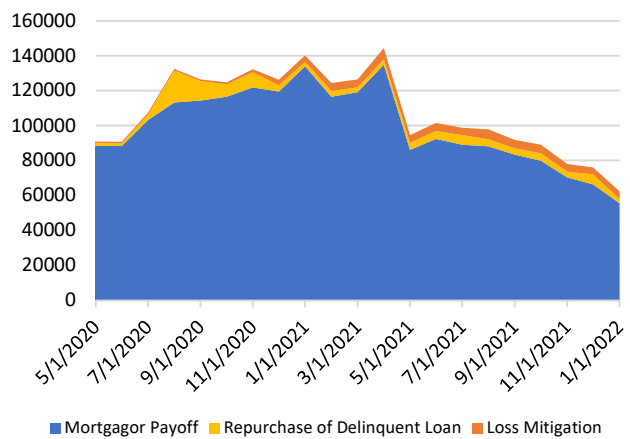
Sources: eMBS and Urban Institute. Data beginning June 2021 sourced from Ginnie Mae Loan Level MBS disclosure files and IOPP Peer Group list. Notes: Data as of January 2022.

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.

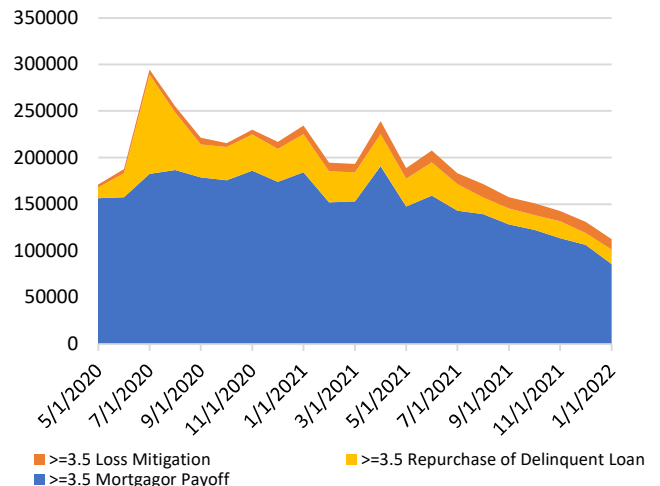
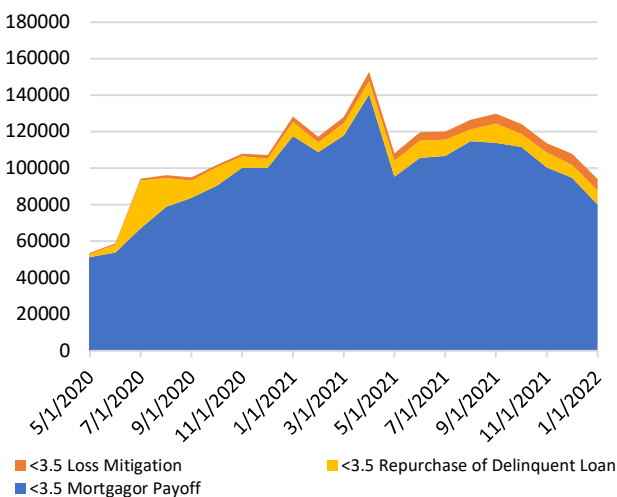
**Number of Loans Removed from Pools: FHA**



**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 January 2022.

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

## 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%).

National	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)
	24%	2,831,932	273.88	293.34	25%	10,540,689	189.75	220.09
AK	51%	10,161	332.06	287.55	47%	36,973	255.29	219.08
AL	37%	57,900	216.10	227.81	40%	231,539	148.23	173.52
AR	35%	30,674	184.35	207.35	39%	135,342	125.70	156.63
AZ	23%	92,289	282.00	284.30	24%	271,811	203.27	217.24
CA	17%	232,751	427.93	415.73	16%	668,928	313.66	318.91
CO	24%	76,203	365.92	346.08	23%	213,055	275.53	270.73
CT	23%	25,859	262.55	276.10	25%	103,378	196.15	208.02
DC	14%	2,570	548.38	455.04	12%	8,572	368.18	351.95
DE	29%	13,912	262.48	269.87	31%	50,165	197.51	207.03
FL	30%	246,055	272.32	269.11	32%	830,054	198.87	202.62
GA	31%	133,016	240.81	265.32	34%	489,207	168.54	199.34
HI	36%	12,024	592.60	468.83	31%	32,807	455.09	354.25
IA	20%	17,845	190.28	196.22	21%	81,645	128.76	148.31
ID	21%	19,084	299.18	289.08	23%	64,146	200.64	215.03
IL	19%	85,860	216.84	240.75	21%	351,333	154.75	177.68
IN	26%	64,495	186.20	196.87	30%	276,459	126.76	147.20
KS	26%	22,362	197.60	216.38	29%	96,298	134.65	161.18
KY	30%	39,484	193.94	204.69	34%	161,399	136.81	152.89
LA	38%	46,267	209.46	231.43	39%	190,550	152.68	175.46
MA	15%	33,714	359.76	355.77	15%	110,887	273.31	268.79
MD	32%	85,075	344.58	323.16	33%	282,997	258.25	248.15
ME	20%	10,002	195.17	251.07	26%	37,506	170.19	188.57
MI	17%	63,778	183.99	207.84	20%	272,623	127.71	154.96
MN	15%	37,366	243.41	257.26	18%	159,011	176.27	196.11
MO	25%	56,730	195.77	210.93	29%	242,891	135.65	159.51
MS	43%	26,075	199.95	209.27	47%	118,058	136.57	158.05
MT	23%	9,145	284.22	282.22	24%	32,952	198.91	210.00
NC	26%	111,969	237.07	261.92	29%	411,562	165.71	195.50
ND	24%	4,787	248.13	238.13	23%	16,629	188.56	184.41
NE	23%	14,003	214.55	207.90	26%	65,272	142.06	158.33
NH	20%	10,572	294.68	281.72	22%	38,542	218.04	211.76
NJ	19%	60,544	315.03	331.15	21%	224,621	231.04	252.97
NM	34%	21,746	232.24	235.27	38%	94,133	159.09	174.02
NV	29%	43,874	316.44	296.45	30%	130,227	234.37	227.17
NY	17%	55,289	315.41	342.40	20%	301,587	200.40	244.88
OH	24%	91,996	182.58	199.98	29%	417,412	124.84	146.81
OK	36%	39,434	181.01	210.51	42%	187,601	134.66	157.79
OR	19%	35,276	326.59	325.73	19%	110,040	241.74	247.27
PA	21%	79,145	208.54	242.89	26%	384,189	145.03	179.52
RI	27%	9,946	278.85	275.54	29%	34,605	222.20	210.21
SC	32%	66,780	240.11	246.24	34%	227,535	173.14	186.59
SD	28%	7,161	231.85	226.01	29%	29,090	165.36	174.87
TN	28%	69,544	243.23	259.21	32%	271,919	164.46	196.76
TX	28%	261,997	251.82	275.26	32%	1,063,345	172.09	203.77
UT	18%	32,270	333.96	326.51	19%	96,338	241.69	255.05
VA	35%	132,696	338.98	323.83	36%	435,783	248.87	249.23
VT	18%	2,952	239.19	249.92	19%	12,065	177.06	178.16
WA	14%	106	367.35	421.19	21%	233,170	271.17	284.12
WI	21%	75,818	371.63	371.60	17%	122,301	150.80	162.23
WV	15%	32,121	209.05	217.08	43%	57,186	139.16	143.36
WY	34%	7,714	258.02	252.48	35%	24,951	199.84	198.69

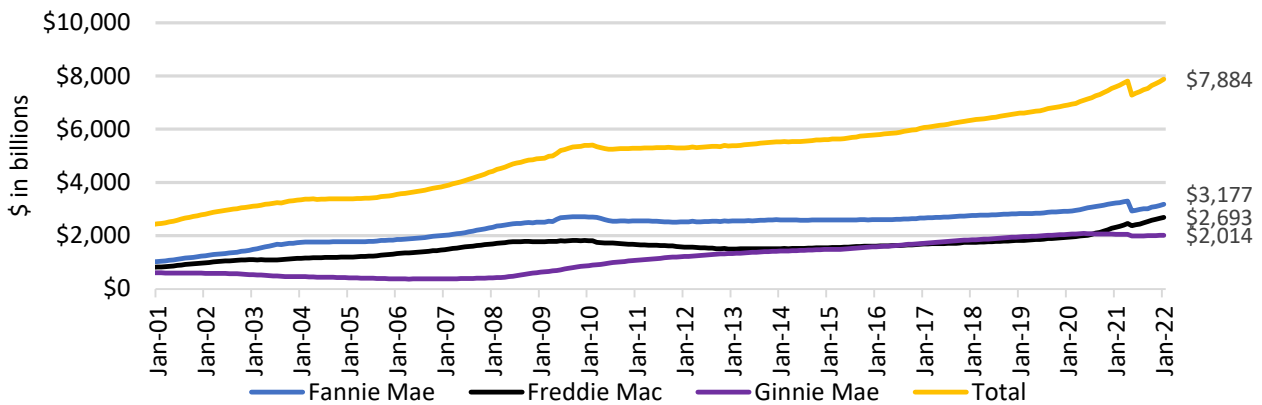
Sources: eMBS, Ginnie Mae/Freddie Mac/Fannie Mae Loan Level MBS Disclosure Files. Notes: Outstanding balance is based on loan balance as of February 2022. Ginnie Mae issuance is based on the last 12 months, from January 2021 to February 2022.

## 2.6 Outstanding Single-Family Agency MBS

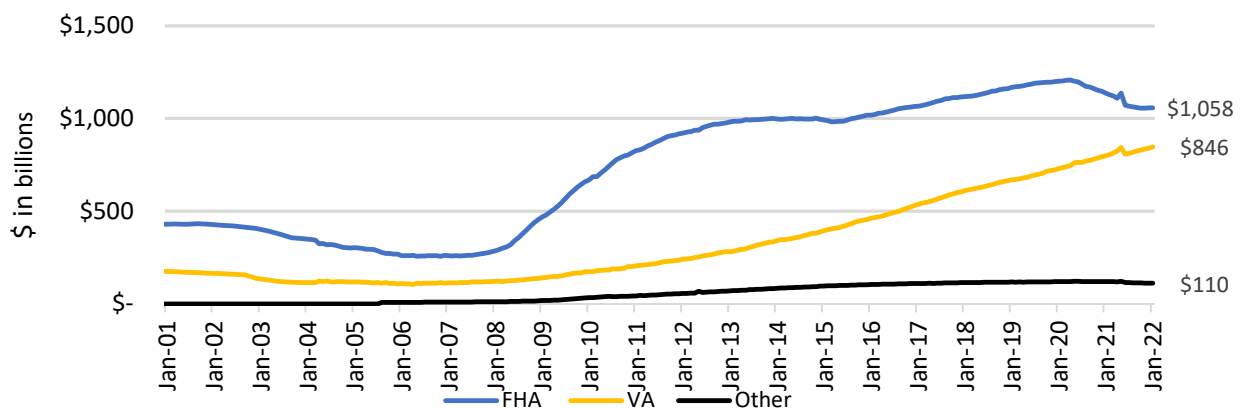
As of January 2022, outstanding single-family MBS in the Agency market totaled \$7.88 trillion: 40.3% Fannie Mae, 34.2% Freddie Mac, and 25.5% Ginnie Mae MBS. Over the past twelve months, Freddie Mac’s total outstanding issuance has increased by approximately 17%, while Fannie and Ginnie have decreased outstanding issuance by 2% 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 January 2022, 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

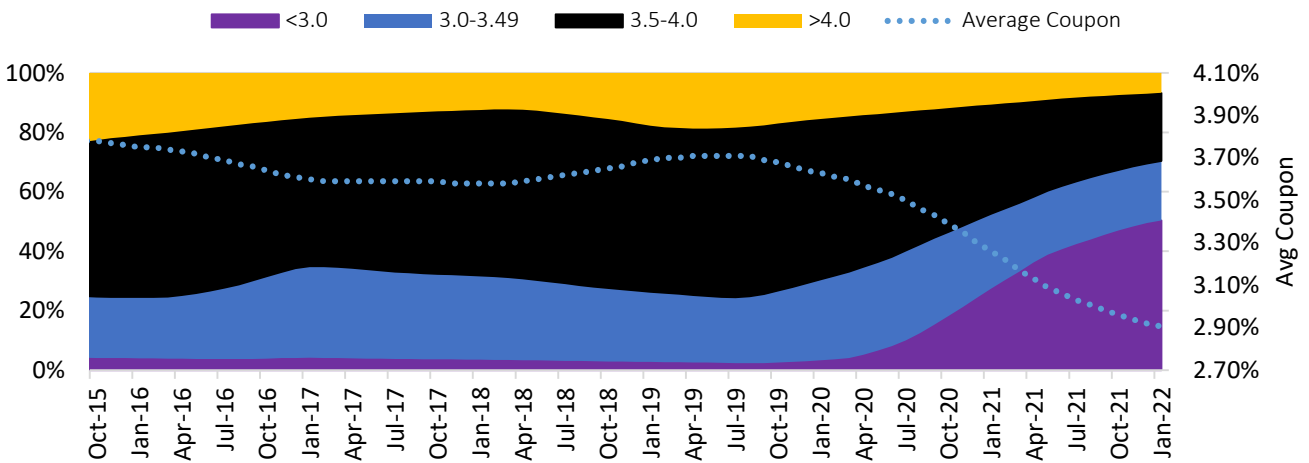


Sources: Data beginning in May 21 is based on outstanding balances in the Ginnie Mae/Freddie Mac/Fannie Mae Loan Level MBS Disclosure Files. Note: Data as of January 2022. Beginning with the October 2021 GMAR, the Fannie Mae and Freddie Mac data within the Outstanding Agency MBS graph have been updated 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.

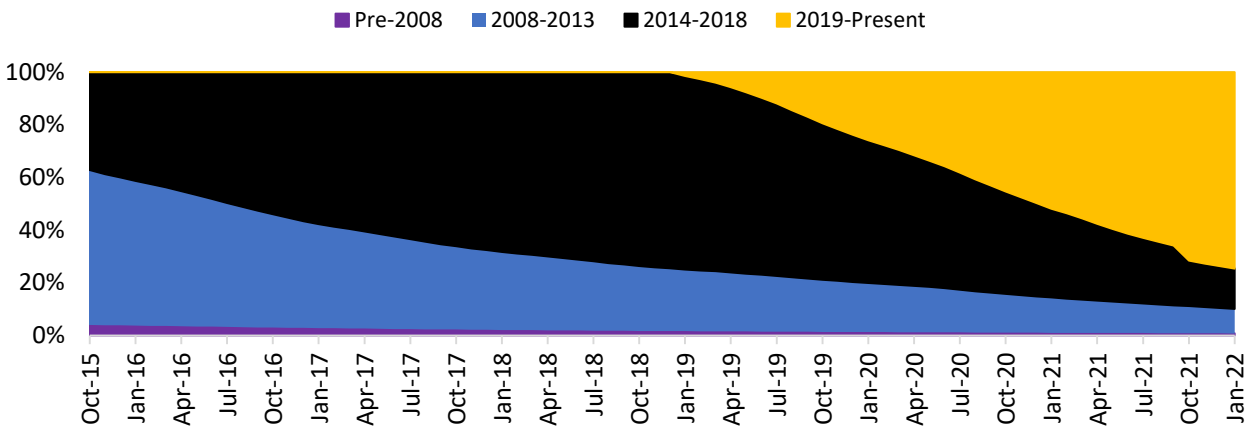
## 2.7 Outstanding Ginnie Mae MBS Volume by Coupon and Vintage Over Time

As of January 2022, the weighted average coupon on outstanding Ginnie Mae pools was 2.91%, down 1 bp since December 2021 and 38 bps since December 2020. The share of outstanding MBS pools with coupons below 3.0% (50% as of December 2021) began a rapid expansion in 2020. Approximately 27% of the outstanding MBS coupons are between 2.5 and 3.0%, 23% have coupons between 2.0 and 2.5%, while approximately 0.64% have coupons under 2.0%. The proportion with coupons under 2.0% has increased approximately 13% (percent change). 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**

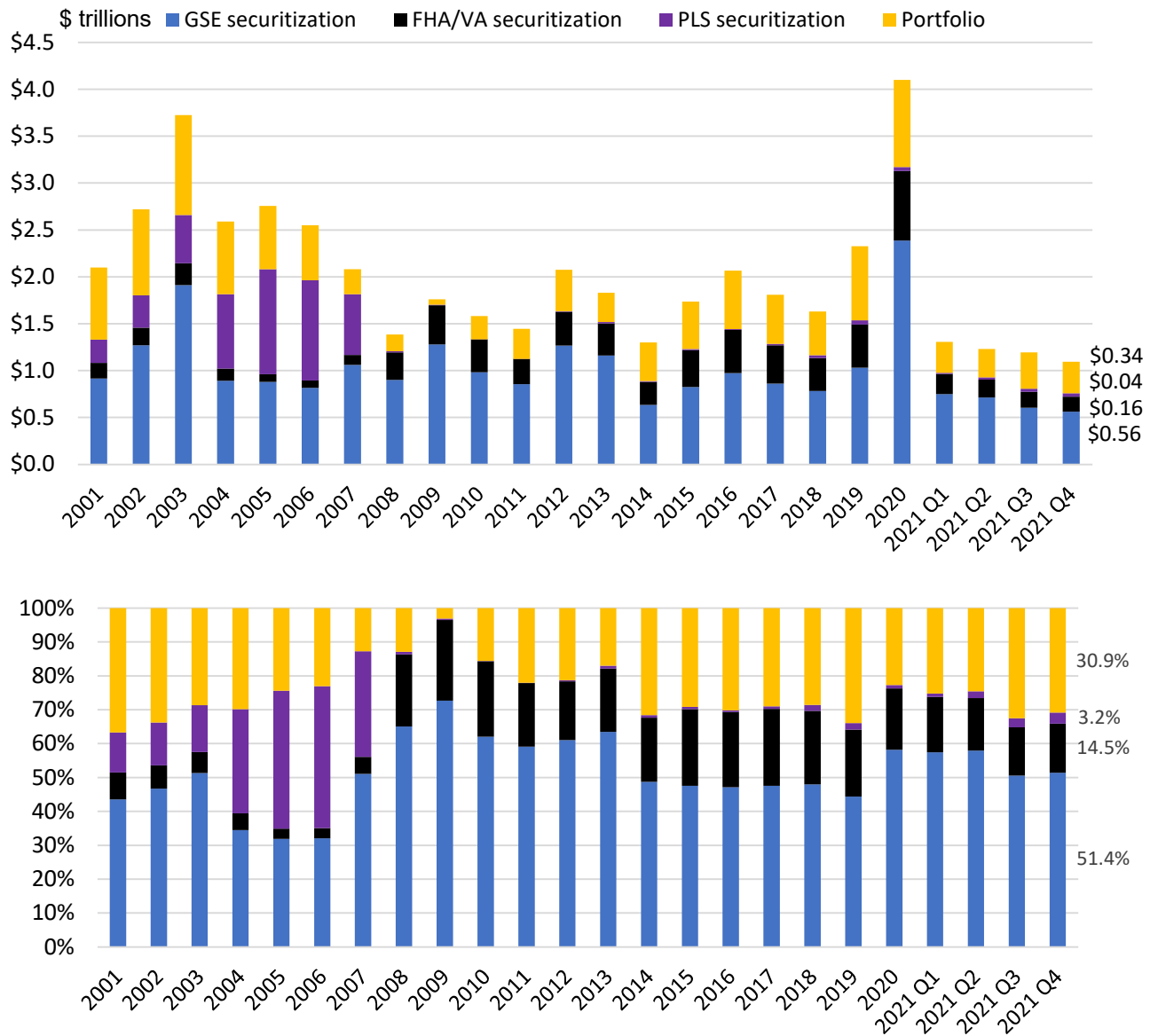


Sources: Ginnie Mae Pool Level MBS Disclosure Files. Note: January 2022 data points reflect the current composition of balances by coupon and vintage; factor data is not applied to prior date balance compositions. Average coupon is weighted by remaining principal balance.

## 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 by 13% (from December to January). Each of the Agencies saw decreases in gross issuance as compared to December, with Freddie's 25% decline in January being the largest. Ginnie Mae's \$49 billion in gross issuance in January was approximately 30% below average monthly issuance for 2021.

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
2022 YTD	\$93.1	\$64.1	\$157.2	\$49.0	\$206.2

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
2022 YTD	\$25.3	\$22.2	\$1.4	\$49.0

Agency net issuance in January was approximately \$98.6 billion, which represents a 33.3% MoM increase in net issuance. Ginnie Mae net issuance was \$8.3 billion in January. As noted in Section 2.6, VA net issuance 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
2022 YTD	\$44	\$46.2	\$90.2	\$8.3	\$98.6

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
2022 YTD	\$14	\$7.4	-\$0.5	\$8.3





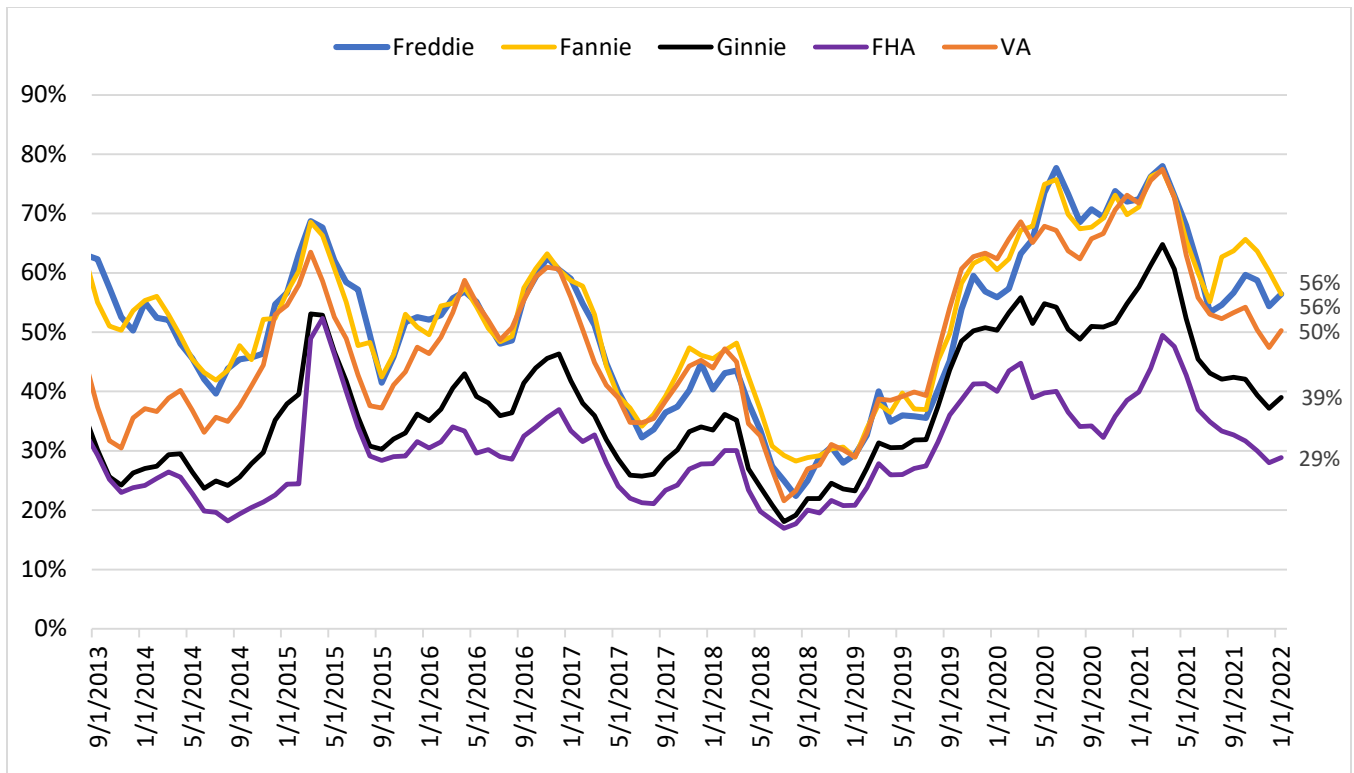
# US Agency Market, Issuance

Month	Agency Gross Issuance Amount (in \$ Billions)					Agency Net Issuance Amount (in \$ Billions)				
	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
Jan-22	\$93.1	\$64.1	\$49.0	\$157.2	\$206.2	\$44.0	\$46.2	\$8.3	\$90.2	\$98.6

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 January 2022. 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 January 2022 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 39% in January, up 5% MoM. The FHA refinance share stood at 29% in January 2022, below the 56% share for Fannie, the 56% refi share for Freddie originations, and the 50% share for the VA. Refinances as a share of all Agency originations decreased 6% to 53% in January.



Sources: eMBS and Urban Institute; Beginning January 2021 data sourced from Ginnie Mae loan level disclosure files and IOPP. Notes: Data as of January 2022

## 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 December 2019 - February 2020 and December 2021 - February 2022. The share of borrowers with DTIs below 35% has decreased by approximately 2.6% over the same period. From the period between December 2019 - February 2020 to the period between December 2021 - February 2022, the share of high-LTV loans decreased in the Ginnie Mae guarantee book by approximately 4% and the GSE portfolios by approximately 32%. 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 62.28% of its issuances between December 2021 and February 2022 having LTVs of 95 or above, compared to 4.42% for the GSEs.

### Share of Loans with LTV $\geq$ 95

	Ginnie Mae	GSE	All
Dec 2019-Feb 2020	64.70%	6.50%	26.38%
Dec 2021 - Feb 2022	62.28%	4.42%	20.66%

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

#### Dec 2019-Feb 2020

DTI	FICO				NA	All
	<650	650-700	700-750	$\geq$ 750		
<35	4.53%	6.17%	3.39%	5.05%	1.29%	20.4%
35-45	6.72%	8.68%	4.23%	4.28%	0.21%	24.1%
$\geq$ 45	5.37%	8.05%	4.03%	3.43%	0.13%	21.0%
NA	5.51%	7.03%	4.25%	5.94%	11.74%	34.5%
All	<b>22.13%</b>	<b>29.93%</b>	<b>15.90%</b>	<b>18.70%</b>	<b>13.37%</b>	<b>100.0%</b>

#### Dec 2021-Feb 2022

DTI	FICO				NA	All
	<650	650-700	700-750	$\geq$ 750		
<35	4.41%	6.00%	3.15%	5.22%	1.11%	19.9%
35-45	6.60%	8.60%	3.86%	4.02%	0.23%	23.3%
$\geq$ 45	5.39%	8.13%	3.76%	3.23%	0.15%	20.7%
NA	4.80%	6.30%	4.11%	6.98%	13.93%	36.1%
All	<b>21.20%</b>	<b>29.03%</b>	<b>14.88%</b>	<b>19.45%</b>	<b>15.42%</b>	<b>100.0%</b>

Sources: eMBS, Recursion and Ginnie Mae. Data as of February 2022



# Holders of Ginnie Mae Mortgage Servicing Rights

## 5.0 Holders of Ginnie Mae Mortgage Servicing Rights

This table shows the 30 largest owners of mortgage servicing rights (MSR) by UPB for loans collateralizing Ginnie Mae MBS. The top 30 firms collectively own 82.6% 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 February 2022, over half (50.9%) 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 (\$)	Share	Cumulative Share
1	Freedom Home Mortgage	\$257,258,760,705	12.97%	13.0%
2	PennyMac	\$225,379,534,685	11.4%	24.3%
3	Lakeview	\$209,747,449,061	10.6%	34.9%
4	Wells Fargo	\$121,516,251,703	6.1%	41.0%
5	Rocket Mortgage	\$102,540,170,255	5.2%	46.2%
6	Nationstar	\$93,053,716,695	4.7%	50.9%
7	Newrez	\$60,507,381,398	3.1%	54.0%
8	Caliber Home Loans	\$50,109,222,912	2.5%	56.5%
9	Carrington Mortgage	\$49,791,663,671	2.5%	59.0%
10	United Wholesale Mortgage	\$49,055,169,078	2.5%	61.5%
11	US Bank	\$48,535,830,735	2.4%	63.9%
12	Loan Depot	\$34,787,178,897	1.8%	65.7%
13	Mortgage Research Center	\$31,826,861,223	1.6%	67.3%
14	USAA Federal Savings Bank	\$31,554,400,454	1.6%	68.9%
15	Planet Home Lending	\$30,251,355,597	1.5%	70.4%
16	Navy Federal Credit	\$28,351,753,207	1.4%	71.8%
17	Truist Bank	\$21,615,289,282	1.1%	72.9%
18	The Money Source	\$21,187,571,164	1.1%	74.0%
19	Guild Mortgage	\$20,665,263,899	1.0%	75.0%
20	Amerihome Mortgage Company	\$17,378,966,591	0.9%	75.9%
21	Crosscountry Mortgage	\$15,936,640,118	0.8%	76.7%
22	New American Funding	\$14,942,651,446	0.8%	77.5%
23	Village Capital	\$14,384,255,775	0.7%	78.2%
24	Citizens Bank	\$13,289,654,241	0.7%	78.9%
25	Idaho Housing and Finance	\$13,063,018,843	0.7%	79.5%
26	Midfirst Bank	\$13,061,475,763	0.7%	80.2%
27	Rushmore Loan Management	\$12,827,552,502	0.6%	80.8%
28	CMG Mortgage	\$12,286,796,042	0.6%	81.4%
29	Movement Mortgage	\$12,256,156,980	0.6%	82.1%
30	PHH Mortgage Corporation	\$11,480,846,828	0.6%	82.6%

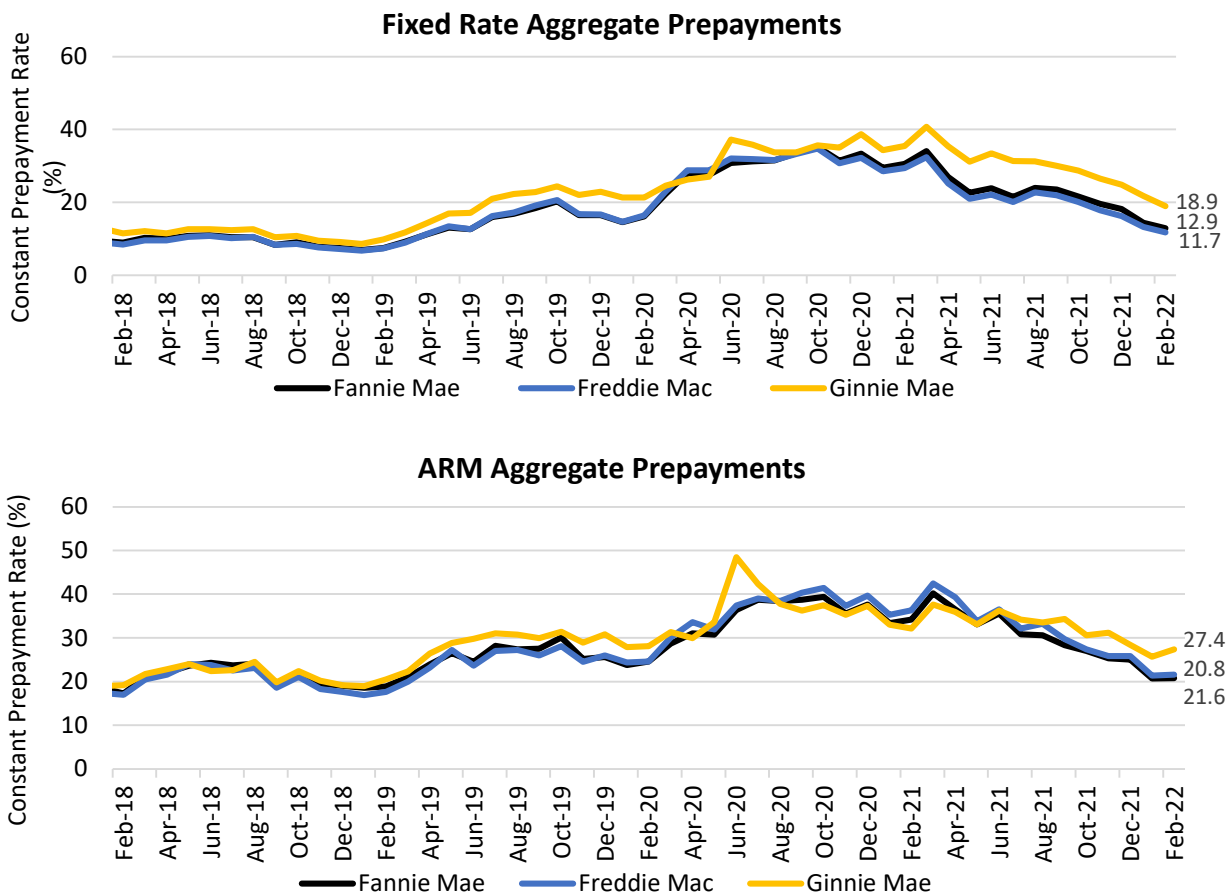
Source: Deloitte and Ginnie Mae. Data as of February 2022.

## 6.0 Prepayments

In February 2022, Ginnie Mae fixed rate prepayment speed decreased by 13%, to 18.9 CPR. The slowdown was driven by both voluntary prepayment and buyout rate decreases. Notably, prepayments for Ginnie Mae II 2.5s and 3s decreased MoM by 15% and 17%, respectively. However, Ginnie Mae I 2.5s and 3s prepayment speeds decreased MoM by 32% and 20%, respectively.

In February 2022, Fannie Mae and Freddie Mac fixed rate prepayment speeds both continued to decrease by 10% and 11%, respectively. ARM MBS prepayments for Ginnie Mae increased by 7%. Freddie Mac posted an increase of 1%. Fannie Mae remained stable MoM.

### 6.1 Aggregate Prepayments



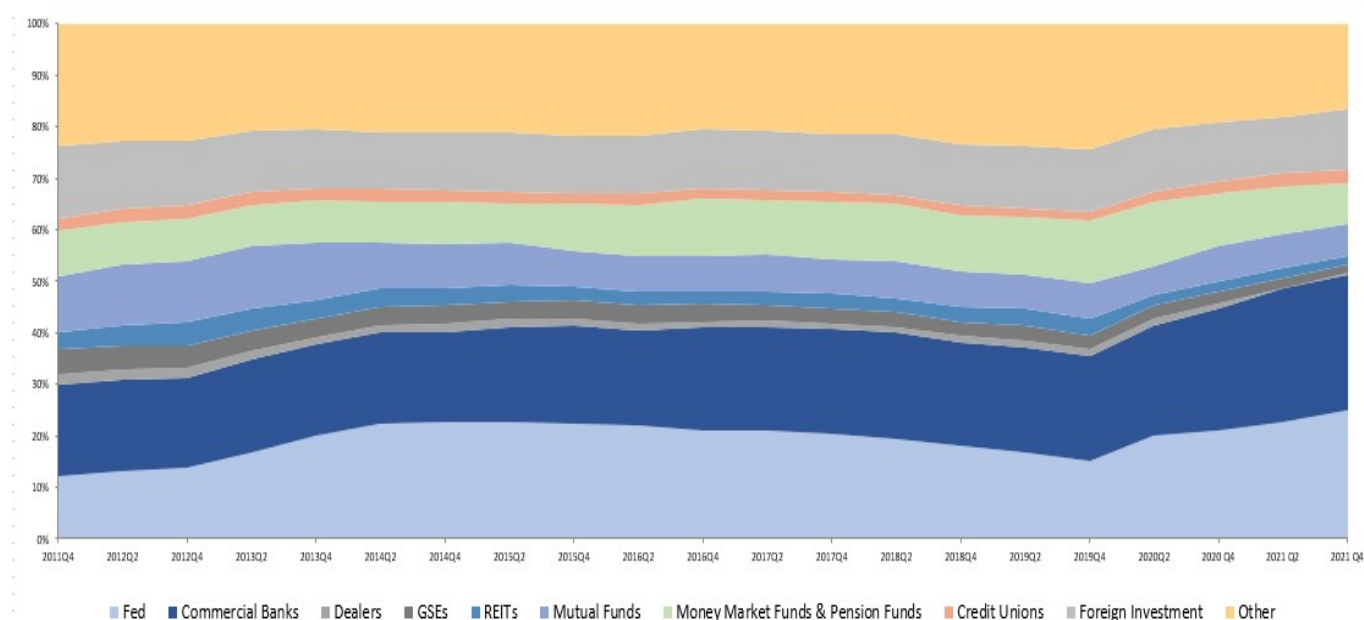
Source: eMBS; Note: Data as of February 2022.

<sup>5</sup> Ahlgren R and Ichaso M (2022, December 7). *US Structured Products Trading Desk Strategy | RMBS Strategy | Drop in VPRs Only Post Modest Slowdown, Buyouts Fall*, pp. 1.

## 7.0 MBS Ownership

As of Q4 2021, the largest holders of Agency debt (Agency MBS + Agency notes and bonds) included commercial banks (26%), the Federal Reserve (25%), and foreign investors (12%). The Federal Reserve's share increased to 25% in the fourth 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 \$3.7 trillion in holdings as of the end of February 2022, \$2.9 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 Q4 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	2-Feb	9-Feb	16-Feb	23-Feb
Largest 25 Domestic Banks	2,537.8	2,771.8	2,809.2	2,825.4	2,858.3	2,877.4	2,882.6	2,927.6	2,948.0	2,930.2	2,941.2	2,959.0
Small Domestic Banks	581.1	674.6	689.3	704.4	721.5	730.0	739.0	752.2	757.6	757.3	758.9	764.0
Foreign Related Banks	49.0	47.7	49.1	48.6	48.7	45.8	43.3	42.7	42.2	41.2	39.0	36.9
<b>Total, Seasonally Adjusted</b>	<b>3,167.9</b>	<b>3,494.1</b>	<b>3,547.6</b>	<b>3,578.4</b>	<b>3,628.5</b>	<b>3,653.2</b>	<b>3,664.9</b>	<b>3,722.5</b>	<b>3,747.8</b>	<b>3,728.7</b>	<b>3,739.1</b>	<b>3,759.9</b>

Source: Federal Reserve Bank. Note: Small domestic banks include all domestically chartered commercial banks not included in the top 25. Data as of March 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
<b>Change:</b>								
<b>2Q21-3Q21</b>	3%	3%	0%	-11%	2%	14%	2%	6%
<b>3Q20-3Q21</b>	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%
<b>Total Top 20</b>		<b>2,167,908.6</b>	<b>1,523,770.8</b>	<b>310,202.8</b>	<b>305,608.5</b>	<b>28,326.5</b>	<b>76%</b>

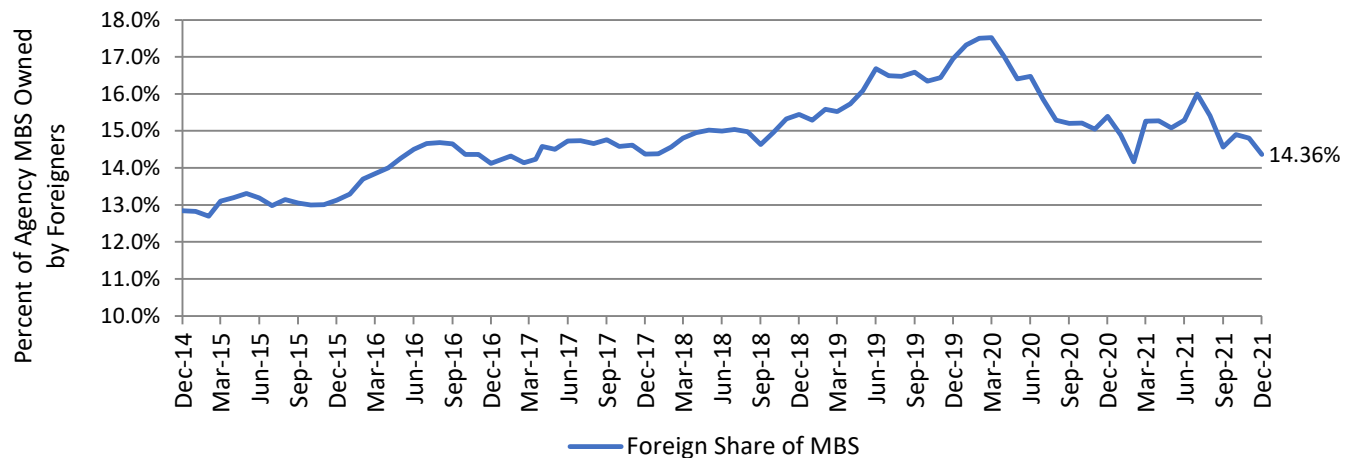
Source: Inside Mortgage Finance. Notes: Data as of Q3 2021.



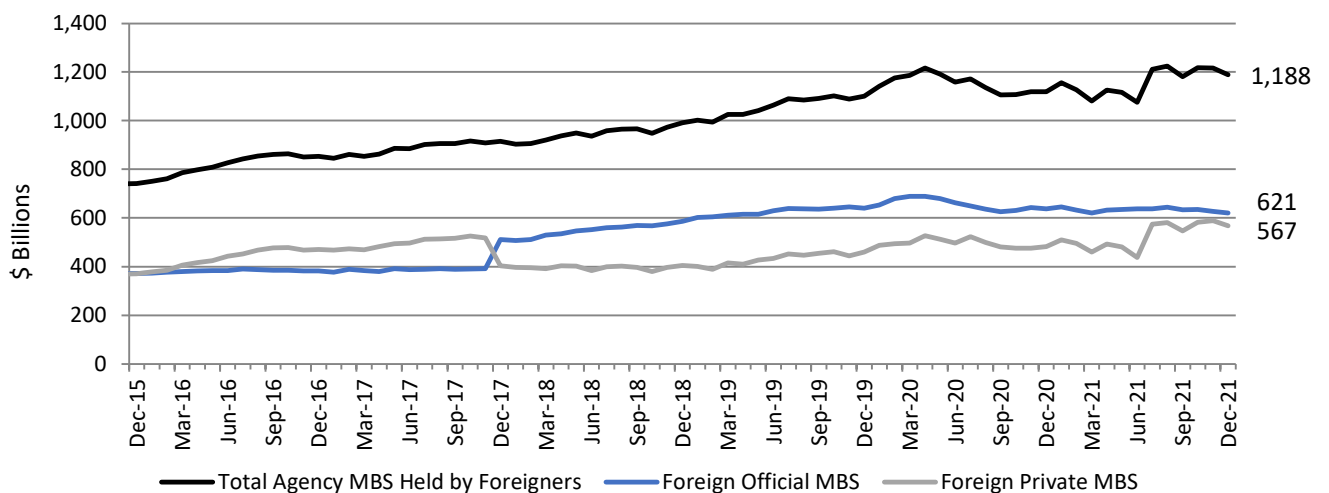
## 7.3 Foreign Ownership of MBS

For the month of December 2021, foreign ownership of MBS represents \$1.19 trillion in Agency MBS, which includes \$567 billion held by foreign private institutions and \$621 billion held by foreign official institutions. This represents a 6% 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 December 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. As of December 2021, these three own 60% 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)			
	3/1/2021	6/1/2021	9/1/2021	12/1/2021	Q1 2021	Q2 2021	Q3 2021	Q4 2021
Japan	319,771	311,375	311,892	301,979	11,738	-8,396	517	-9,913
Taiwan	253,036	250,081	247,341	244,375	-9,417	-2,955	-2,740	-2,966
China	200,972	217,842	215,102	202,659	-11,345	16,870	-2,740	-12,443
Luxembourg	34,371	35,497	33,339	34,277	-1,852	1,126	-2,158	938
Ireland	26,965	21,453	22,617	21,305	-4,099	-5,512	1,164	-1,312
South Korea	43,032	43,201	43,208	42,051	404	169	7	-1,157
Cayman Islands	37,111	36,027	36,160	35,004	2,847	-1,084	133	-1,156
Bermuda	26,443	23,806	24,411	23,209	-1,545	-2,637	605	-1,202
Netherlands	13,049	12,544	17,435	16,249	705	-505	4,891	-1,186
Malaysia	19,047	19,089	19,445	18,830	-100	42	356	-615
Other	173,905	166,009	268,746	302,816	-23,557	-7,896	102,737	34,070
<b>Total</b>	<b>1,147,702</b>	<b>1,136,924</b>	<b>1,239,696</b>	<b>1,242,754</b>	<b>-36,221</b>	<b>-10,778</b>	<b>102,772</b>	<b>3,058</b>

### 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
<b>Total</b>	<b>1,159,809</b>	<b>1,156,341</b>	<b>-3,468</b>

Sources: Treasury International Capital (TIC). Notes: Level of Agency debt Holdings by month data as of Q4 2021. Agency MBS as of June 2021. Revised to include top 10 holders of Agency debt listed as of June 2018.



## Disclosure:

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