Ginnie Mae
Our Guaranty Matters

GLOBAL MARKETS ANALYSIS REPORT

A Monthly Publication of Ginnie Mae's Office of Capital Markets

December 2022

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Inside this Month's Global Market Analysis Report...

This month's *Highlights* section calls attention to the recent phenomenon of increasing spreads between Ginnie Mae II Single Family MBS and US 10-yr Treasury yields despite consistent month-over-month decreases in MBS production. The section also covers production trends between the agencies, revealing that gross MBS production has been declining at higher rates for the GSEs than for Ginnie Mae. While net MBS issuance has dropped for the GSEs, net issuance for Ginnie Mae is growing.

Notable insights in this month's Global Market Analysis Report include the following:

- The Prepayments section illustrates the convergence of Ginnie Mae aggregate prepayment rates to those of Fannie Mae and Freddie Mac (GSE) securities.
- The Agency REMIC issuance section captures the continued upward trend in coupon rates for REMIC deals.
- The Agency Credit Breakdown section illustrates the leading role that Ginnie Mae continues to play in high-LTV lending and in providing homeownership opportunities to first-time homebuyers.
- The U.S. Housing Market section shows signs of decelerating inflation and mortgage rates this month, particularly in the rental housing market, as well as home prices beginning to decline nationally. However, inflation and mortgage rates seem to still outpace wage growth.

Highlights

Even though the production of MBS has declined consistently month after month in 2022 (see **Section 5.3**), spreads on Ginnie Mae MBS have remained wide on a relative basis throughout the year. At month's end November 2022, Ginnie Mae II Single-Family MBS recorded a yield of 5.03% compared to the US 10-Yr yield at 3.61% as illustrated in **Figure 1**. This is a 321 bp YoY increase for the Ginnie Mae II Single-Family MBS yield from 1.82% at month-end November 2021. [1]

Figure 1. Ginnie Mae II Single Family Index versus US Treasury 10-yr Yields

The total issuance of Ginnie Mae MBS decreased from $62.3 billion in January 2022 to $36.0 billion in November 2022. This is a monthly rate of decline of approximately 4.9%.[2] Even though there is a slowdown in Ginnie Mae MBS production, prepayments have slowed at an even greater rate, currently driven by seasonality and a higher interest rate environment (see **Section 4**). In November 2022, Ginnie Mae fixed rate aggregate prepayment speeds decreased by 21.4% MoM. As shown in **Figure 3,** the total remaining principal balance of Ginnie Mae I and II is $2.3 trillion in November 2022—a $19 billion increase from October 2022 and a $157 billion increase from January 2022. [3]

[1] Bloomberg data as of November 2022

[2] https://www.ginniemae.gov/data_and_reports/reporting/MonthlyIssuanceReports/Nov22_ISS.pdf

[3] https://www.ginniemae.gov/data_and_reports/reporting/Monthly%20UPB%20Reports/Oct22_RPB.pdf

Figure 2. Total Issuance of Ginnie Mae I and II

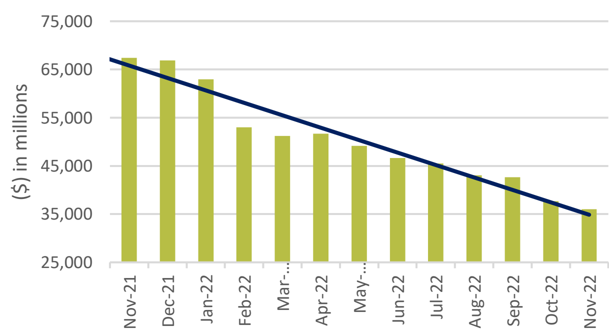
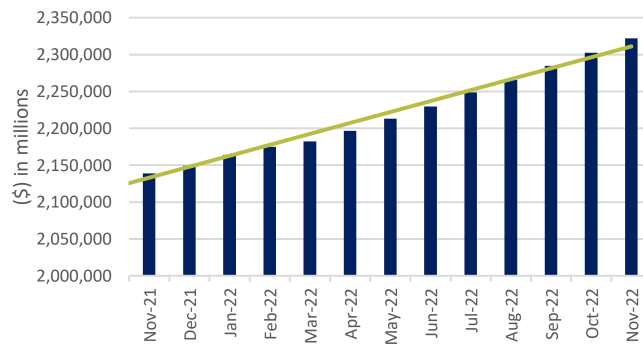
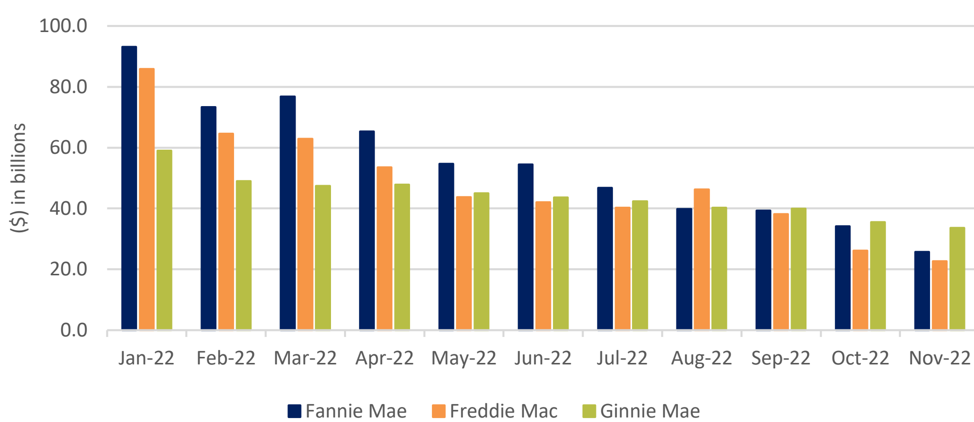


Figure 3. Total Remaining Principal Balance



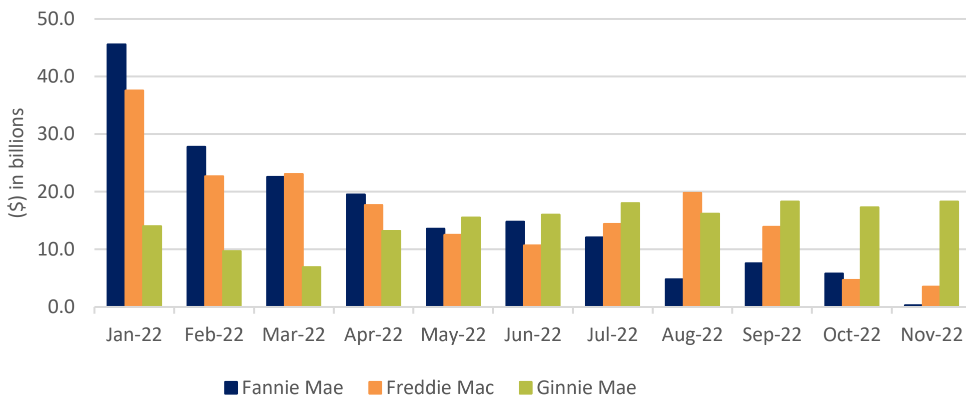
In January 2022, the gross MBS issuance amount was $59 billion for Ginnie Mae, $85.9 billion for Freddie Mac, and $93.1 billion for Fannie Mae (see **Section 5.3**). In November 2022, the gross issuance amount for Ginnie Mae was $33.6 billion, $22.7 billion for Freddie Mac, and $25.7 billion for Fannie Mae. While Ginnie Mae gross issuance has decreased by 43.1% since January 2022, Fannie Mae and Freddie Mac gross issuance levels have decreased by 72.4% and 73.6% respectively, as illustrated in **Figure 4.** Although Ginnie Mae gross issuance has dropped consistently throughout 2022 (average growth rate of -5.3%), gross issuance for Freddie Mac and Fannie Mae have been consistently declining at over double the rate of Ginnie Mae, with approximately 12.5% and 12.1% monthly rates of decline in issuance respective.

Figure 4. Agency Gross Issuance Amount



As agency gross issuance amounts have dropped, Ginnie Mae net issuance has increased while Fannie Mae and Freddie Mac net issuance has dropped significantly. In January 2022, the net issuance amount was $14 billion for Ginnie Mae, $37.6 billion for Freddie Mac, and $45.6 billion for Fannie Mae (see **Section 5.3).** In November 2022, the net issuance amount for Ginnie Mae was $18.3 billion, $3.5 billion for Freddie Mac, and only $300 million for Fannie Mae. Since January 2022, Fannie Mae net issuance has declined by 99.3% and Freddie Mac net issuance has also declined by 90.7% while Ginnie Mae net issuance has grown by 30.7% as shown in **Figure 5.**

Figure 5. Agency Net Issuance Amount



Despite the decrease YTD 2022 in MBS production, the spread between GN II SF and the US 10-Yr remains relatively wide. As depicted in **Figure 6**, the spread over the last five years was at its widest, at 187 bps, in September 2022 when the GN II SF yield was at 5.79% and the US 10-Yr at 3.92%.[4]

At month-end November 2022, the spread between the GN II SF and the US 10-Yr was 143 bps—a 2.86% YoY increase from a spread of 37 bps in November 2021.

Figure 6. Spread between GN II SF and US 10-Yr Treasury

Current MBS production volume is projected to remain relatively stable through the end of Q1 2023, per the Mortgage Bankers Association (MBA) November 21, 2022 forecast (Q4 2022 production volumes of $398 billion compared to $392 billion projections in Q1 2023). The MBA forecasts that the pace of mortgage loan originations is driven by a decline in refinancing share from 58% in 2021 to 30% in 2022 and dropping again to 24% in 2023.[5]

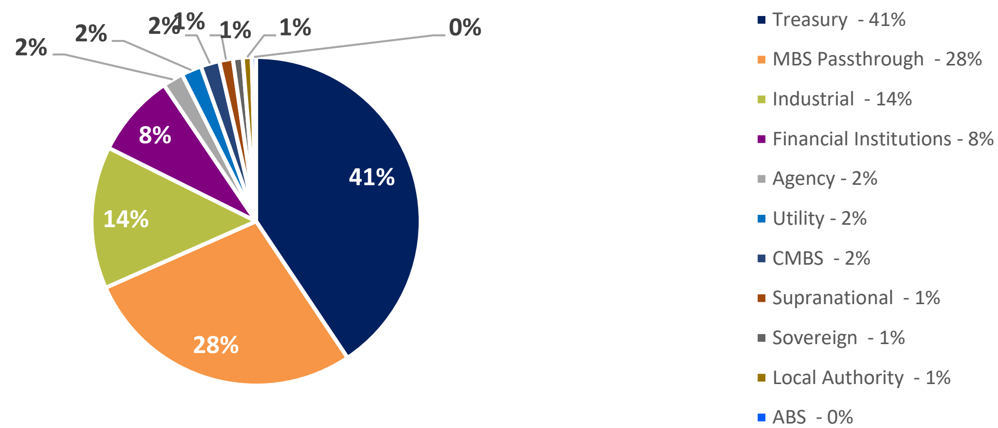
[4] Bloomberg data as of November 2022

[5] https://www.mba.org/docs/default-source/research-and-forecasts/forecasts/mortgage-finance-forecast-nov-2022.pdf?sfvrsn=a8e2944_1

1 US AGGREGATE AND GLOBAL INDICES

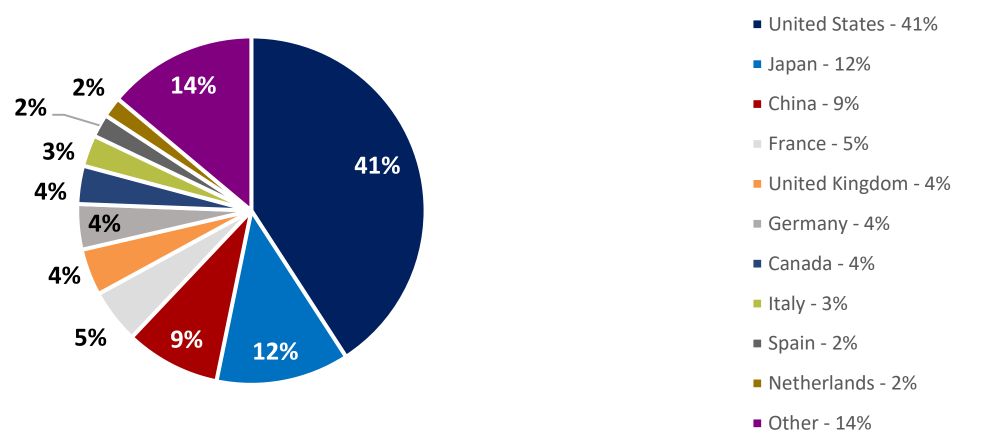
1.1 Bloomberg US Aggregate and Global Indices

Figure 7. Bloomberg US Aggregate Index.



At month-end November, US Treasuries contributed approximately 41% to the Bloomberg US Aggregate Index, stable from the prior month. US MBS (Ginnie Mae, Fannie Mae, and Freddie Mac) continues to contribute approximately 28%. For the US Aggregate Index, all other changes to the index components were no larger than 1%.

Figure 8. Bloomberg Global Aggregate Index by Country.



In the Bloomberg Global Aggregate Index by Country, the US share of fixed income remains the largest share of total outstanding issuance, representing approximately 41% of the total Bloomberg Global Aggregate Index. Japan's share of fixed income is the second highest at 12%. For the Global Aggregate Index, all countries remained stable when compared to the prior month with no changes larger than 1%.

Source: Bloomberg [both charts]. Note: Data as of November 2022. Figures in charts may not add to 100% due to rounding.

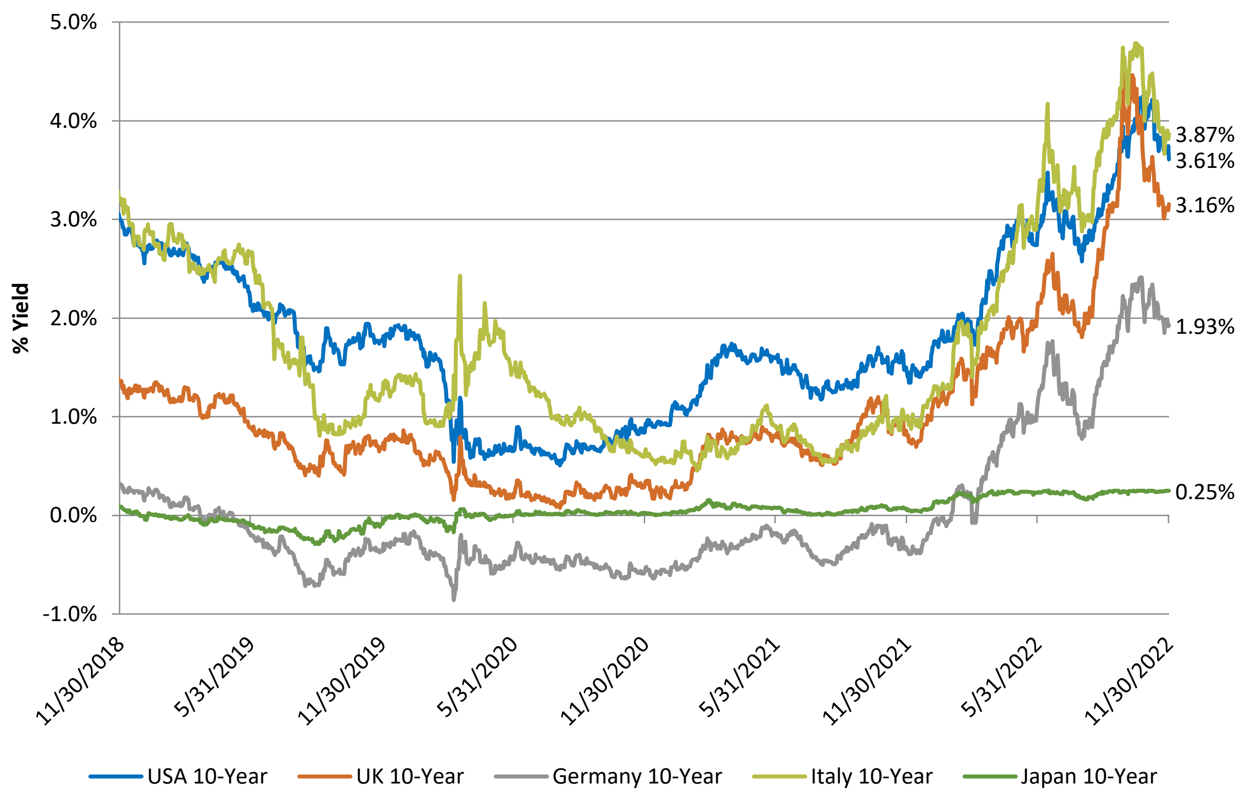
2 SOVEREIGN DEBT PRODUCT PERFORMANCE COMPARISONS

2.1 Global 10-Year Treasury Yields (Unhedged)

The US 10-year Treasury yield moved to 3.61% at month-end November 2022, a MoM decrease of 44 bps. US Treasury yields remain the second highest of all the government treasury yields depicted in the figure below behind Italian Treasury yields.

- The yield on the UK 10-year notes decreased to 3.16% at month-end November, a MoM decrease of 35 bps.
- The yield on the German 10-year notes decreased to 1.93% at month-end November, a MoM decrease of 21 bps.
- The yield on the Italian 10-year note decreased to 3.87% at month-end November, a MoM decrease of 42 bps.
- The yield on the Japanese 10-year notes decreased to 0.25% at month-end November, a MoM decrease of 1 bps.

Figure 9. Global 10-Year Treasury Yields.



Source: Bloomberg. Note: Data as of November 2022.

2.2 US Treasury Hedged Yields

- The hedged yield for the 10-year Treasury JPY increased MoM 5 bps to 2.17% at month-end November.
- The hedged yield for the 10-year Treasury EUR increased MoM 4 bps to 1.25% at month-end November.

Figure 10. 7–10yr Total Return Hedged Index, JPY.

Figure 11. 7–10yr Total Return Hedged, EUR.

Source: Bloomberg. Note: Data as of November 2022.

SECONDARY MORTGAGE MARKET

3 FIXED INCOME PRODUCT PERFORMANCE COMPARISONS

3.1 Ginnie Mae Yields – USD

Ginnie Mae fixed rate MBS yields decreased MoM in November 2022. Ginnie Mae II yields were at 5.56% at month-end September, increased 16 bps to 5.72% at month-end October and have now decreased to 5.03%, a 69 bps decrease. Ginnie Mae I yields were at 5.51% at month-end September, increased 13 bps to 5.64% at month-end October, and have now decreased 65 bps to 4.99%. Ginnie Mae II spreads over the US 10-year Treasury yield, just 37 bps at month-end November 2021, had increased 106 bps to 143 bps over the US 10-year Treasury yield at month-end November 2022. The yields on the Ginnie Mae I SF were 139 bps higher than the US 10-year Treasury yield at month-end November, a decrease in spread of 20 bps MoM but an increase of 84 bps YoY.

Figure 12. Ginnie Mae II SF Yield, USD

Figure 13. Ginnie Mae I SF Yield, USD

Sources Bloomberg. Note: Data as of November 2022

3.2 Ginnie Mae Yield Spreads – Intermediate Credit

The yield differential between US Intermediate Credit and GNMA II 30-year OAS decreased by 8 bps to 0.58% at month-end November. The Ginnie Mae II 30-year OAS decreased 13 bps MoM. The US Intermediate credit OAS has decreased 22 bps MoM.

Figure 14. US GNMA II 30yr MBS OAS versus US Intermediate Credit OAS.

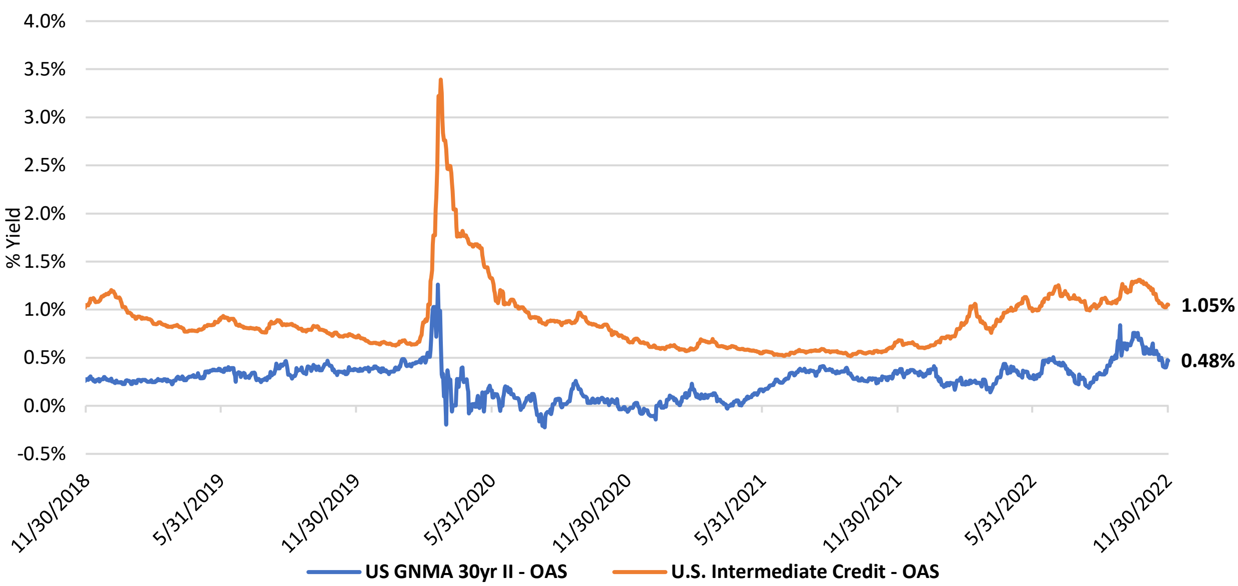
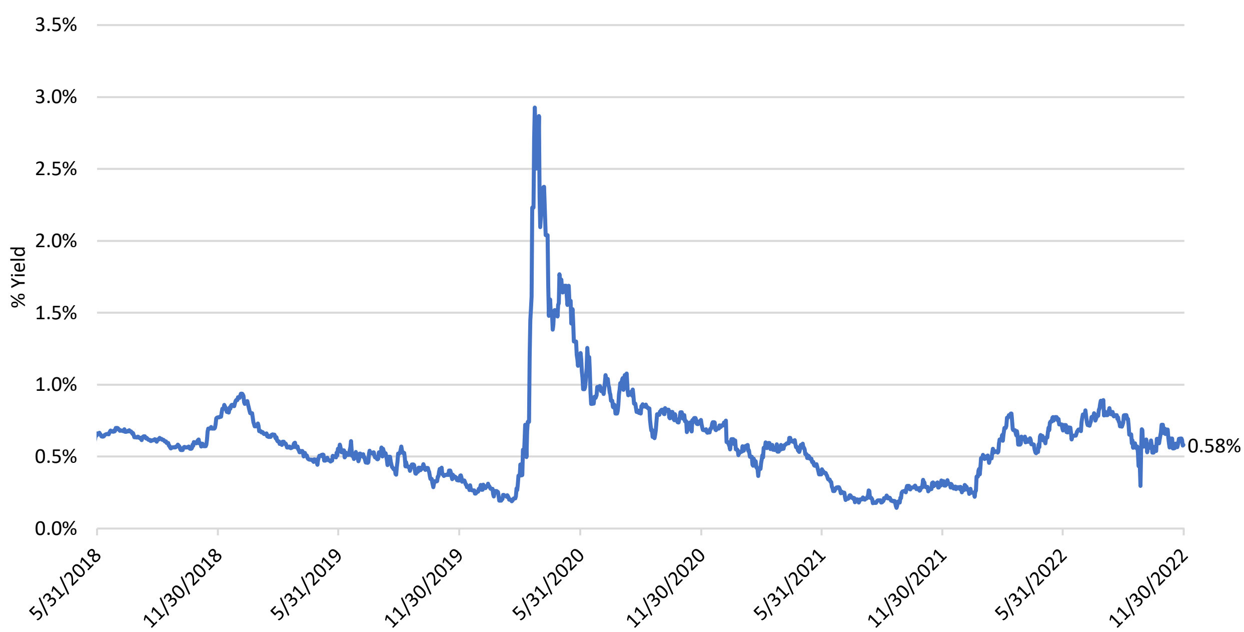


Figure 15. Spread between US Intermediate Credit and US GNMA II 30yr MBS OAS.

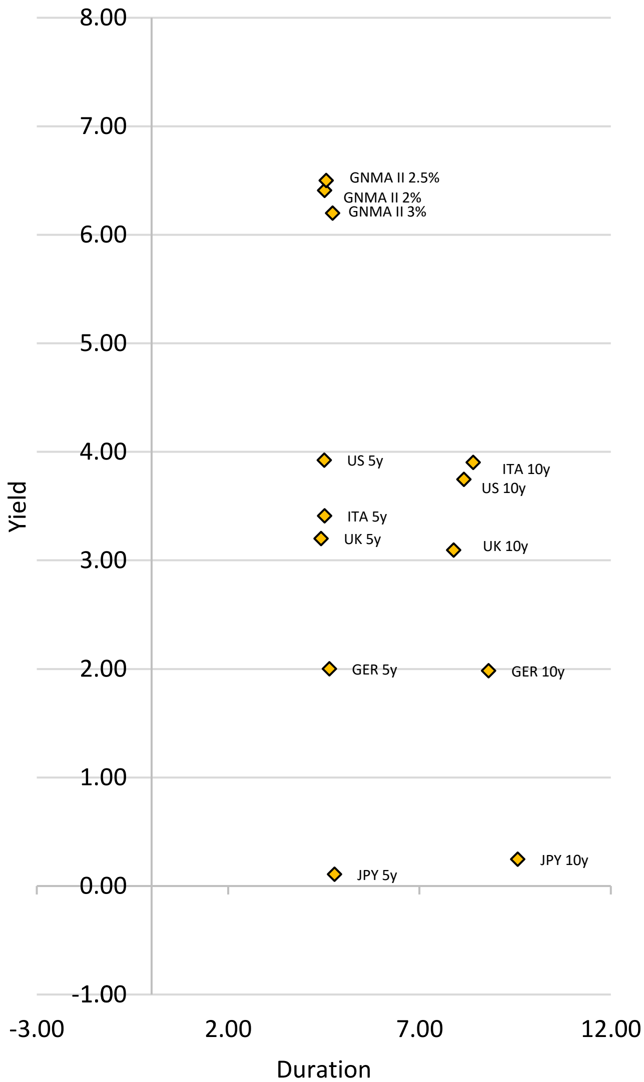


Source: Bloomberg. Note: Data as of November 2022.

3.3 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. Particularly for GNMA II securities, decreases in duration have been observed relative to the month prior.

Figure 16. Yield vs. Duration



Security	Duration	Yield
US 5y	4.51	3.93
US 10y	8.16	3.75
JPY 5y	4.78	0.11
JPY 10y	9.57	0.25
GER 5y	4.64	2.00
GER 10y	8.80	1.99
ITA 5y	4.52	3.41
ITA 10y	8.40	3.90
UK 5y	4.43	3.20
UK 10y	7.89	3.09
GNMA II 2%	4.52	6.41
GNMA II 2.5%	4.56	6.50
GNMA II 3%	4.73	6.20
GNMA II 3.5%	4.87	5.81
GNMA II 4%	4.96	5.42
GNMA II 4.5%	5.01	5.21
GNMA II 5%	5.11	4.76
GNMA II 5.5%	5.30	4.48
GNMA II 6%	5.50	3.58

Source: Bloomberg. Note: Yield and modified duration for GNMA II securities is based on median prepayment assumptions from surveyed Bloomberg participants. All data is as of November 2022. Yields are in base currency of security and unhedged.

4 PREPAYMENTS

4.1 Aggregate Prepayments (CPR)

Ginnie Mae fixed rate aggregate prepayment speeds decreased in November by 21.4% MoM, while Fannie Mae and Freddie Mac CPRs decreased by 15.5% and 15.9%, respectively. ARM prepayments have dropped for all three agencies, due to decreased refinance activity in the current higher interest rate environment.

Figure 17. Fixed Rate Aggregate 1-Month CPR.

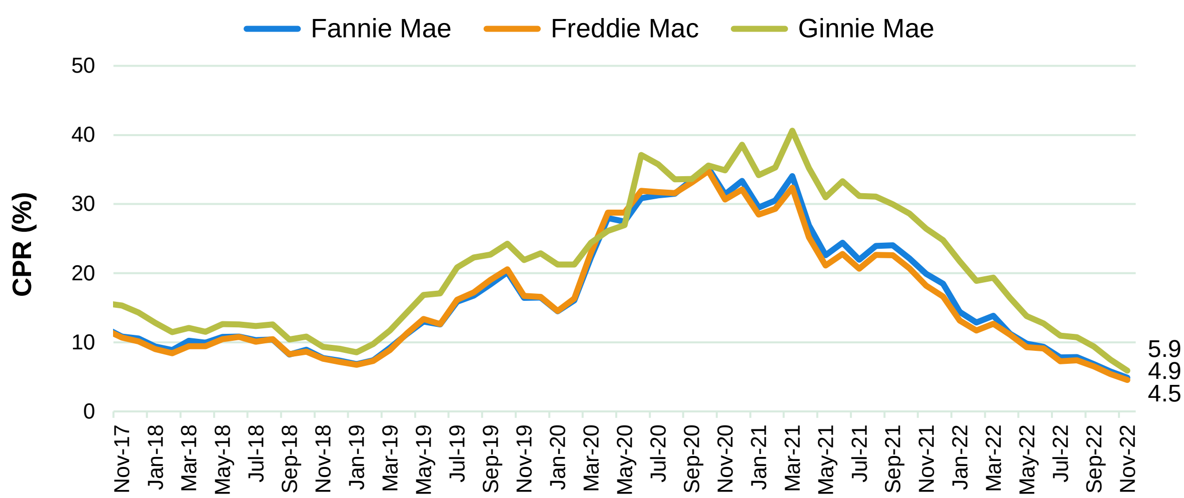
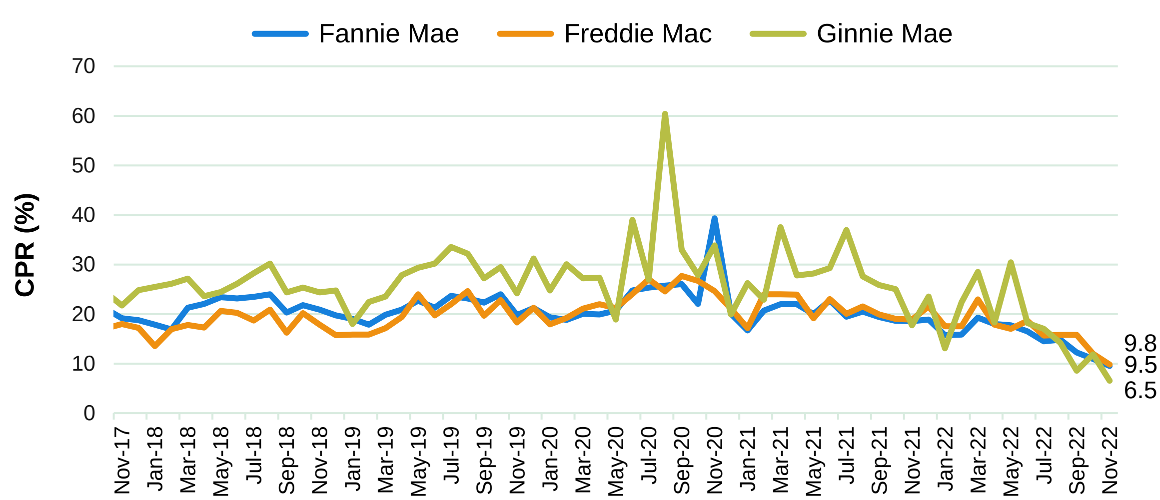


Figure 18. ARM Aggregate 1-Month CPR.



Source: Recursion. Note: Data as of November 2022.

4.2 Involuntary Prepayments (CDR)

Fixed rate involuntary prepayments (CDR) remain higher for Ginnie Mae than for the GSEs. The spread in prepayment speeds between Ginnie Mae and GSE prepayments has converged significantly since Ginnie Mae's CDR peak of 12.4 CDR in June 2020. ARM CDRs for Freddie Mac continued to remain below Ginnie Mae in November 2022 after slightly overtaking Ginnie Mae in September 2022.

Figure 19. Fixed Rate Aggregate CDR.

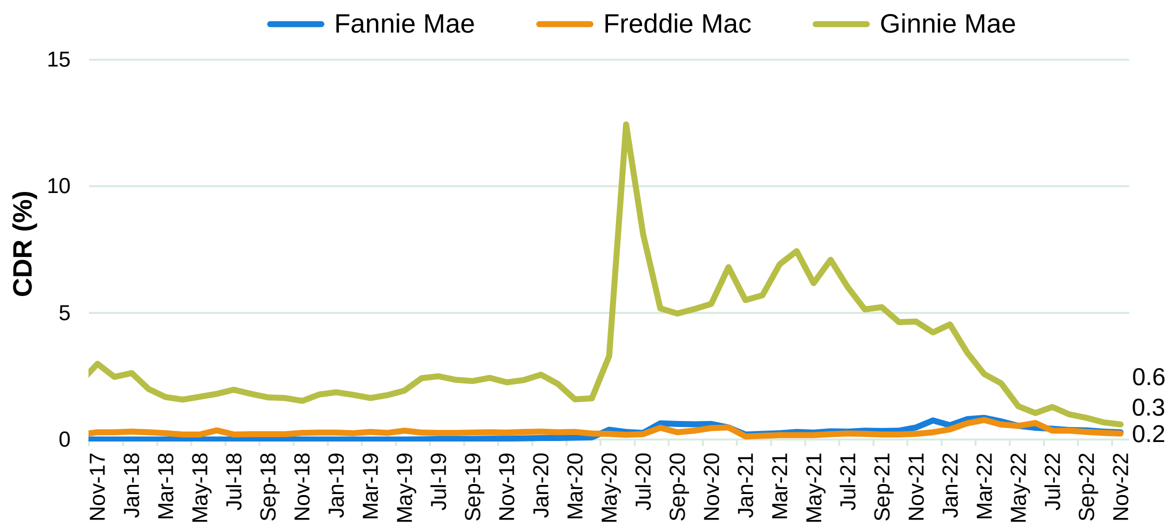
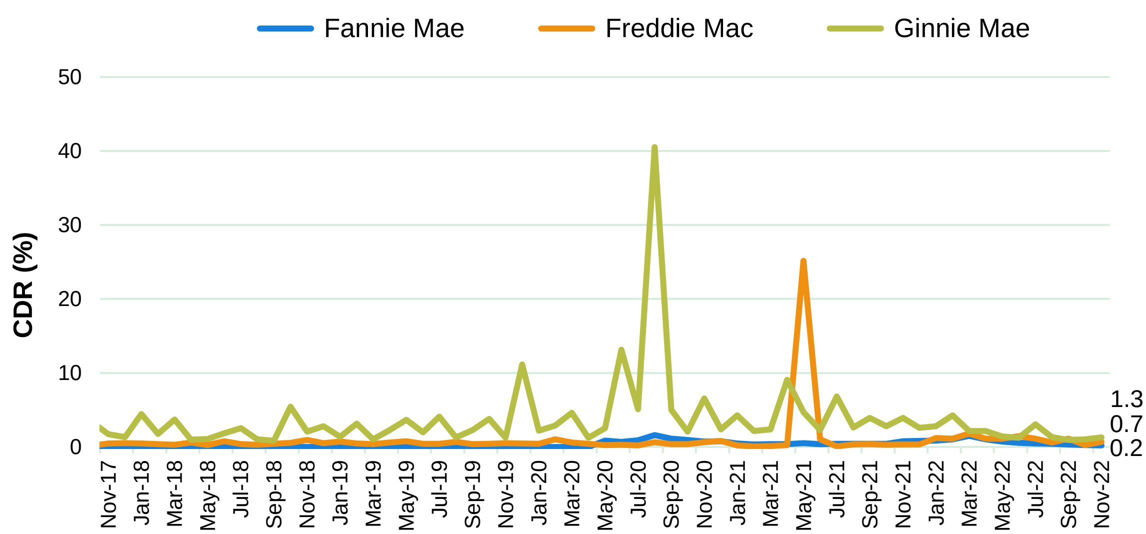


Figure 20. ARM Aggregate CDR.



Source: Recursion. Note: Data as of November 2022.

4.3 Voluntary Prepayment Rates (CRR)

Fixed rate voluntary prepayments (CRR) continue to remain higher for Ginnie Mae relative to the GSEs. In the environment of increasing interest rates and higher prices (See Section 14.2.1), voluntary prepayments are facing downward trends for both Ginnie Mae and the GSEs. Fannie Mae and Freddie Mac saw decreases of 16.1% MoM in fixed rate aggregate CRR, respectively. Freddie Mac saw a 21.8% MoM decrease and Fannie Mae saw a 13.1% MoM decrease in ARM aggregate CRR. Ginnie Mae decreased 22.4% MoM in fixed rate aggregate CRR and saw a 51.2% MoM decrease in ARM aggregate CRR.

Figure 21. Fixed Rate Aggregate CRR.

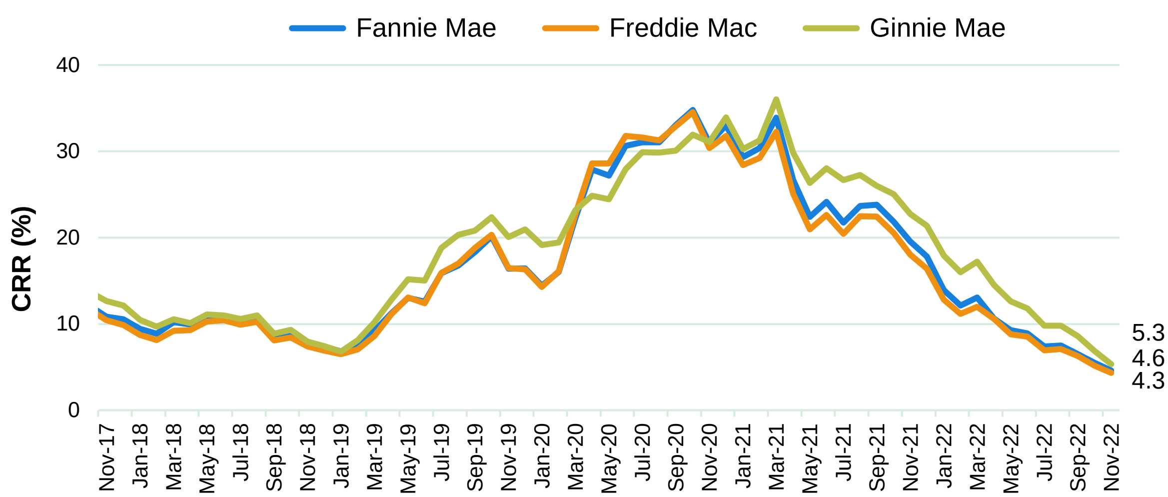
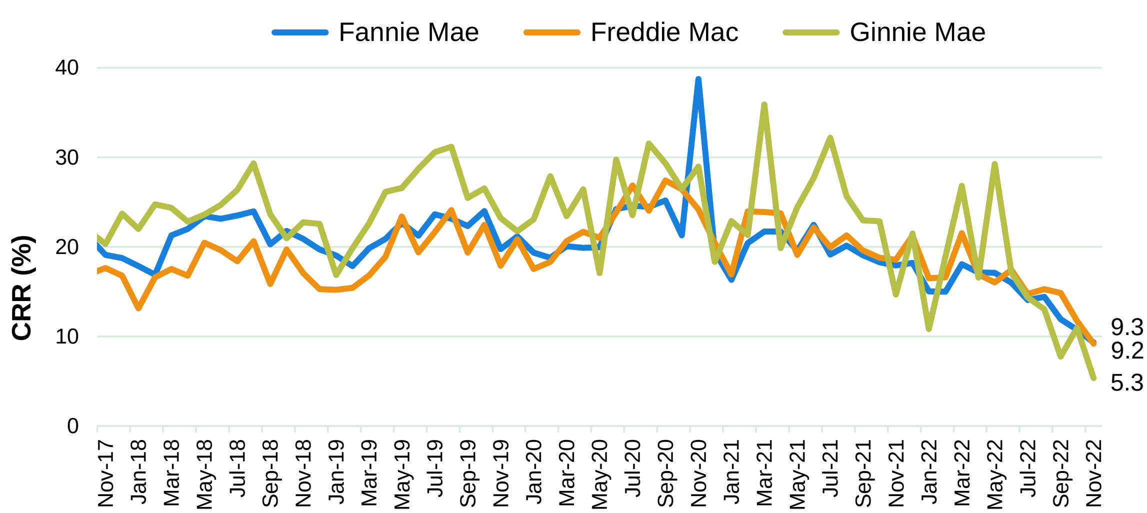


Figure 22. ARM Aggregate CRR.



Source: Recursion. Note: Data as of November 2022.

5 SINGLE-FAMILY MBS PASS-THROUGH ISSUANCE

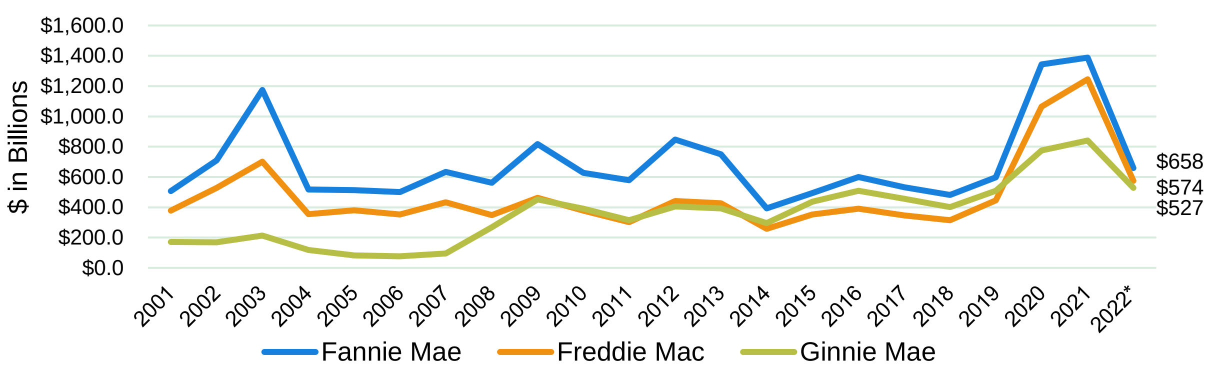
5.1 Gross Issuance of Agency MBS

Agency gross MBS issuance decreased MoM by 14.3%. All three agencies saw decreases in gross issuance as compared to November.

Table 1. 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	$1,388.0	$1,245.1	$2,633.1	$840.9	$3,474.0
2022 YTD	$603.4	$526.1	$1,129.5	$483.5	$1,613.0
2022 Annualized	$658.3	$573.9	$1,232.2	$527.4	$1,759.6

Figure 23. Agency Gross Issuance



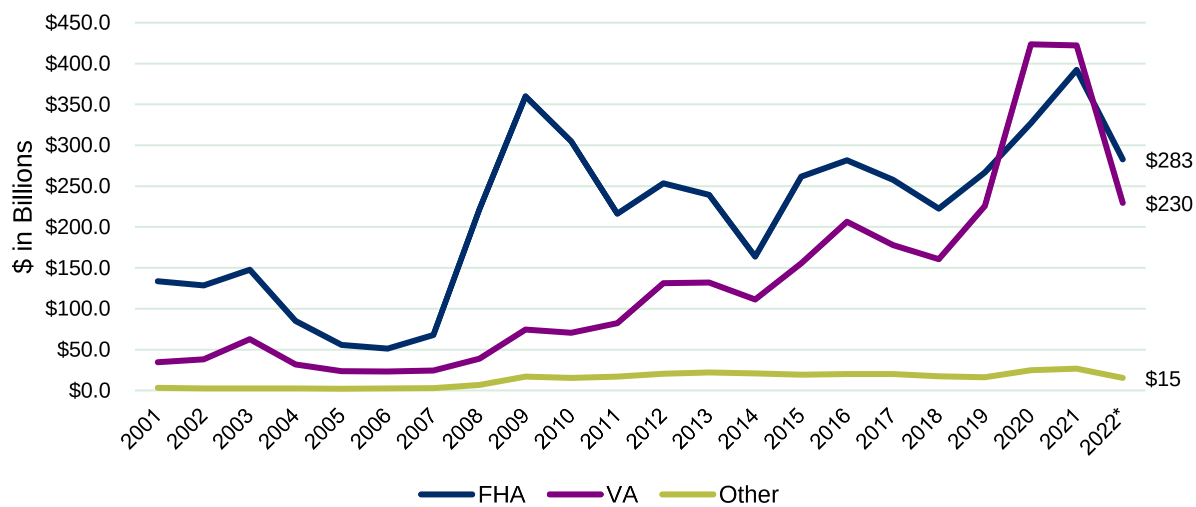
*2022 values have been annualized – the annualization methodology is not seasonally adjusted.
Note: Numbers are rounded to the nearest hundred million. For sums, like “GSE Total”, the values are rounded after the exact underlying values are summed. As a result, some sums may not appear to match the sum of their rounded component values.

Ginnie Mae's $33.6 billion in gross issuance in November was approximately 52% below the average monthly issuance for 2021. Thus far in 2022, Ginnie Mae is on pace to have lower gross issuance than 2021 by approximately $313.5 billion.

Table 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	$392.2	$422.1	$26.7	$840.9
2022 YTD	$259.1	$210.3	$14.1	$483.5
2022 Annualized	$282.6	$229.5	$15.4	$527.4

Figure 24. Ginnie Mae Gross Issuance



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5.2 Net Issuance of Agency MBS

Agency net issuance in November was approximately $22.1 billion, which represents a 20.5% MoM decrease in net issuance driven entirely by decreases in GSE net issuance. Ginnie Mae net issuance was $18.3 billion in November, a 5.5% increase from October 2022. Since May 2022, FHA net issuance outpaces VA net issuance MoM, as shown in Table 4 and Figure 21.

Table 3. 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	$193.8	$161.4	$355.2	$163.4	$518.5
2022 Annualized	$211.4	$176.0	$387.4	$178.2	$565.7

Figure 25. Agency Net Issuance

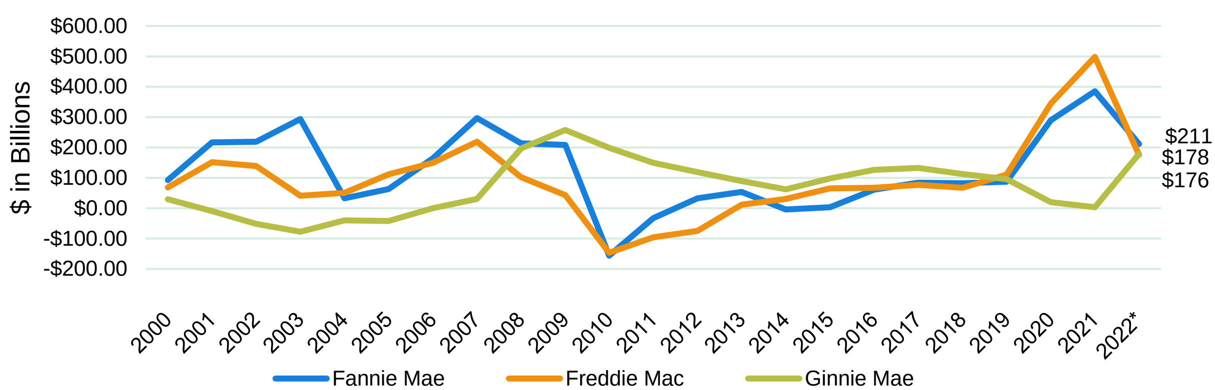

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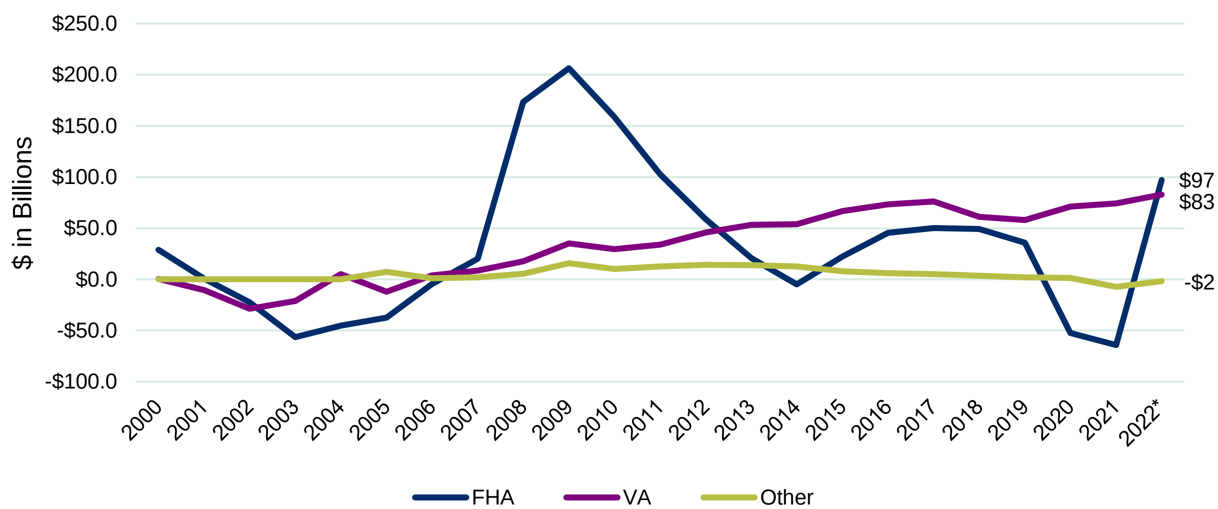
Table 4. Ginnie Mae Net Issuance Collateral Composition ($ in billions)

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	$89.1	$75.9	-$1.7	$163.4
2022 Annualized	$97.2	$82.8	-$1.8	$178.2

Figure 26. Ginnie Mae Net Issuance



*2022 values have been annualized – the annualization methodology is not seasonally adjusted.
Note: Numbers are rounded to the nearest hundred million. For sums, like "GSE Total", the values are rounded after the exact underlying values are summed. As a result, some sums may not appear to match the sum of their rounded component values.

5.3 Monthly Issuance Breakdown

Table 5. Ginnie Mae Net Issuance Collateral Composition ($ in billions)

	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
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	$85.9	$59.0	$179.0	$238.0	$45.6	$37.6	$14.0	$83.2	$97.3
Feb-22	$73.3	$64.6	$49.0	$137.9	$186.9	$27.8	$22.7	$9.7	$50.5	$60.2
Mar-22	$76.8	$62.9	$47.4	$139.7	$187.1	$22.6	$23.1	$6.9	$45.7	$52.6
Apr-22	$65.3	$53.5	$47.8	$118.8	$166.6	$19.5	$17.7	$13.2	$37.2	$50.4
May-22	$54.7	$43.7	$45.0	$98.4	$143.4	$13.6	$12.5	$15.5	$26.1	$41.6
Jun-22	$54.5	$42.0	$43.6	$96.5	$140.1	$14.8	$10.7	$16.0	$25.5	$41.5
Jul-22	$46.8	$40.3	$42.4	$87.1	$129.5	$12.1	$14.4	$18.0	$26.5	$44.5
Aug-22	$39.8	$46.3	$40.3	$86.1	$126.4	$4.8	$19.8	$16.2	$24.6	$40.8
Sep-22	$39.3	$38.2	$39.9	$77.5	$117.4	$7.6	$13.9	$18.3	$21.5	$39.8
Oct-22	$34.1	$26.1	$35.5	$60.2	$95.7	$5.8	$4.7	$17.3	$10.5	$27.8
Nov-22	$25.7	$22.7	$33.6	$48.4	$82.0	$0.3	$3.5	$18.3	$3.8	$22.1

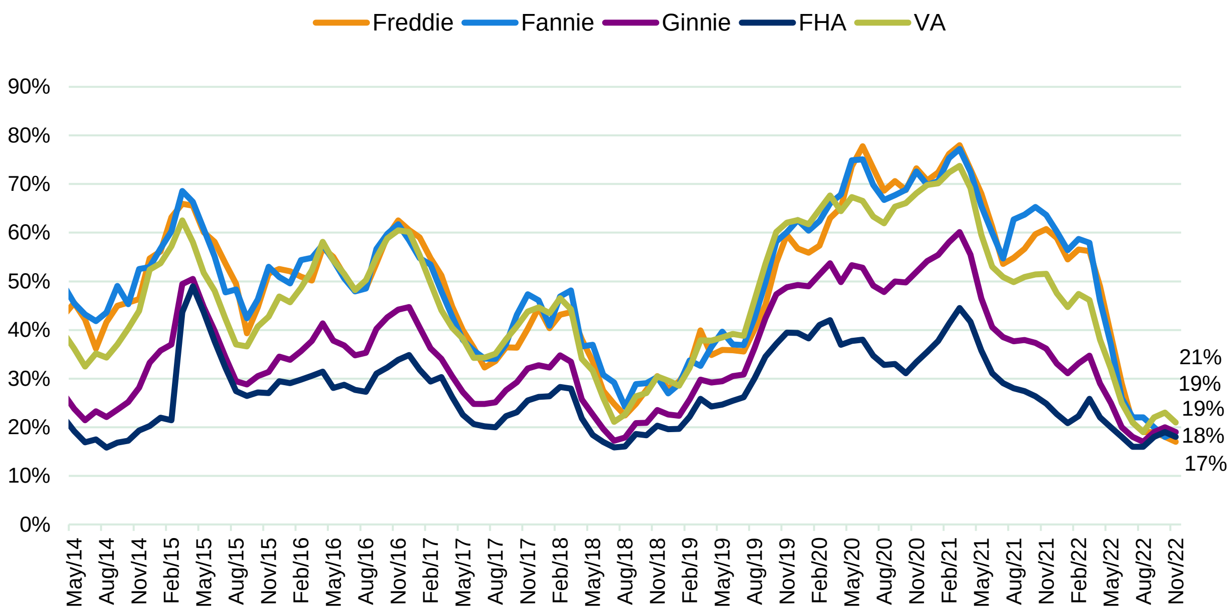
Source: Beginning May 2021, data for Gross and Net Issuance was sourced from Fannie Mae, Freddie Mac, and Ginnie Mae loan level disclosure files. Net issuance is defined here as the difference between prior period UPB and current period UPB. Data as of November 2022. Beginning with the October 2021 GMAR, the Fannie Mae and Freddie Mac net issuance data have been updated to reflect the current UPB of the portfolios. July 2021 through November 2022 GMAR net issuance data reflect the UPB at security issuance for Fannie Mae and Freddie Mac. Note: Numbers are rounded to the nearest hundred million.

5.4 Percent Refi at Issuance – Single-Family

Refinance activity has decreased for Ginnie Mae in November. In the conventional mortgage market space, Fannie Mae saw an increase of approximately 6% MoM while Freddie Mac's refinance share decreased 6% MoM. Ginnie Mae's MoM decrease was approximately 5%, with the greater drop taking place with VA lending which was down almost 9% in November MoM. FHA's refinance share decreased by approximately 5%.

- Freddie Mac's refinance percentage dropped to 17% in November, down from 18% in October.
- Fannie Mae's refinance percentage increased to 19% in November, up from 18% in October.
- Ginnie Mae's refinance percentage dropped to 19% in November, down from 20% in October.
- FHA's refinance percentage dropped to 18% in November, down from 19% in October.
- VA's refinance percentage dropped to 21% in November, down from 23% in October.

Figure 27. Percent Refinance at Issuance – Single-Family.



Sources: Recursion. Note: Data as of November 2022.

6 AGENCY SINGLE-FAMILY MBS OUTSTANDING

6.1 Outstanding Single-Family Agency MBS

As of November 2022, outstanding single-family MBS in the agency market totaled $8.582 trillion: 41.6% Fannie Mae, 33.7% Freddie Mac, and 24.7% Ginnie Mae MBS. Over the past twelve months, Freddie Mac's, Fannie Mae's, and Ginnie Mae's total outstanding MBS increased by approximately 8.5%, 5.5% and 8.9%, respectively. Fannie Mae outstanding MBS remains larger than Freddie Mac's and Ginnie Mae's by approximately $685 billion and $1.5 trillion, respectively.

Ginnie Mae MBS collateral composition has changed dramatically over the past five years. In November 2017, 60.9% of Ginnie Mae outstanding collateral was FHA and 32.8% was VA. In November 2022, FHA collateral comprised 52.7% of Ginnie Mae MBS outstanding and VA collateral comprised 42.3% of Ginnie Mae MBS outstanding.

Figure 28. Outstanding Agency Mortgage-Backed Securities.

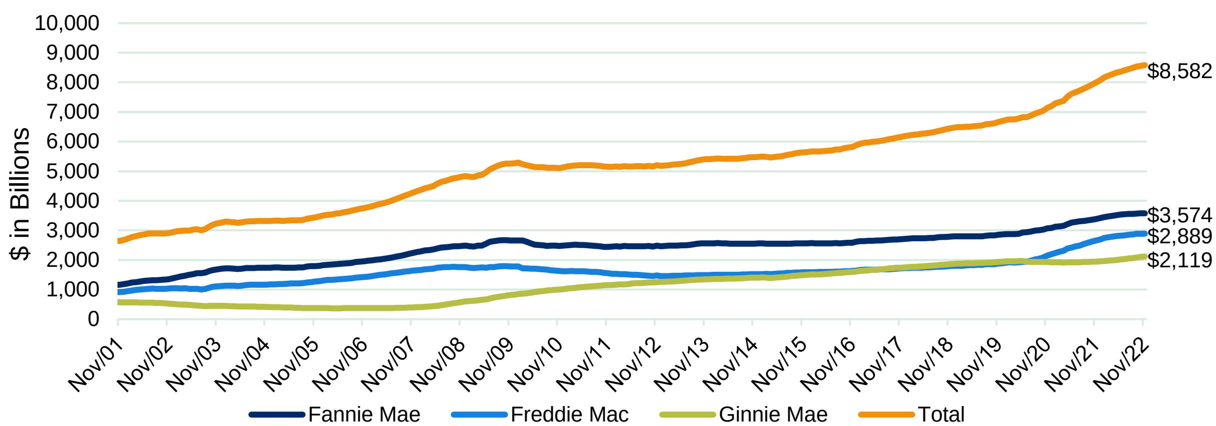
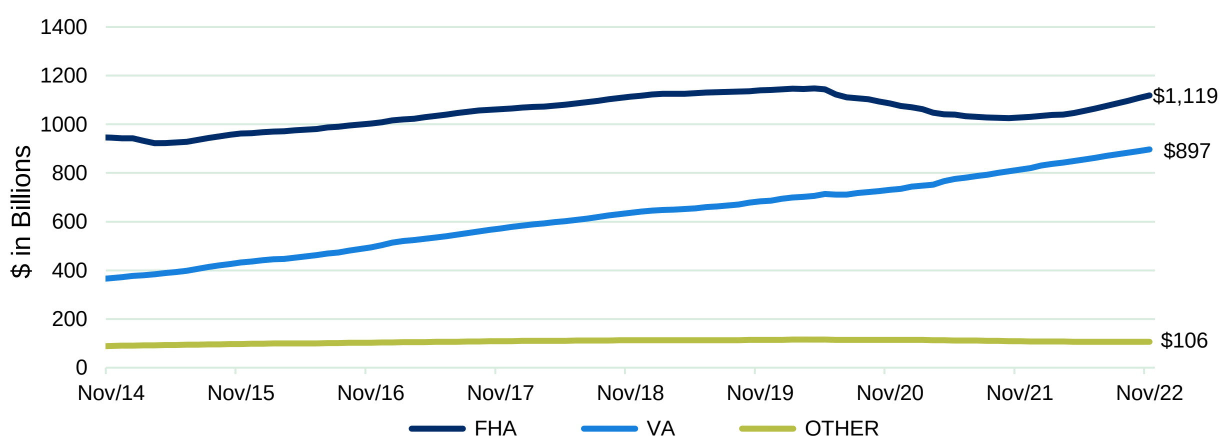


Figure 29. Composition of Outstanding Ginnie Mae Mortgage-Backed Securities.



Sources: Recursion. Note: Data as of November 2022.

6.2 Origination Volume and Share Over Time

Origination volume continued to decline in Q3 2022, with $505 billion in originations in Q3, which represents a decline in issuance from Q2 2022 of approximately 22%. Ginnie Mae's share of total origination increased from 17.8% to 21.6% in Q3 2022, while Portfolio origination decreased from 30.8% to 26.4% in Q3 2022.

Figure 30. First Lien Origination Volume

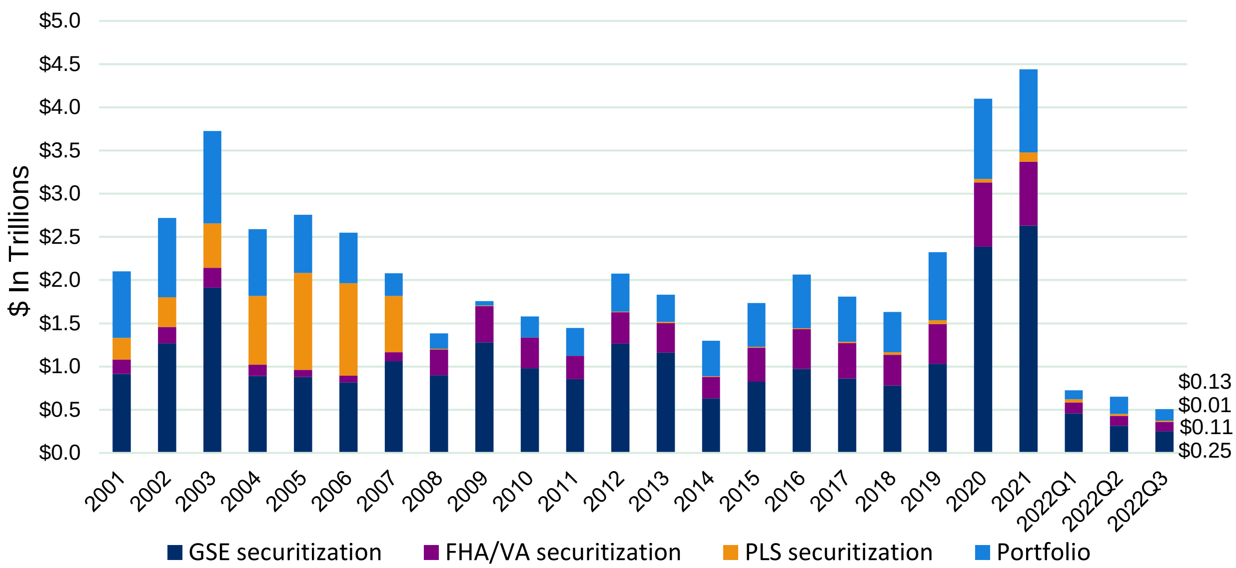
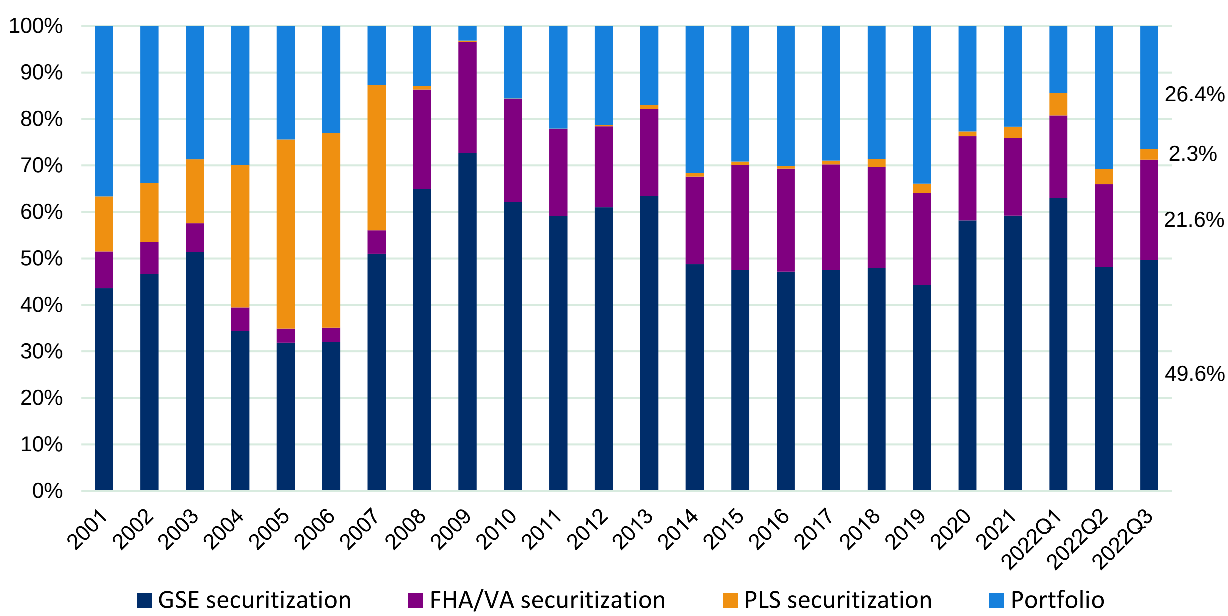


Figure 31. First Lien Origination Share



Source: Inside Mortgage Finance. Note: Data as of Q3 2022.

6.3 Agency Issuance and Agency Outstanding by State

Ginnie Mae MBS represent approximately 28% of new agency issuance over the past year. The share of Ginnie Mae's new agency issuance varies across states, with the highest Ginnie Mae share being in Alaska (51%) and the lowest in the District of Columbia (18%). The highest Ginnie Mae outstanding share is in Alaska and Mississippi (47%) and the lowest still in the District of Columbia (13%). There is currently a 3% difference between Ginnie Mae's share of new agency issuance and Ginnie Mae's share of agency outstanding.

Table 6. Agency Issuance Breakdown by State

	Agency Issuance (past 1 year)				Agency Outstanding			
National	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)
	28%	*2,480,932*	*276.27*	*283.75*	*25%*	*10,622,771*	*203.97*	*211.00*
AK	51%	8,427	330.70	295.47	47%	37,276	261.67	221.74
AL	42%	53,992	218.98	233.63	40%	234,508	156.29	177.70
AR	39%	28,976	187.30	216.05	39%	136,011	131.76	160.89
AZ	26%	74,944	306.82	312.55	24%	270,078	217.76	225.66
CA	21%	171,988	434.50	426.30	16%	676,713	326.58	321.24
CO	27%	56,428	390.86	373.44	23%	211,871	290.53	277.41
CT	28%	23,635	259.62	275.45	25%	104,995	201.94	209.92
DC	18%	1,978	497.20	427.95	13%	8,839	381.63	351.28
DE	33%	12,146	263.59	285.17	31%	51,240	203.67	211.38
FL	32%	217,523	285.21	287.11	31%	838,927	210.53	210.99
GA	35%	126,143	247.70	280.33	33%	492,405	178.75	206.56
HI	38%	7,978	610.43	487.14	32%	33,328	469.47	359.01
IA	26%	17,051	180.69	195.77	22%	81,814	133.62	148.88
ID	25%	14,640	327.23	315.35	23%	63,055	216.71	222.75
IL	25%	83,708	208.14	241.22	22%	362,646	159.65	179.75
IN	31%	62,907	186.87	205.32	30%	276,331	133.42	150.85
KS	30%	20,003	191.14	219.92	29%	95,574	139.58	164.06
KY	36%	37,188	194.83	211.20	34%	163,507	143.16	156.08
LA	44%	45,716	203.95	233.60	40%	198,792	157.54	177.86
MA	22%	27,802	368.41	362.44	16%	112,520	284.22	269.67
MD	38%	69,607	333.61	323.25	33%	289,408	265.03	250.22
ME	28%	8,543	239.99	263.09	25%	37,525	177.25	192.00
MI	22%	60,895	184.19	211.52	20%	272,751	133.42	157.20
MN	20%	32,633	244.18	269.83	18%	158,500	182.06	198.91
MO	31%	52,824	195.07	216.73	29%	242,441	141.63	162.31
MS	49%	26,842	198.55	213.56	47%	121,247	143.04	161.43
MT	24%	6,841	300.93	306.01	23%	32,129	208.33	216.51
NC	30%	98,555	244.08	277.25	28%	409,825	174.78	201.97
ND	30%	3,969	242.46	239.45	24%	16,950	193.30	185.11
NE	28%	12,771	213.96	217.29	26%	64,411	148.69	161.29
NH	24%	8,327	303.56	298.14	22%	37,974	225.94	215.30
NJ	25%	56,172	310.55	330.28	21%	229,306	239.81	255.17
NM	38%	19,626	235.90	246.35	37%	94,347	166.16	178.39
NV	32%	35,752	333.32	321.93	30%	131,298	247.04	235.29
NY	22%	57,197	300.19	339.81	20%	304,457	208.65	248.81
OH	30%	89,766	180.22	199.98	29%	419,219	129.87	149.40
OK	40%	38,213	198.51	218.24	41%	187,592	140.61	162.39
OR	21%	26,169	345.27	351.01	19%	109,575	253.54	253.84
PA	25%	74,141	199.71	243.85	25%	385,042	148.77	182.42
RI	35%	8,632	313.53	291.70	30%	35,244	233.65	213.60
SC	36%	60,554	245.81	256.00	34%	232,029	182.42	192.14
SD	31%	6,137	239.00	239.33	29%	29,094	172.74	178.14
TN	31%	64,242	251.99	273.56	31%	267,565	174.61	204.19
TX	30%	237,895	256.71	290.64	31%	1,077,553	181.13	212.16
UT	21%	24,188	365.60	367.29	18%	94,469	258.86	263.69
VA	40%	102,861	327.25	316.19	36%	442,592	256.66	250.87
VI	20%	144	375.43	412.29	23%	782	247.73	302.87
VT	20%	2,371	237.58	260.41	18%	11,998	181.26	180.97
WA	25%	55,753	390.12	390.35	21%	230,539	284.22	289.75
WI	20%	26,935	207.87	225.24	17%	122,630	156.49	163.90
WV	46%	13,212	193.07	194.82	43%	58,959	143.93	145.70
WY	36%	5,992	263.52	264.00	34%	24,890	206.23	202.22

Source: Recursion. Note: Outstanding balance is based on loan balance as of November 2022. Ginnie Mae issuance is based on the last 12 months, from October 2021 to November 2022. Values above are based on loan level disclosure data, thus excluding loan balances for the first six months that loans are in a pool. This accounts for the difference in share of outstanding MBS represented above and in Outstanding Single-Family Agency MBS.

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

As of November 2022, the weighted average coupon (WAC) on outstanding Ginnie Mae MBS increased slightly from 3.04% in October 2022 to 3.07% in November. With 30-year fixed mortgage rates for certain credit profiles at over 6.0% in November, this increase in WAC is likely to continue. The bottom chart illustrates that loans originated since 2019 account for 77% of Ginnie Mae MBS collateral outstanding.

Figure 32. Outstanding Ginnie Mae MBS Balance, by Coupon.

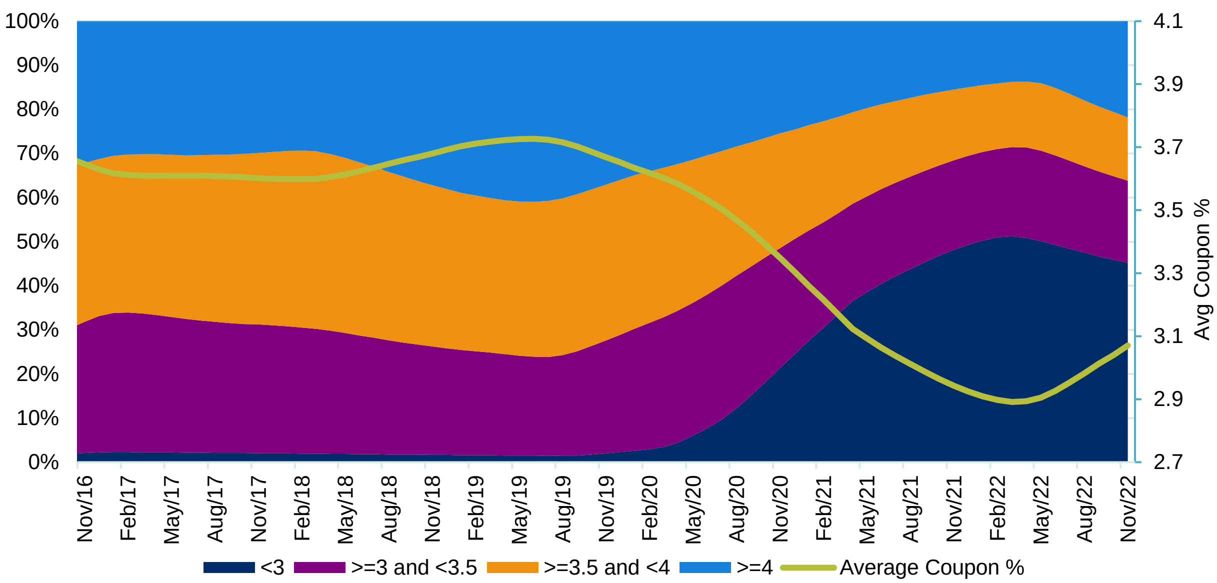
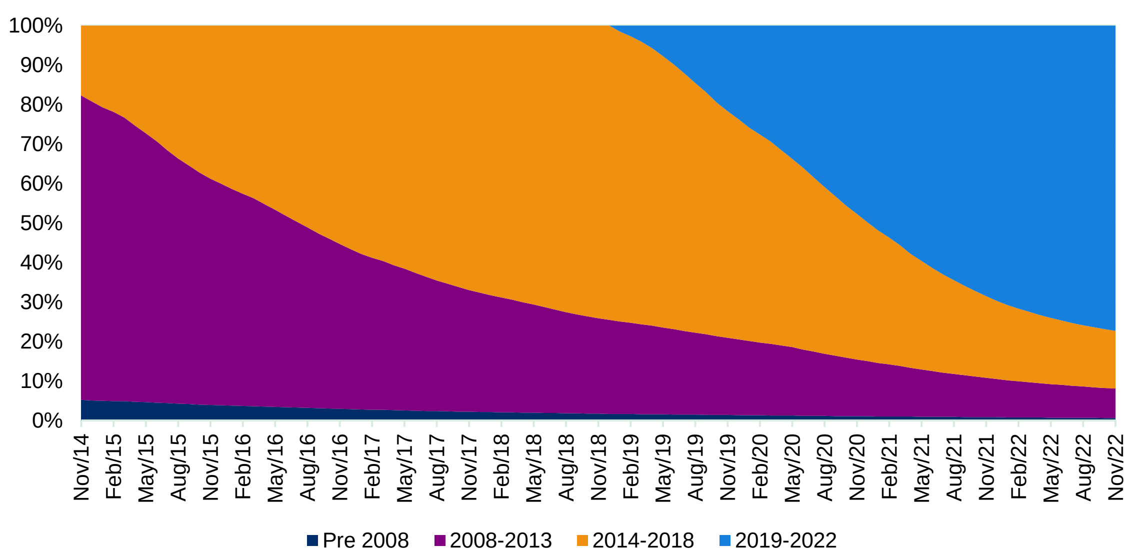


Figure 33. Outstanding Ginnie Mae MBS Balance, by Vintage.



Sources: Recursion. Note: November 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.

7 AGENCY REMIC SECURITIES

7.1 Monthly REMIC Demand for Ginnie Mae MBS

In November 2022, $3.4 billion of Ginnie Mae MBS were securitized into Real Estate Mortgage Investment Conduits (REMICs) as underlying collateral, a 42% MoM decrease. Of that, approximately $1.2 billion were multifamily MBS having coupons between 3.5% and 4.0%. $2.1 billion were Single Family MBS with 84% of the single family MBS having coupons over 4.0%.

As of November, in 2022, approximately $97.8 billion of Ginnie Mae single family and multifamily MBS were securitized into Ginnie Mae REMIC transactions. This represents a roughly 46.4% decrease over the same period in 2021 ($182.6 billion).

Figure 34. Ginnie Mae Single Family and Multifamily MBS Securitized into REMICs

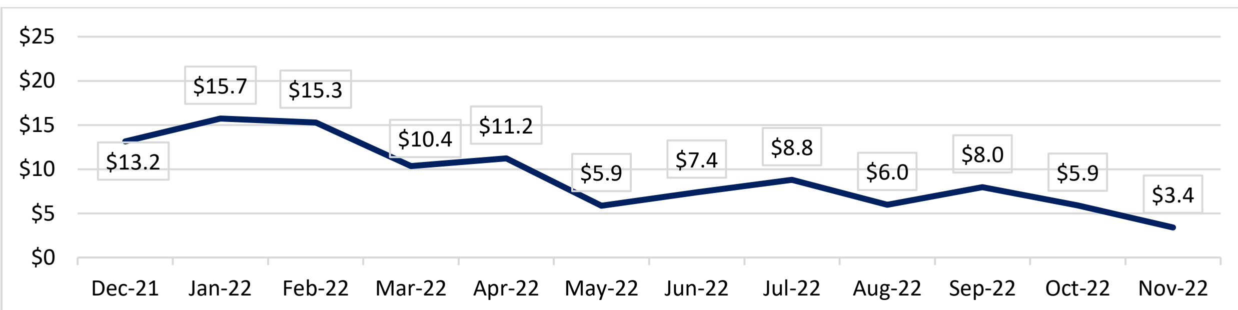


Table 7. November 2022 REMIC Collateral Coupon Distribution

Net Coupon (%)	*Approx. Ginnie Mae MBS amount securitized into REMIC Deals ($MM)*[6]	*% Breakdown of REMIC Collateral by coupon*[17]
Multifamily		
3.51-4.00	1,153.9	100.0%
Subtotal	**1,153.9**	**100%**
Single-Family		
3.01-3.50	24.2	
3.51-4.00		1.0%
4.01-4.50	-	-
4.51-5.00	152.1	
5.01-5.50		7.0%
5.51-6.00	260.0	12.0%
6.01-6.50	689.0	33.0%
Subtotal	815.1	39.0%
Grand Total	**155.0**	**7.0%**

Source: Ginnie Mae Disclosure Files

[6]Totals may not sum due to rounding.

7.2 REMIC Market Snapshot

In November 2022, Ginnie Mae Single-Family REMIC collateral WAC increased MoM by 73 basis points which is the highest it has been in 2022. Freddie Mac and Fannie Mae Single-Family REMIC collateral WAC are also the highest they have been all of 2022 and increased MoM by 48 basis points and 35 basis points, respectively.

- In November 2022, Ginnie Mae REMIC issuance volume was $5.9 billion, the seventh consecutive month of REMIC issuance volume below $10.0 billion.
- Ginnie Mae guaranteed two HREMIC transactions in November 2022. This is the fourth month in 2022 in which Ginnie Mae guaranteed two HREMIC transactions. In 2021, there were seven months where Ginnie Mae guaranteed two HREMIC transactions.

Figure 35. REMIC Issuance by Agency

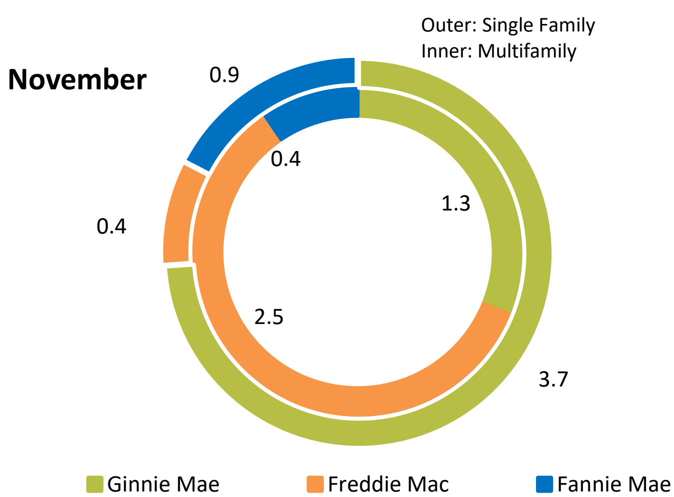


Table 8. Monthly REMIC Issuance by Agency

	SF REMIC Issuance Volume ($B)	% of SF REMIC Issuance Volume	Number of SF REMIC Trans-actions	MF REMIC Issuance Volume ($B)	% of MF REMIC Issuance Volume	Number of MF REMIC Trans-actions
Ginnie Mae	3.7	73.9	10	1.3	31.2	7
Freddie Mac	0.4	8.7	6	2.5	59.3	3
Fannie Mae	0.9	17.4	8	0.4	9.5	1
Total	$5.0	100%	24	$4.1	100%	11

Source: Ginnie Mae, Fannie Mae, and Freddie Mac Disclosure Files