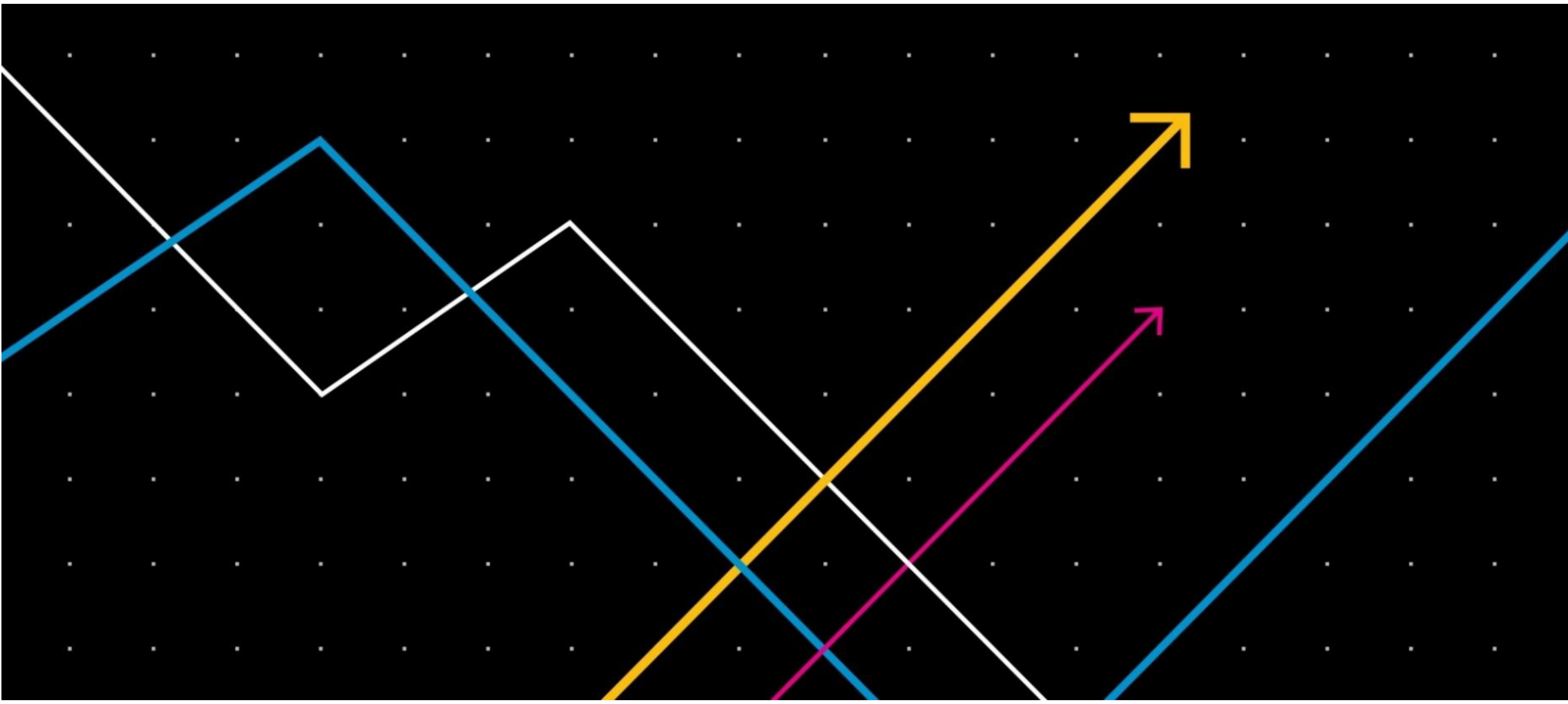
HOUSING FINANCE POLICY CENTER



MORTGAGE INSURANCE DATA AT A GLANCE

2025

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Contents

Overview

The Role of Mortgage Insurance in the Mortgage Market

During the past 68 years, the private mortgage insurance (PMI) industry has enabled homeownership for nearly 40 million borrowers who lack sufficient funds for a 20 percent down payment on a conventional mortgage. This data publication quantifies the role of PMI in the agency mortgage market. It describes the borrowers served by PMI and how they compare with conventional borrowers without PMI as well as borrowers with government mortgage insurance (e.g., Federal Housing Administration, or FHA, and US Department of Veterans Affairs, or VA, borrowers) along key dimensions, such as loan-to-value (LTV) ratios, credit scores, and first-time homebuyer status. In addition to loan origination characteristics, this publication quantifies the performance of PMI-insured agency loans as measured by historical delinquency rates and loss severities, as well as the role of PMI in reducing losses to Fannie Mae and Freddie Mac, the government-sponsored enterprises (GSEs).

This data publication is an update to the 2023 data publication *Mortgage Insurance: Data at a Glance* to provide an up-to-date snapshot of the mortgage insurance market. For an in-depth explanation of the past and present role of PMI, see the 2017 comprehensive research report *Sixty Years of Private Mortgage Insurance in the United States*, available at urban.org.

This publication relies on two main data sources:

Data on the Agency Mortgage Market

This section compares loan origination characteristics for GSE PMI mortgages with GSE non-PMI, FHA, and VA mortgages using loan-level agency security data (from eMBS) for Ginnie Mae, Fannie Mae, and Freddie Mac, available from 2013 onward. These data contain all agency origination data, but they do not contain credit performance data.

Government-Sponsored Enterprise Loan-Level Credit Data

These data, covering loans from 1999 onward, are provided by the GSEs in support of Fannie Mae's Connecticut Avenue Securities and Freddie Mac's Structured Agency Credit Risk deals and cover loans similar to those included in the deals: fixed-rate, full-documentation, fully amortizing loans not purchased under special programs (including HomeReady/Home Possible).

A Few Highlights

- **Conventional mortgages with PMI** have been the most common execution for low down payment purchasers since 2018.

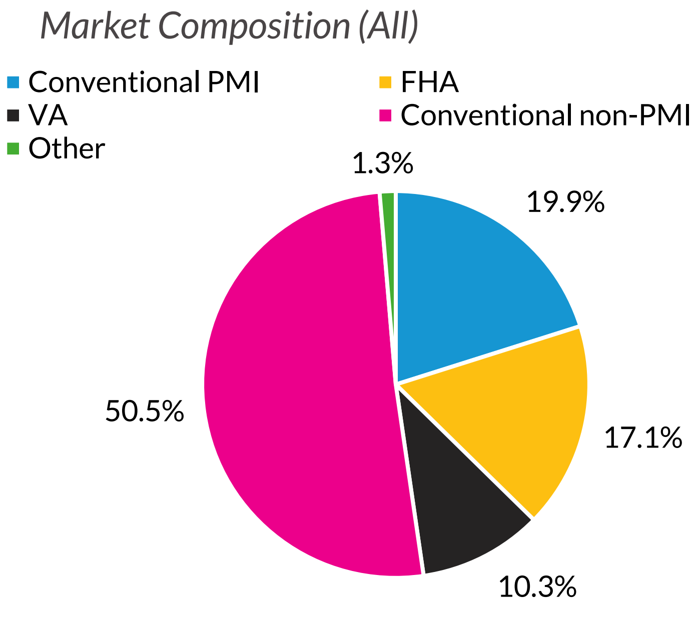
- **Total loss severity** for the 1994 to 2024 origination period of GSE loans without PMI (48.0) was 16.7 percent higher than the loss severity for loans with PMI (31.2), indicating that PMI is highly effective in reducing losses to the GSEs.

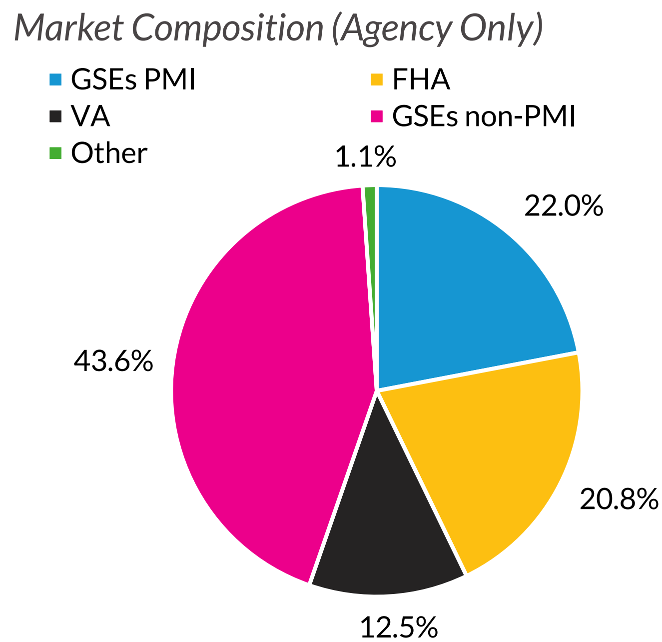
- **Capitalization of the mortgage insurance industry** has increased since 2008, with MI companies raising $19.5 billion dollars in total capital to keep up with capital requirements, while the average private MI in force premium yield has declined from 52.5 to 39.4 basis points between 2017 and 2024.

Mortgage Insurance Market

In the 2022-2024 period, loans with PMI accounted for just under 1 in every 5 new originations. Loans with any type of mortgage insurance (Conventional PMI plus VA and FHA) made up approximately 47.3 percent of the entire mortgage market. Conventional non-PMI made up just over half of originations during this period, with other (loans categorized as miscellaneous) comprising the remaining 1.3 percent. Looking at the agency market alone, PMI held 22.0 percent of the market share. Origination volumes are significantly lower than their recent peak in 2021 due to higher interest rates. However, there was a slight pickup in 2024 volume with FHA and VA accelerating new lending at a more rapid rate than total PMI.

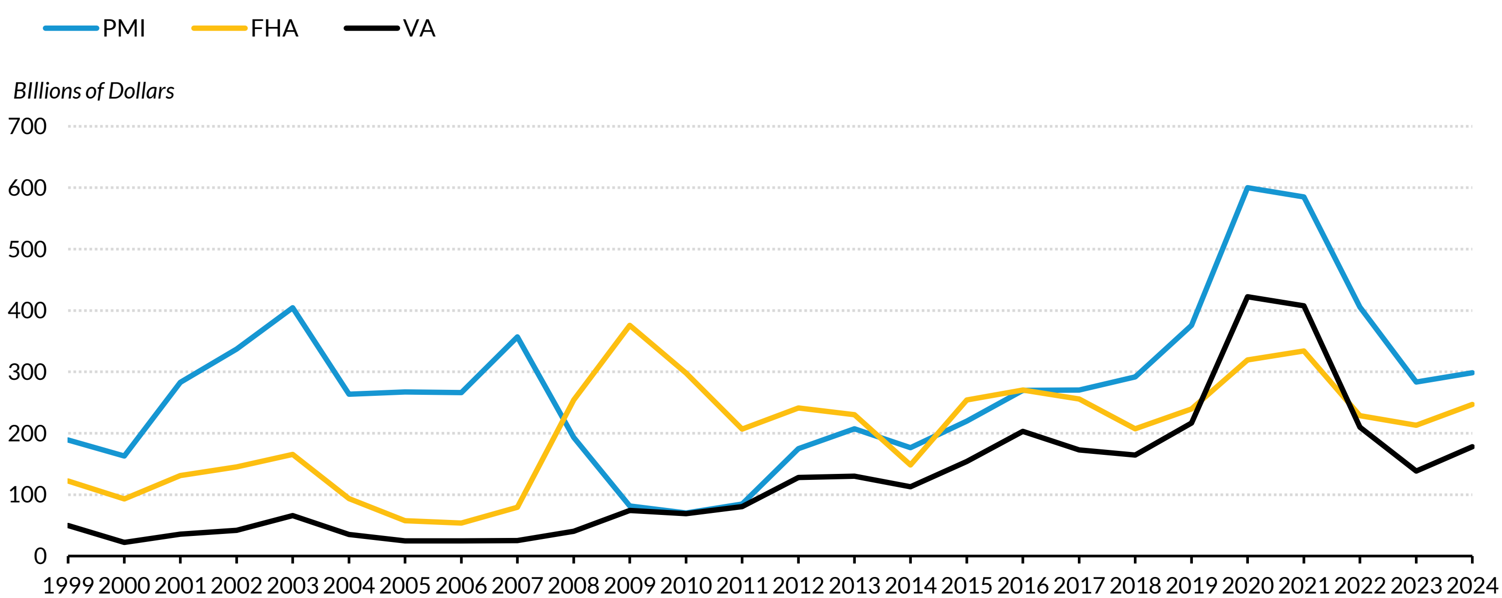
Mortgage Insurance Market Share, 2022-2024 Originations (Count)





Sources: Data are from ICE Mortgage Analytics, eMBS and the Urban Institute. Other includes RHS & Indian Housing, and Miscellaneous.
Notes: FHA = Federal Housing Administration; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. eMBS numbers on PMI are for government-sponsored enterprise loans only.

Annual Mortgage Insurance Volume: PMI, FHA, and VA



Sources: Inside Mortgage Finance and the Urban Institute.
Note: FHA = Federal Housing Administration; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. PMI includes all "flow" products.

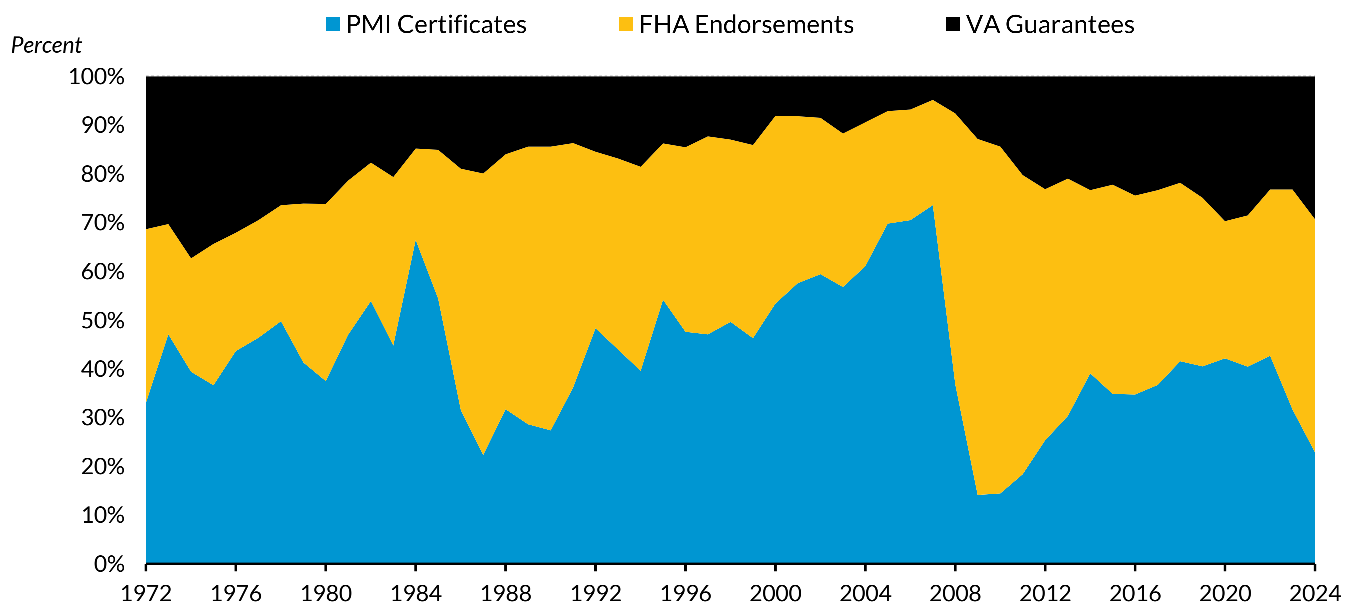
Agency Mortgage Market

Agency Mortgage Insurance Market

The PMI share of agency originations has varied widely since 1972. The PMI share of new originations has expanded during periods of strong mortgage origination, while the FHA and VA share has expanded during periods of weaker mortgage origination (top). This held true during the strong mortgage market of 2020, which saw the PMI share expand, and most recently during the 2021-2024 period when high rates have pushed down mortgage activity coinciding with an increase in the FHA/VA share. Although market share of new originations has fluctuated due to economic conditions, the PMI share of outstanding mortgage volume (bottom) has remained more stable, hovering between 35 and 40 percent of outstanding loans by count going back to 2016 when these data became available.

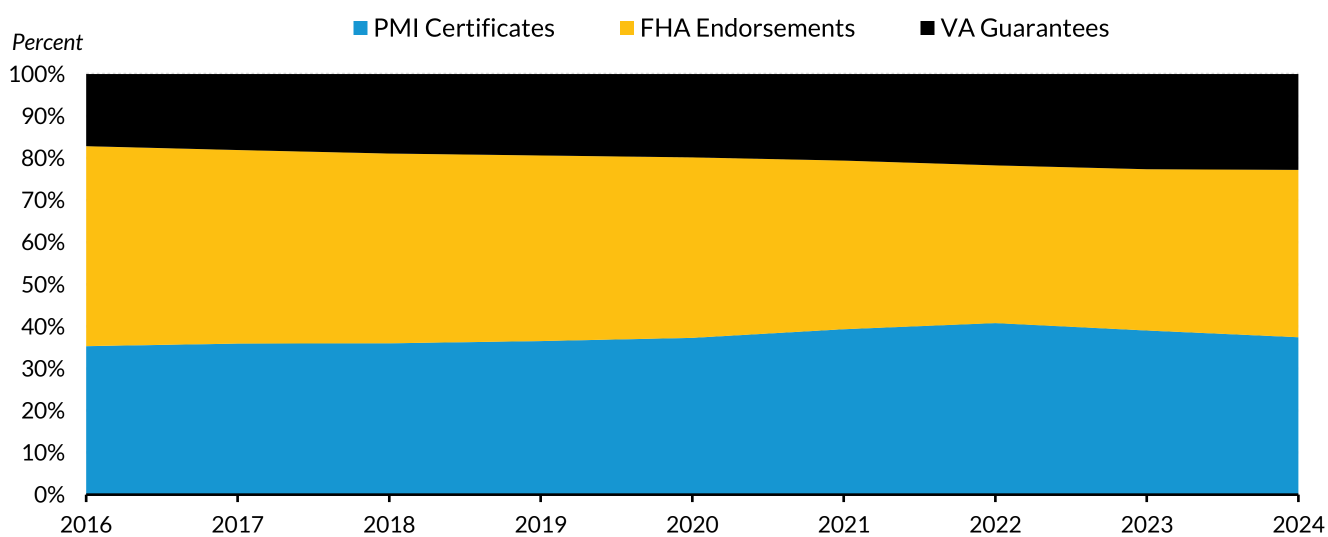
Mortgage Insurance Origination Market Share, 1972–2024

Originations, Loan Count



Mortgage Insurance Outstanding Market Share, 2016–2024

Outstanding, Loan Count



Sources: Before 2016, data are from the US Department of Housing and Urban Development (US Housing Market Conditions archives), Mortgage Insurance Companies of America, and U.S. Mortgage Insurers; after that, data are from eMBS and the Urban Institute. Bottom is eMBS only.
Notes: FHA = Federal Housing Administration; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. eMBS numbers on PMI are for government-sponsored enterprise loans only.

Mortgage Insurance Market

PMI borrowers tend to have lower credit scores and higher LTV and DTI ratios than non-PMI GSE borrowers. For 2024 originations, PMI borrowers had an average FICO credit score 5 points lower than non-PMI borrowers. In 2024, 36.1 percent of GSE loans had PMI. The share was significantly higher for purchase loans (44.1 percent) than for refinance loans (6.7 percent) with refinance activity being very limited in 2024. The average loan size of a GSE PMI loan was nearly 12 percent larger than that of a non-PMI GSE loan. But the average value of a home where the borrower has PMI is $392,769 , compared with $500,081 for borrowers without PMI (based on average loan size and LTV ratio in the table below). GSE PMI borrowers averaged 92.8 percent LTV ratios versus 64.2 percent LTV ratios for GSE borrowers without PMI.

All GSE Loans

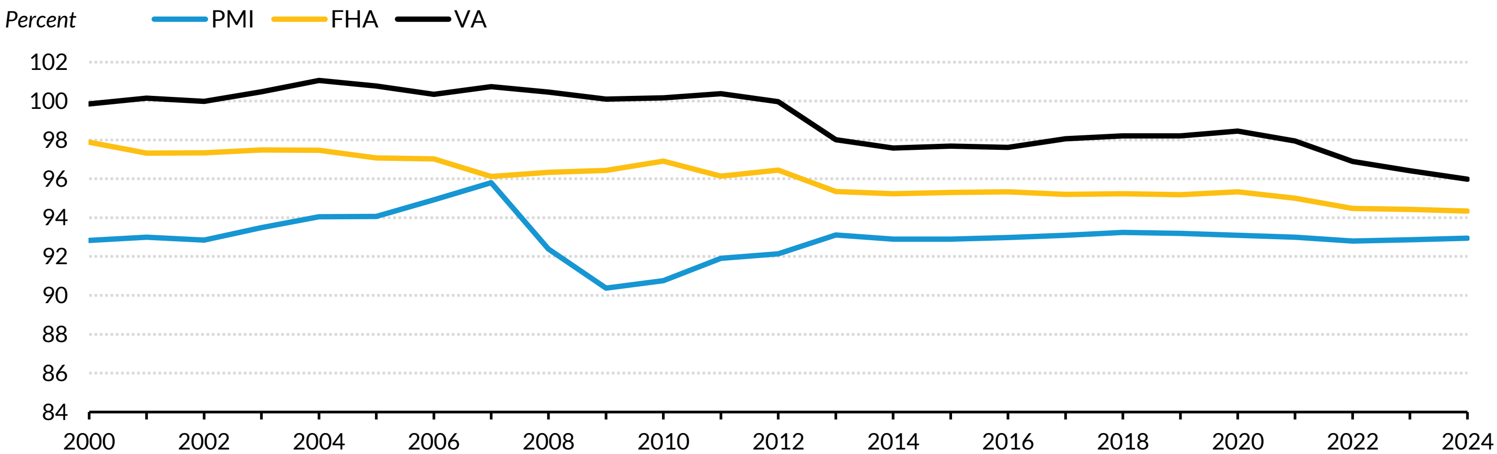
	% of Loans		Average Loan Size ($ Thousands)		Note Rate (%)		Purchase Share (%)		FRM 30 (%)		LTV Ratio (%)		FICO Score		DTI Ratio (%)	
	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI
2016	25.4	74.6	225.0	224.3	3.85	3.68	75.2	33.0	88.9	65.4	92.3	65.8	742	752	34.8	33.2
2017	29.0	71.0	223.7	213.8	4.25	4.12	86.2	43.7	91.2	68.8	92.7	66.8	740	745	35.9	34.6
2018	33.7	66.3	228.7	213.0	4.80	4.72	92.7	51.3	95.1	76.6	92.9	67.0	739	744	37.3	35.7
2019	32.6	67.4	253.7	240.7	4.19	4.11	83.7	39.8	95.2	75	92.4	66.9	745	750	36.4	34.6
2020	22.4	77.5	284.9	279.1	3.18	3.07	67.6	19.1	93.2	69.7	91.3	64.1	749	762	35.2	32.5
2021	19.7	80.3	309.9	279.8	3.07	2.92	81.9	20.4	95.3	69.2	91.9	62.7	746	755	35.8	33.4
2022	29.6	70.4	341.6	284.5	5.03	4.56	97.3	45.1	97	80.1	92.7	64.3	746	744	37.9	35.9
2023	37.8	62.2	346.7	300.4	6.71	6.68	98.7	73.8	98.1	90.4	92.8	64.6	749	753	39.3	36.6
2024	36.1	63.8	364.5	321.0	6.70	6.63	96.1	68.9	98	89.5	92.8	64.2	750	755	39.5	36.6

Sources: eMBS and the Urban Institute.
Notes: DTI = debt-to-income; FRM 30 = 30-year fixed-rate mortgage; LTV = loan-to-value; PMI = private mortgage insurance. Home Affordable Refinance Program loans are included and counted as refinances. PMI numbers are for government-sponsored enterprise loans only.

Mortgage Insurance Market

Since 1999, the average LTV ratios for PMI purchase originations have been consistently lower than those for FHA or VA loans. LTV ratios have trended slightly downward for all three channels between 2020 and 2022 but have since started to increase for PMI and FHA originations. Originations declined sharply for all channels during the years 2023 and 2024 due to a rise in interest rates. The annual GSE security volume backed by PMI stood at $261.0 billion in 2024, down from a peak of $561.1 billion in 2020 but up slightly from 2023.

Average LTV Ratio, Purchase Originations



Sources: Before 2016, data are from Laurie Goodman et al., *Mortgage Insurance at a Glance, June 2017* (Washington, DC: Urban Institute, 2017); after that, they are from eMBS and the Urban Institute.
Notes: FHA = Federal Housing Administration; LTV = loan-to-value; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. Purchase loans only.

All Loans

	Origination Volume, by Loan Amount ($ Billions)					Origination Volume, by Loan Count (Thousands of Loans)				
Pool issuance year	PMI	FHA	VA	GSE non-PMI	Other	PMI	FHA	VA	GSE non-PMI	Other
2016	258.4	275.7	203.3	711.7	25.1	1,110.5	1,334.5	793.5	3,076.4	132.8
2017	258.8	251.6	172.4	601.4	21.7	1,090.2	1,188.9	670.1	2,621.7	137.4
2018	270.4	218.6	153.1	511.9	18.7	1,105.4	995.8	570.6	2,165.7	116.8
2019	342.9	262.0	221.2	688.6	16.7	1,291.6	1,122.6	759.9	2,676.9	103.8
2020	561.1	328.0	410.4	1,827.8	27.2	1,951.6	1,349.7	1,343.1	6,484.7	142.5
2021	549.6	395.1	421.9	2,081.7	27.2	1,794.2	1,389.7	1,293.8	7,433.2	124.6
2022	367.9	278.4	221.6	807.1	15.0	1,083.4	863.8	600.5	2,826.3	64.3
2023	257.9	228.5	140.2	360.8	7.8	742.4	725.9	374.6	1,198.1	35.4
2024	261.0	255.6	184.4	405.3	7.0	721.8	782.6	472.9	1,267.4	32.9

Sources: eMBS and the Urban Institute.
Notes: FHA = Federal Housing Administration; GSE = government-sponsored enterprise; LTV = loan-to-value; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. Other includes RHS and Indian Housing loans. PMI numbers are for government-sponsored enterprise loans only.

PMI Compared with FHA and VA: All Loans

For 2024 originations, 60.8 percent of agency mortgages, by loan count, had mortgage insurance (PMI, FHA, or VA). Of these insured mortgages, 36.5 percent had PMI coverage, 39.6 percent were FHA insured, and 24.0 percent were VA guaranteed. The PMI share of insured loans declined in 2023 and 2024, while the combined FHA and VA share increased. Originations during this period fell for all channels due to higher interest rates, with FHA and VA programs falling less than PMI. The average loan size in 2024 for mortgages with PMI ($364,509) was larger than for FHA mortgages ($310,477) and smaller than for VA mortgages ($381,588). Since 2021, the average LTV ratio for FHA originations has been lower than that of the average PMI loan, driven by an increase in cash-out refinances as a share of total refinances in the FHA channel.

All Loans

		% of All Insured Loans				Average Loan Size ($ Thousands)			Note Rate (%)		
	% of loans with MI	PMI	FHA	VA	All	PMI	FHA	VA	PMI	FHA	VA
2016	50.8	34.7	40.3	25.0	100	233.8	198.1	255.2	3.88	3.77	3.50
2017	53.3	37.5	39.6	22.8	100	236.0	201.9	255.2	4.27	4.16	3.86
2018	55.5	42.2	36.5	21.3	100	244.0	207.3	264.4	4.81	4.80	4.52
2019	54.2	40.5	34.6	24.9	100	268.5	225.7	289.6	4.22	4.24	3.87
2020	40.7	42.2	28.2	29.7	100	289.3	234.9	304.5	3.21	3.28	2.89
2021	37.4	40.3	31.1	28.6	100	310.1	242.5	314.1	3.07	3.04	2.63
2022	48.8	42.7	34.0	23.3	100	341.6	269.7	352.5	5.03	4.88	4.50
2023	60.5	39.6	39.9	20.5	100	346.7	292.4	362.9	6.71	6.45	6.32
2024	60.8	36.5	39.6	24.0	100	364.5	310.5	381.6	6.70	6.29	6.13

	Purchase (%)			LTV Ratio (%)			FICO Score			DTI Ratio (%)		
	PMI	FHA	VA	PMI	FHA	VA	PMI	FHA	VA	PMI	FHA	VA
2016	75.6	67.8	44.7	92.3	92.3	94.5	742	681	710	34.8	40.7	38.4
2017	86.5	73.6	57.7	92.7	91.8	94.3	740	676	708	36.0	42.1	39.9
2018	93.1	78.4	67.9	92.9	92.0	95.3	740	670	707	37.6	43.3	41.4
2019	82.2	67.8	48.9	92.4	91.7	94.4	745	670	711	36.6	43.2	40.2
2020	66.5	62	31.3	91.3	92.1	90.5	749	677	727	35.3	42.7	39.0
2021	81.8	59.2	35.1	91.9	90.3	88.1	746	671	724	35.8	42.9	39.2
2022	97.3	74.1	66	92.7	88.9	91.5	746	666	712	37.9	44.2	42.2
2023	98.7	79.2	80.5	92.8	89.3	94.1	749	676	714	39.3	44.8	43.8
2024	96.1	74.8	62.8	92.8	89.4	93.8	750	682	716	39.5	44.8	43.5

Sources: eMBS and the Urban Institute.
Notes: FHA = Federal Housing Administration; LTV = loan-to-value; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. PMI numbers are for government-sponsored enterprise loans only.

PMI Compared with FHA and VA: Purchase Loans

For purchase originations in 2024, 64.2 percent of agency loans, by loan count, had mortgage insurance, driven by a decline in conventional non-PMI lending due to higher interest rates and higher home prices. PMI composed 44.0 percent of the insured market, down from 53.7 percent in 2021. Purchase loans with PMI had an average LTV ratio of 93.0 percent, lower than the 94.4 percent average ratio for FHA loans or the 96.0 percent average ratio for VA loans. PMI borrowers also had higher FICO credit scores and lower DTI ratios than FHA and VA borrowers in 2024 for both purchase loans and refinance loans (page 13).

Purchase

		% of All Insured Loans				Average Loan Size ($ Thousands)			Note Rate (%)		
	% of loans with MI	PMI	FHA	VA	All	PMI	FHA	VA	PMI	FHA	VA
2016	67.2	40.5	42.2	17.3	100	233.9	197.6	254.2	3.90	3.80	3.61
2017	66.2	43.4	39.0	17.6	100	237.2	204.4	262.5	4.28	4.21	3.96
2018	66.7	47.7	34.7	17.6	100	244.5	208.9	269.4	4.82	4.86	4.59
2019	68.1	48.3	34.0	17.7	100	260.3	221.1	282.8	4.27	4.33	4.01
2020	66.7	51.4	31.7	16.9	100	284.6	236.0	317.7	3.23	3.31	3.07
2021	63.0	53.7	30.0	16.3	100	313.9	255.8	353.6	3.10	3.14	2.86
2022	62.9	50.7	30.6	18.7	100	342.0	282.8	372.6	5.06	5.03	4.78
2023	64.5	44.9	36.2	18.9	100	346.3	307.7	373.6	6.71	6.48	6.32
2024	64.2	44.0	37.1	18.9	100	362.4	322.3	389.6	6.71	6.30	6.21

	LTV Ratio (%)			FICO Score			DTI Ratio (%)		
	PMI	FHA	VA	PMI	FHA	VA	PMI	FHA	VA
2016	93.0	95.3	97.6	743	682	711	34.9	41.0	39.4
2017	93.1	95.2	98.1	741	678	712	36.0	42.4	40.4
2018	93.2	95.2	98.2	741	672	712	37.6	43.5	41.6
2019	93.2	95.2	98.2	744	671	713	36.9	43.4	41.2
2020	93.1	95.3	98.5	748	678	720	35.8	43.1	40.4
2021	93.0	95.0	98.0	746	672	719	36.0	43.4	40.7
2022	92.8	94.5	96.9	746	671	719	38.0	44.7	43.1
2023	92.9	94.4	96.3	749	683	722	39.3	45.3	44.1
2024	93.0	94.4	96.0	750	690	727	39.5	45.3	44.0

Sources: eMBS and the Urban Institute.
Notes: FHA = Federal Housing Administration; LTV = loan-to-value; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. PMI numbers are GSE only.

PMI Compared with FHA and VA: Refinance Loans

For refinance originations in 2024, 50.4 percent of agency loans, by loan count, had mortgage insurance, with PMI composing 6.9 percent of the insured market. With mortgage interest rates rising between 2022 to 2024, the overall number of refinances was historically low.

Refinance

		% of All Insured Loans				Average Loan Size ($ thousands)			Note Rate (%)		
	% of loans with MI	PMI	FHA	VA	All	PMI	FHA	VA	PMI	FHA	VA
2016	35.1	24.0	36.9	39.1	100	233.6	199.2	256.0	3.82	3.70	3.42
2017	33.7	20.1	41.6	38.3	100	228.0	194.7	245.1	4.16	4.02	3.72
2018	31.1	16.5	44.7	38.8	100	237.0	201.6	253.7	4.64	4.61	4.38
2019	37.2	23.2	35.9	40.9	100	306.7	235.6	296.1	3.99	4.05	3.73
2020	27.7	31.2	24.0	44.9	100	298.9	233.0	298.4	3.17	3.22	2.81
2021	22.7	19.0	33.0	48.1	100	293.4	223.3	292.8	2.93	2.89	2.51
2022	24.2	6.5	49.4	44.2	100	326.7	232.0	313.3	3.99	4.45	3.95
2023	42.8	3.9	64.9	31.2	100	383.1	234.0	318.6	6.44	6.33	6.29
2024	50.4	6.9	49.1	44.0	100	416.9	275.4	368.1	6.35	6.26	5.98

	LTV Ratio (%)			FICO Score			DTI Ratio (%)		
	PMI	FHA	VA	PMI	FHA	VA	PMI	FHA	VA
2016	90.1	85.1	87.0	739	679	709	34.3	39.4	36.5
2017	89.8	81.6	88.6	733	671	703	35.7	41.0	39.0
2018	88.8	79.8	89.1	735	663	696	36.8	42.4	40.9
2019	88.5	83.8	90.6	749	667	708	35.6	42.3	38.2
2020	87.7	86.5	86.6	753	675	732	34.1	41.1	36.1
2021	87.0	83.2	82.6	746	668	727	34.6	41.3	36.6
2022	87.5	73.0	81.0	738	648	696	36.6	42.5	40.3
2023	88.7	70.0	84.4	746	653	679	38.8	42.7	42.1
2024	89.2	74.0	90.0	755	658	694	38.3	42.9	41.5

Sources: eMBS and the Urban Institute.
Notes: FHA = Federal Housing Administration; LTV = loan-to-value; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. PMI numbers are for government-sponsored enterprise loans only.

State-Level Analysis: All Loans

For 2024 agency originations, 60.2 percent had FHA, VA, or private mortgage insurance. Of these, 36.5 percent had PMI, and the remaining 63.5 percent were either FHA or VA insured. Alaska had the highest share of loans with mortgage insurance, at 72.7 percent, followed by the Mississippi, Alabama, New Mexico, and Maryland. New York had the lowest share, at 47.3 percent, followed by Vermont, Massachusetts, District of Columbia, and New Hampshire.

	% of Loans with Insurance			Number of Loans				% All Agency Loans with Insurance
State	PMI	FHA	VA	PMI	FHA	VA	All	
National	36.5	39.6	24.0	736,417	799,181	484,056	2,019,654	60.2
Alabama	23.0	45.4	31.6	9,452	18,672	13,002	41,126	68.3
Alaska	24.8	24.7	50.6	1,104	1,098	2,252	4,454	72.7
Arizona	29.9	45.4	24.7	19,071	28,892	15,741	63,704	61.5
Arkansas	28.2	44.6	27.2	6,015	9,514	5,792	21,321	62.1
California	35.1	45.3	19.7	43,428	56,037	24,335	123,800	51.6
Colorado	36.4	35.3	28.3	17,304	16,749	13,458	47,511	58.5
Connecticut	51.7	34.6	13.7	8,699	5,819	2,305	16,823	57.3
Delaware	35.0	42.3	22.7	2,885	3,492	1,876	8,253	58.5
District of Columbia	61.0	19.1	20.0	1,277	399	418	2,094	48.7
Florida	27.9	46.6	25.5	49,142	82,154	44,860	176,156	63.3
Georgia	27.3	43.8	28.9	24,825	39,776	26,302	90,903	65.9
Hawaii	29.3	13.3	57.3	1,325	602	2,590	4,517	59.5
Idaho	33.2	40.4	26.4	4,736	5,751	3,760	14,247	56.0
Illinois	54.4	31.2	14.4	38,484	22,046	10,178	70,708	57.5
Indiana	42.0	41.0	17.0	23,991	23,472	9,725	57,188	64.2
Iowa	51.6	29.7	18.7	9,529	5,494	3,460	18,483	59.4
Kansas	41.0	32.3	26.6	7,606	5,994	4,939	18,539	64.4
Kentucky	31.9	44.0	24.0	9,511	13,118	7,156	29,785	64.9
Louisiana	26.2	50.8	23.0	6,595	12,770	5,787	25,152	66.8
Maine	38.2	34.6	27.1	2,675	2,423	1,896	6,994	56.3
Maryland	37.8	37.0	25.3	17,166	16,815	11,487	45,468	67.4
Massachusetts	51.0	36.1	12.9	11,894	8,421	3,016	23,331	48.1
Michigan	52.5	31.5	16.0	30,383	18,267	9,256	57,906	57.4
Minnesota	61.2	24.5	14.3	21,894	8,765	5,130	35,789	58.1
Mississippi	19.2	51.6	29.2	3,263	8,750	4,952	16,965	69.4
Missouri	40.5	36.2	23.3	18,680	16,699	10,732	46,111	61.1
Montana	32.0	29.4	38.6	1,762	1,623	2,127	5,512	51.5
Nebraska	44.7	30.4	24.9	5,815	3,958	3,236	13,009	61.5
Nevada	29.8	44.2	26.0	8,241	12,232	7,181	27,654	64.0
New Hampshire	47.3	29.2	23.5	3,461	2,138	1,719	7,318	49.4
New Jersey	45.3	42.9	11.8	17,113	16,185	4,456	37,754	49.6
New Mexico	26.3	44.0	29.7	3,858	6,468	4,360	14,686	68.2
New York	53.3	35.4	11.3	22,435	14,905	4,775	42,115	47.3
North Carolina	31.1	34.0	34.9	27,586	30,177	30,963	88,726	62.7
North Dakota	41.8	28.2	30.0	1,426	960	1,022	3,408	62.5
Ohio	45.1	37.0	18.0	36,519	29,955	14,590	81,064	62.6
Oklahoma	28.1	41.5	30.4	8,045	11,858	8,688	28,591	66.2
Oregon	41.4	36.6	22.0	9,610	8,489	5,102	23,201	54.5
Pennsylvania	48.8	35.4	15.7	30,031	21,784	9,671	61,486	58.3
Rhode Island	33.8	51.5	14.7	1,907	2,903	826	5,636	58.3
South Carolina	26.3	40.4	33.4	12,852	19,761	16,342	48,955	62.9
South Dakota	37.4	35.9	26.7	2,102	2,014	1,497	5,613	61.6
Tennessee	28.6	42.6	28.8	15,896	23,623	15,979	55,498	61.2
Texas	31.4	45.1	23.5	67,129	96,423	50,157	213,709	62.9
Utah	39.9	44.4	15.7	10,285	11,448	4,042	25,775	60.0
Vermont	53.0	25.9	21.1	1,165	569	464	2,198	47.7
Virginia	29.0	28.2	42.9	19,540	18,993	28,922	67,455	65.3
Washington	38.8	32.0	29.3	17,251	14,229	13,032	44,512	54.8
West Virginia	29.7	43.2	27.1	2,718	3,948	2,481	9,147	66.7
Wisconsin	56.3	24.5	19.1	17,294	7,527	5,877	30,698	55.7
Wyoming	26.5	38.7	34.8	1,111	1,627	1,461	4,199	60.4

Sources: eMBS and the Urban Institute. **Notes:** PMI numbers are GSE only. Data are based on agency issuance in 2024. National numbers include Guam, Puerto Rico, and the Virgin Islands. The District of Columbia is considered a state for this analysis.

State-Level Analysis: Purchase Loans

For 2024 agency purchase originations, 63.4 percent had FHA, VA, or private mortgage insurance. Of these, 44.0 percent had PMI, and 56.0 percent were either FHA or VA insured. The five states with the highest mortgage insurance shares of purchase originations were Alaska, Mississippi, New Mexico, Louisiana, and Alabama. The five states with the lowest mortgage insurance shares were New York, New Jersey, District of Columbia, Vermont, and Massachusetts.

	% of Loans with Insurance			Number of Loans				% All Agency Loans with Insurance
State	PMI	FHA	VA	PMI	FHA	VA	All	
National	44.0	37.1	18.9	708,042	597,874	303,918	1,609,834	63.4
Alabama	28.7	45.5	25.8	8,922	14,159	8,015	31,096	70.1
Alaska	30.6	24.7	44.7	1,078	870	1,572	3,520	76.8
Arizona	36.5	44.5	19.0	18,083	22,028	9,387	49,498	64.7
Arkansas	34.5	44.1	21.4	5,658	7,226	3,516	16,400	64.2
California	42.8	42.9	14.3	41,385	41,538	13,871	96,794	56.0
Colorado	43.8	33.6	22.5	16,444	12,624	8,460	37,528	60.7
Connecticut	63.2	27.0	9.9	8,516	3,634	1,333	13,483	60.0
Delaware	44.2	39.3	16.5	2,774	2,463	1,033	6,270	58.7
District of Columbia	68.2	14.7	17.1	1,229	265	308	1,802	51.3
Florida	33.3	46.3	20.4	48,156	67,015	29,547	144,718	65.2
Georgia	36.0	41.4	22.6	23,846	27,374	14,977	66,197	68.1
Hawaii	36.1	11.7	52.2	1,283	417	1,853	3,553	62.2
Idaho	39.8	38.9	21.3	4,579	4,468	2,451	11,498	59.8
Illinois	63.2	26.2	10.6	36,989	15,316	6,231	58,536	61.3
Indiana	52.5	35.5	12.1	23,154	15,644	5,327	44,125	66.9
Iowa	59.4	26.2	14.5	9,164	4,040	2,233	15,437	62.8
Kansas	49.6	28.6	21.8	7,328	4,226	3,212	14,766	67.2
Kentucky	40.2	41.0	18.8	9,160	9,351	4,282	22,793	67.2
Louisiana	30.0	51.7	18.3	6,104	10,501	3,722	20,327	70.2
Maine	50.4	30.4	19.2	2,557	1,543	974	5,074	59.1
Maryland	46.6	33.9	19.5	16,523	12,031	6,911	35,465	69.1
Massachusetts	62.0	29.2	8.9	11,438	5,386	1,638	18,462	51.4
Michigan	65.1	23.6	11.3	28,715	10,422	4,981	44,118	62.3
Minnesota	69.3	20.5	10.2	21,183	6,248	3,115	30,546	61.0
Mississippi	22.9	52.5	24.6	2,965	6,789	3,188	12,942	72.7
Missouri	50.2	31.9	17.9	17,735	11,263	6,324	35,322	64.3
Montana	41.4	27.3	31.3	1,695	1,117	1,282	4,094	55.2
Nebraska	52.4	27.6	20.1	5,567	2,932	2,135	10,634	65.7
Nevada	36.0	43.4	20.6	7,991	9,647	4,569	22,207	65.8
New Hampshire	60.9	22.3	16.7	3,329	1,219	915	5,463	51.8
New Jersey	58.6	33.3	8.1	16,638	9,451	2,286	28,375	51.1
New Mexico	32.5	43.6	23.9	3,721	4,984	2,739	11,444	71.3
New York	61.2	29.6	9.2	22,110	10,703	3,327	36,140	51.0
North Carolina	39.9	31.4	28.6	26,378	20,752	18,921	66,051	63.6
North Dakota	48.6	26.1	25.4	1,362	731	711	2,804	64.8
Ohio	56.1	30.6	13.4	35,438	19,324	8,458	63,220	65.4
Oklahoma	33.5	41.9	24.5	7,660	9,580	5,604	22,844	68.6
Oregon	49.1	34.8	16.0	9,250	6,561	3,016	18,827	56.8
Pennsylvania	60.5	28.3	11.3	29,223	13,661	5,457	48,341	60.1
Rhode Island	41.9	47.9	10.3	1,839	2,104	451	4,394	62.9
South Carolina	33.0	39.3	27.8	12,382	14,730	10,415	37,527	63.6
South Dakota	43.1	34.7	22.1	2,019	1,625	1,036	4,680	65.7
Tennessee	38.3	38.9	22.8	15,322	15,575	9,130	40,027	63.3
Texas	32.8	47.0	20.3	64,551	92,516	39,884	196,951	70.0
Utah	45.3	43.0	11.6	9,654	9,161	2,477	21,292	64.6
Vermont	65.4	20.0	14.6	1,141	349	254	1,744	51.4
Virginia	37.9	24.9	37.2	18,741	12,310	18,404	49,455	65.5
Washington	47.5	30.3	22.2	16,527	10,542	7,705	34,774	57.5
West Virginia	37.3	40.1	22.6	2,640	2,844	1,603	7,087	69.6
Wisconsin	68.3	18.5	13.2	16,497	4,459	3,194	24,150	60.0
Wyoming	34.6	36.7	28.7	1,069	1,134	886	3,089	63.6

Sources: eMBS and the Urban Institute. **Notes:** PMI numbers are GSE only. Data are based on agency issuance in 2024. National numbers include Guam, Puerto Rico, and the Virgin Islands. The District of Columbia is considered a state for this analysis.

State-Level Analysis: Refinance Loans

High interest rates through 2024 resulted in a significant decline in refinances nationally relative to prior years. For 2024 agency refinance originations, 50.3 percent had FHA, VA, or private mortgage insurance. Of these, 6.9 percent had PMI, and 93.1 percent were either FHA or VA insured. The five states with the largest mortgage insurance shares of refinance originations were Virginia, Alabama, Maryland, Georgia, and South Carolina. The five states with the lowest PMI shares were Texas, New York, District of Columbia, Vermont, and Massachusetts.

	% of Loans with Insurance			Number of Loans				% All Agency Loans with Insurance
State	PMI	FHA	VA	PMI	FHA	VA	All	
National	6.9	49.1	44.0	28,375	201,307	180,138	409,820	50.3
Alabama	5.3	45.0	49.7	530	4,513	4,987	10,030	63.3
Alaska	2.8	24.4	72.8	26	228	680	934	60.4
Arizona	7.0	48.3	44.7	988	6,864	6,354	14,206	52.5
Arkansas	7.3	46.5	46.3	357	2,288	2,276	4,921	55.8
California	7.6	53.7	38.7	2,043	14,499	10,464	27,006	40.4
Colorado	8.6	41.3	50.1	860	4,125	4,998	9,983	51.5
Connecticut	5.5	65.4	29.1	183	2,185	972	3,340	48.4
Delaware	5.6	51.9	42.5	111	1,029	843	1,983	57.8
District of Columbia	16.4	45.9	37.7	48	134	110	292	36.9
Florida	3.1	48.2	48.7	986	15,139	15,313	31,438	55.7
Georgia	4.0	50.2	45.8	979	12,402	11,325	24,706	60.9
Hawaii	4.4	19.2	76.5	42	185	737	964	51.5
Idaho	5.7	46.7	47.6	157	1,283	1,309	2,749	44.3
Illinois	12.3	55.3	32.4	1,495	6,730	3,947	12,172	44.4
Indiana	6.4	59.9	33.7	837	7,828	4,398	13,063	56.4
Iowa	12.0	47.7	40.3	365	1,454	1,227	3,046	46.6
Kansas	7.4	46.9	45.8	278	1,768	1,727	3,773	55.3
Kentucky	5.0	53.9	41.1	351	3,767	2,874	6,992	58.5
Louisiana	10.2	47.0	42.8	491	2,269	2,065	4,825	55.6
Maine	6.1	45.8	48.0	118	880	922	1,920	50.0
Maryland	6.4	47.8	45.7	643	4,784	4,576	10,003	61.9
Massachusetts	9.4	62.3	28.3	456	3,035	1,378	4,869	38.7
Michigan	12.1	56.9	31.0	1,668	7,845	4,275	13,788	45.7
Minnesota	13.6	48.0	38.4	711	2,517	2,015	5,243	45.8
Mississippi	7.4	48.7	43.8	298	1,961	1,764	4,023	60.7
Missouri	8.8	50.4	40.9	945	5,436	4,408	10,789	52.7
Montana	4.7	35.7	59.6	67	506	845	1,418	43.1
Nebraska	10.4	43.2	46.4	248	1,026	1,101	2,375	47.8
Nevada	4.6	47.5	48.0	250	2,585	2,612	5,447	57.5
New Hampshire	7.1	49.5	43.3	132	919	804	1,855	43.4
New Jersey	5.1	71.8	23.1	475	6,734	2,170	9,379	45.4
New Mexico	4.2	45.8	50.0	137	1,484	1,621	3,242	59.0
New York	5.4	70.3	24.2	325	4,202	1,448	5,975	33.0
North Carolina	5.3	41.6	53.1	1,208	9,425	12,042	22,675	60.4
North Dakota	10.6	37.9	51.5	64	229	311	604	53.8
Ohio	6.1	59.6	34.4	1,081	10,631	6,132	17,844	54.4
Oklahoma	6.7	39.6	53.7	385	2,278	3,084	5,747	58.1
Oregon	8.2	44.1	47.7	360	1,928	2,086	4,374	46.4
Pennsylvania	6.1	61.8	32.1	808	8,123	4,214	13,145	52.4
Rhode Island	5.5	64.3	30.2	68	799	375	1,242	46.3
South Carolina	4.1	44.0	51.9	470	5,031	5,927	11,428	60.7
South Dakota	8.9	41.7	49.4	83	389	461	933	46.8
Tennessee	3.7	52.0	44.3	574	8,048	6,849	15,471	56.3
Texas	15.4	23.3	61.3	2,578	3,907	10,273	16,758	28.8
Utah	14.1	51.0	34.9	631	2,287	1,565	4,483	44.8
Vermont	5.3	48.5	46.3	24	220	210	454	37.4
Virginia	4.4	37.1	58.4	799	6,683	10,518	18,000	64.5
Washington	7.4	37.9	54.7	724	3,687	5,327	9,738	47.0
West Virginia	3.8	53.6	42.6	78	1,104	878	2,060	58.4
Wisconsin	12.2	46.9	41.0	797	3,068	2,683	6,548	43.9
Wyoming	3.8	44.4	51.8	42	493	575	1,110	53.2

Sources: eMBS and the Urban Institute. **Notes:** PMI numbers are GSE only. Data are based on agency issuance in 2024. National numbers include Guam, Puerto Rico, and the Virgin Islands. The District of Columbia is considered a state for this analysis.

Credit Box Distribution: FICO Scores

In 2024, GSE borrowers with PMI had higher median FICO credit scores than FHA and VA borrowers but lower FICO credit scores than GSE borrowers without PMI. The median FICO score for purchase originations was 750 for PMI borrowers, 690 for FHA borrowers, and 727 for VA borrowers. Among purchase loans, nearly 64 percent of PMI borrowers had FICO credit scores of at least 740, compared with about 20 percent of FHA borrowers and about 49 percent of VA borrowers. Over 46 percent of FHA purchase borrowers had FICO credit scores below 680, compared with 25.5 percent of VA borrowers and 5.5 percent of PMI borrowers. Median PMI FICO credit scores were higher than median FHA and VA FICO credit scores for refinance loans.

All Loans, 2024

	Loan count	≤ 619	620–679	680–739	≥ 740	Median	Mean
All	**3,291,342**	**3.5%**	**17.3%**	**27.1%**	**52.1%**	**742**	**731**
PMI	736,180	0.0%	5.4%	30.6%	63.9%	756	750
FHA	779,067	11.0%	40.3%	31.9%	16.9%	678	682
VA	443,093	6.1%	24.0%	27.0%	42.9%	722	716
GSE non-PMI	1,299,741	0.3%	8.3%	22.0%	69.4%	768	755
Other	33,261	4.6%	30.5%	39.3%	25.6%	703	702

Purchase Loans, 2024

	Loan count	≤ 619	620–679	680–739	≥ 740	Median	Mean
All	**2,535,827**	**2.5%**	**15.3%**	**26.7%**	**55.5%**	**749**	**737**
PMI	707,805	0.0%	5.5%	30.8%	63.7%	755	750
FHA	595,931	7.7%	38.4%	34.1%	19.8%	685	690
VA	303,386	4.6%	20.9%	25.8%	48.7%	737	727
GSE non-PMI	895,790	0.2%	5.4%	18.3%	76.2%	775	763
Other	32,915	4.6%	30.6%	39.3%	25.6%	703	702

Refinance Loans, 2024

	Loan count	≤ 619	620–679	680–739	≥ 740	Median	Mean
All	**755,515**	**7.2%**	**24.6%**	**28.8%**	**39.4%**	**715**	**711**
PMI	28,375	0.0%	3.3%	25.7%	71.1%	761	755
FHA	183,136	22.6%	47.1%	24.0%	6.3%	657	658
VA	139,707	11.7%	35.8%	31.2%	21.2%	692	694
GSE non-PMI	403,951	0.5%	14.8%	30.4%	54.3%	746	738
Other	346	1.9%	21.5%	42.6%	34.0%	715	710

Sources: eMBS and the Urban Institute.
Notes: FHA = Federal Housing Administration; GSE = government-sponsored enterprise; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. "Other" refers to loans insured by the US Department of Housing and Urban Development's Office of Public and Indian Housing and the US Department of Agriculture's Rural Development. Data are based on agency issuance in 2024. PMI numbers are for government-sponsored enterprise only.

Credit Box Distribution: LTV Ratios

In 2024, GSE borrowers with PMI had lower median LTV ratios than FHA and VA borrowers, but higher LTV ratios than GSE borrowers without PMI. The median LTV ratio was 95.0 percent for PMI purchase borrowers, 96.5 percent for FHA borrowers, and 100.0 percent for VA borrowers. Most FHA and VA purchase borrowers (72.3 and 79.8 percent, respectively) had LTV ratios at or above 95 percent, compared with 20.4 percent of PMI borrowers. VA had the greatest share of refinance loans with LTV ratios over 95 percent at 29.0 percent of loans; compared with 2.0 percent of FHA loans and 3.1 percent of loans with PMI.

All Loans, 2024

	Loan count	≤ 80	80–90%	90–95%	> 95%	Median	Mean
All	3,347,921	47.5%	11.2%	14.2%	27.1%	86.5	81.1
PMI	736,417	0.0%	35.3%	44.9%	19.8%	95.0	92.8
FHA	794,035	22.9%	6.5%	13.5%	57.0%	96.5	89.4
VA	483,026	13.0%	12.8%	5.1%	69.1%	100.0	93.8
GSE non-PMI	1,300,835	100.0%	0.0%	0.0%	0.0%	70.0	64.2
Other	33,608	3.5%	3.9%	6.4%	86.2%	100.7	97.9

Purchase Loans, 2024

	Loan count	≤ 80	80–90%	90–95%	> 95%	Median	Mean
All	2,539,632	37.3%	12.1%	17.3%	33.3%	91.6	84.9
PMI	708,042	0.0%	34.1%	45.4%	20.4%	95.0	93.0
FHA	597,666	3.6%	7.3%	16.8%	72.3%	96.5	94.4
VA	303,871	8.4%	6.8%	5.0%	79.8%	100.0	96.0
GSE non-PMI	896,840	100.0%	0.0%	0.0%	0.0%	75.0	68.0
Other	33,213	3.3%	3.8%	6.4%	86.5%	100.7	98.0

Refinance Loans, 2024

	Loan count	≤ 80	80–90%	90–95%	> 95%	Median	Mean
All	808,289	85.7%	7.8%	2.4%	4.0%	72.0	69.0
PMI	28,375	0.0%	65.8%	31.2%	3.1%	89.0	89.2
FHA	196,369	92.5%	3.7%	1.9%	2.0%	78.3	74.0
VA	179,155	30.0%	35.5%	5.5%	29.0%	94.4	90.0
GSE non-PMI	403,995	100.0%	0.0%	0.0%	0.0%	59.0	55.7
Other	395	26.0%	17.7%	9.4%	46.8%	95.9	88.9

Sources: eMBS and the Urban Institute.
Notes: FHA = Federal Housing Administration; GSE = government-sponsored enterprise; LTV = loan-to-value ratio; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. "Other" refers to loans insured by the US Department of Housing and Urban Development's Office of Public and Indian Housing and the US Department of Agriculture's Rural Development. Data are based on agency issuance in 2024. PMI numbers are for government-sponsored enterprise loans only.

Credit Box Distribution: DTI Ratios

In 2024, GSE borrowers with PMI had lower median DTI ratios than FHA and VA borrowers but higher DTI ratios than GSE borrowers without PMI. The median purchase DTI ratio was 41.0 percent for PMI borrowers, 46.0 percent for FHA borrowers, and 44.5 percent for VA borrowers. Nearly 31.9 percent of PMI purchase borrowers had DTI ratios lower than 36 percent, compared to 14.4 percent and 21.5 percent for FHA and VA purchase borrowers. In addition, 65.0 percent and 57.3 percent of FHA and VA purchase borrowers, respectively, had DTI ratios at or above 43 percent in 2024, compared with 38.0 percent of PMI purchase borrowers. The median PMI DTI ratio for refinance loans was lower than those of FHA and VA.

All Loans, 2024

	Loan count	≤ 36%	36–43%	43–48%	≥ 48%	Median	Mean
All	3,213,364	32.5%	25.1%	21.6%	20.8%	41.3	40.0
PMI	736,409	32.1%	30.2%	25.2%	12.5%	41.0	39.5
FHA	762,601	16.3%	21.0%	21.9%	40.7%	46.0	44.8
VA	379,904	23.1%	21.3%	18.8%	36.8%	44.5	43.5
GSE non-PMI	1,300,808	44.5%	25.3%	20.6%	9.7%	38.0	36.6
Other	33,642	48.6%	44.5%	6.9%	0.0%	36.2	35.3

Purchase Loans, 2024

	Loan count	≤ 36%	36–43%	43–48%	≥ 48%	Median	Mean
All	2,535,643	31.3%	24.9%	22.0%	21.8%	42.0	40.3
PMI	708,039	31.9%	30.1%	25.3%	12.7%	41.0	39.5
FHA	597,525	14.4%	20.7%	22.4%	42.6%	46.4	45.3
VA	299,907	21.5%	21.2%	19.1%	38.2%	45.0	44.0
GSE non-PMI	896,825	44.8%	24.0%	20.7%	10.6%	38.0	36.6
Other	33,347	48.5%	44.5%	6.9%	0.0%	36.2	35.3

Refinance Loans, 2024

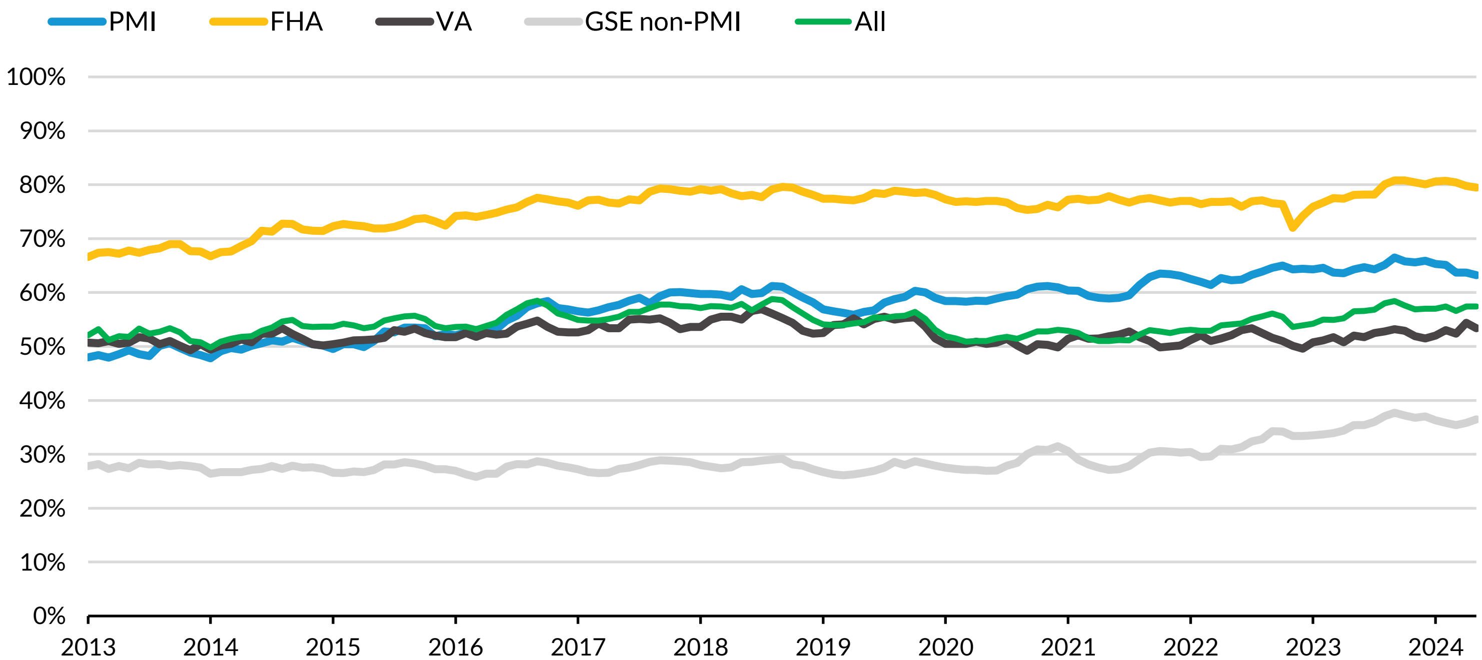
	Loan count	≤ 36%	36–43%	43–48%	≥ 48%	Median	Mean
All	677,721	36.9%	26.1%	20.1%	17.0%	40.0	38.7
PMI	28,370	38.2%	31.3%	21.6%	9.0%	39.0	38.3
FHA	165,076	23.3%	22.0%	20.4%	34.2%	44.2	42.9
VA	79,997	29.3%	21.6%	17.8%	31.3%	42.7	41.5
GSE non-PMI	403,983	43.8%	28.2%	20.3%	7.7%	38.0	36.5
Other	295	61.1%	35.1%	2.6%	1.1%	33.2	31.8

Sources: eMBS and the Urban Institute.
Notes: DTI = debt-to-income ratio; FHA = Federal Housing Administration; GSE = government-sponsored enterprise; LTV = loan-to-value ratio; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. “Other” refers to loans insured by the US Department of Housing and Urban Development’s Office of Public and Indian Housing and the US Department of Agriculture’s Rural Development. Data are based on agency issuance in 2024. PMI numbers are for government-sponsored enterprise loans only.

Credit Box: First-Time Homebuyer Status

Among all purchase originations in the latest month of data (November 2024), 63.2 percent of GSE borrowers with PMI, 79.5 percent of FHA borrowers, 53.4 percent of VA borrowers, and 36.5 percent of GSE borrowers without PMI were first-time homebuyers. For 2024 purchase originations, the average first-time homebuyer was more likely than the average repeat buyer to take out a smaller loan and have a lower credit score, higher LTV ratio, and lower DTI ratio. First-time and repeat buyers had similar interest rates across insurance types and uses.

First-Time Homebuyer Share



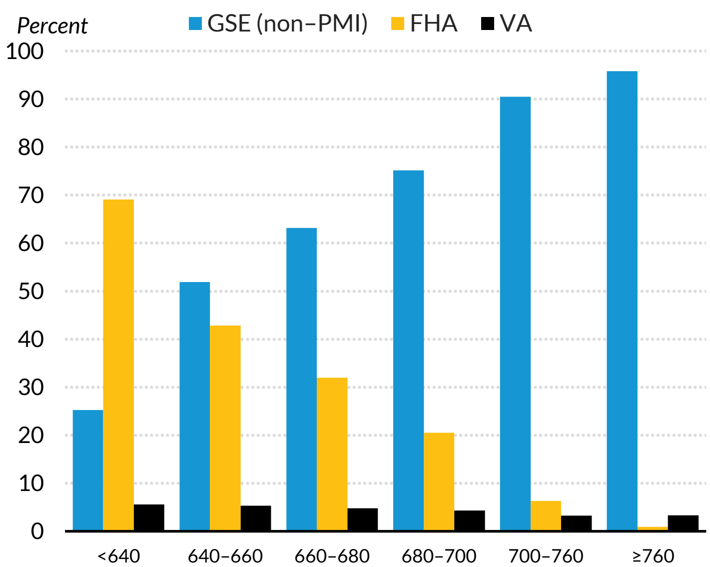
	PMI		FHA		VA		GSE Non-PMI		Other	
	First-time	Repeat	First-time	Repeat	First-time	Repeat	First-time	Repeat	First-time	Repeat
Loan amount ($ thousands)	339.5	405.0	318.7	336.7	356.3	426.6	345.8	338.6	195.1	213.4
FICO score	747	756	689	692	714	741	757	767	700	713
LTV ratio (%)	93.4	92.1	95.0	92.4	98.4	93.4	71.3	66.1	98.0	97.8
DTI ratio (%)	38.9	40.7	44.9	46.6	43.3	44.8	36.1	36.9	35.2	36.1
Note rate (%)	6.69	6.76	6.31	6.26	6.25	6.17	6.54	6.67	6.38	6.39

Sources: eMBS and the Urban Institute.
Notes: DTI = debt-to-income ratio; FHA = Federal Housing Administration; GSE = government-sponsored enterprise; LTV = loan-to-value ratio; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. "Other" refers to loans insured by the US Department of Housing and Urban Development's Office of Public and Indian Housing and the US Department of Agriculture's Rural Development. Data in table are based on agency purchase originations in 2024. PMI numbers are for government-sponsored enterprise loans only.

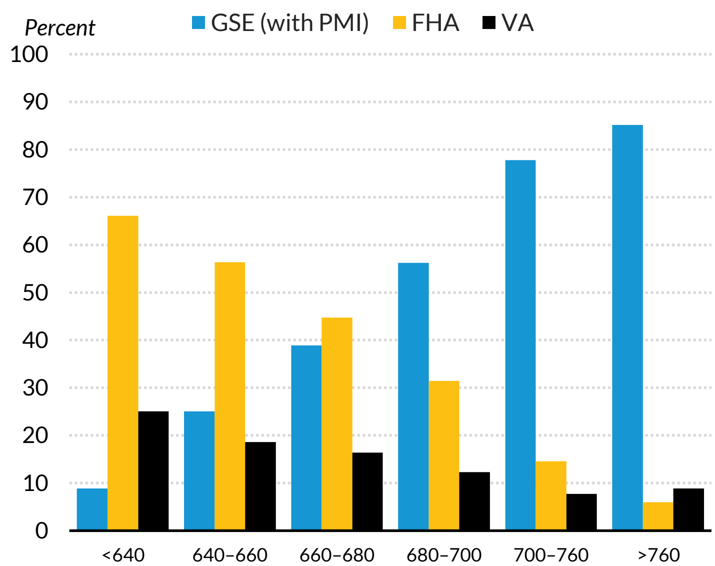
Channel, by FICO Score and LTV Ratio: All Loans

For all 2024 originations, borrowers with LTV ratios up to 80 percent and FICO credit scores of 640 and above were more likely to choose non-PMI GSE mortgages over any other channel. Borrowers with LTV ratios up to 80 percent and FICO credit scores below 640 were more likely to choose FHA mortgages. Borrowers with LTV ratios from 80 to 95 percent and FICO credit scores of 680 and above were more likely to choose GSE loans with PMI over FHA or VA loans, while borrowers with FICO credit scores below 680 were more likely to choose FHA loans over PMI or VA loans. FICO credit score bands dictated which channel borrowers with LTV ratios from 95-97 percent chose, with PMI loans being most popular with higher credit score borrowers. In the market with LTV ratios above 97 percent, VA loans dominated all FICO credit score buckets.

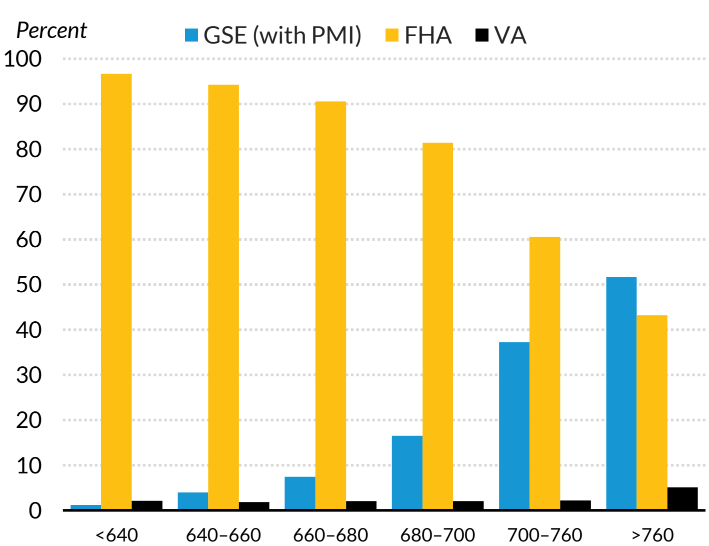
FICO Score Distribution, by Channel, for Loans with LTV Ratios up to 80 Percent



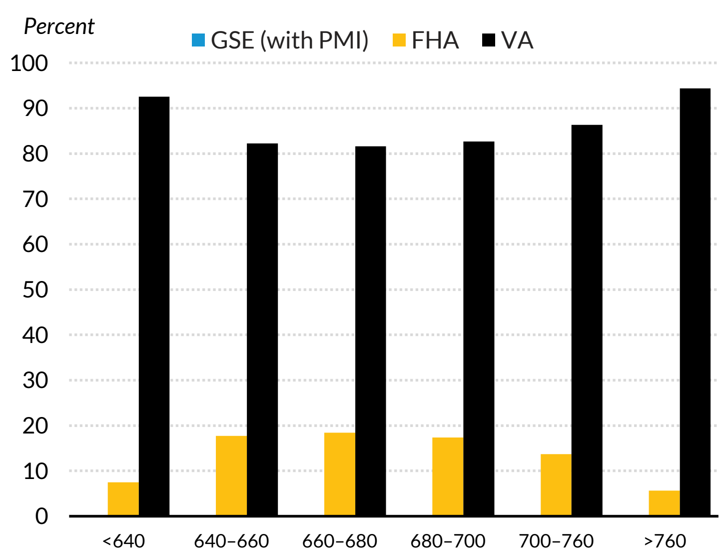
FICO Score Distribution, by Channel, for Loans with LTV Ratios from 80 to 95 Percent



FICO Score Distribution, by Channel, for Loans with LTV Ratios from 95 to 97 Percent



FICO Score Distribution, by Channel, for Loans with LTV Ratios above 97 Percent

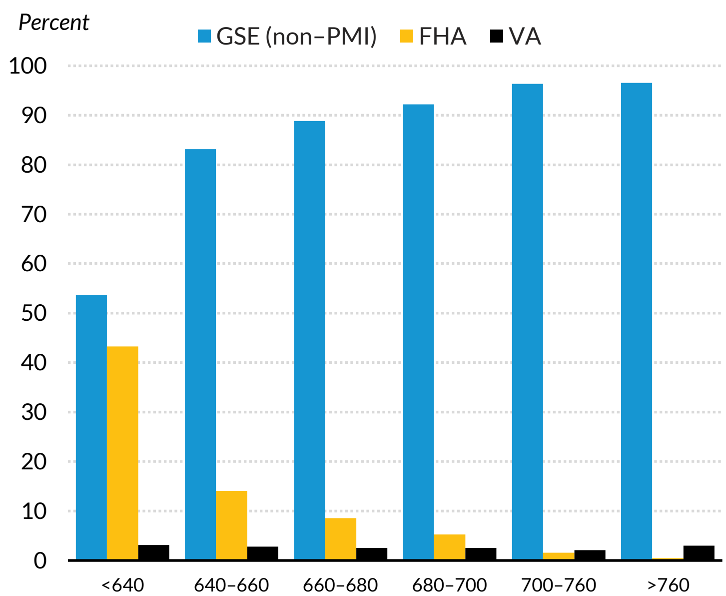


Sources: eMBS and the Urban Institute. **Notes:** FHA = Federal Housing Administration; GSE = government-sponsored enterprise; LTV = loan-to-value ratio; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. Data are based on agency originations in 2024. PMI numbers are for GSE loans only.

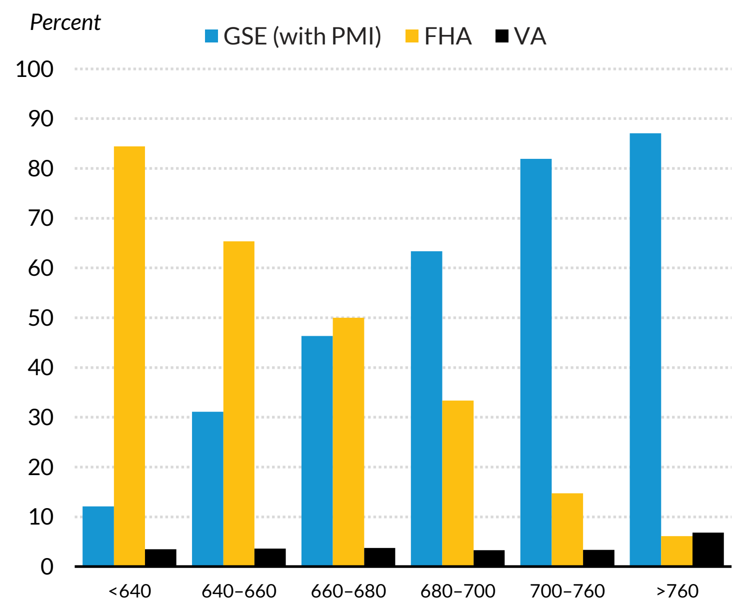
Channel, by FICO Score and LTV Ratio: Purchase Loans

Because of the low refinance rate in 2024, credit characteristics of purchase loans closely reflected the market as a whole. Purchase borrowers with LTV ratios up to 80 percent were likely to choose non-PMI GSE mortgages over any other channel. Borrowers with LTV ratios from 80 to 95 percent and FICO credit scores of 680 and above were more likely to choose GSE loans with PMI over FHA or VA loans, while borrowers with FICO credit scores below 680 were more likely to choose FHA loans over PMI or VA loans. FICO credit score bands dictated which channel borrowers with LTV ratios from 95-97 percent chose, with PMI loans being most popular with higher credit score borrowers. In the market with LTV ratios above 97 percent, VA loans dominated all FICO credit score buckets.

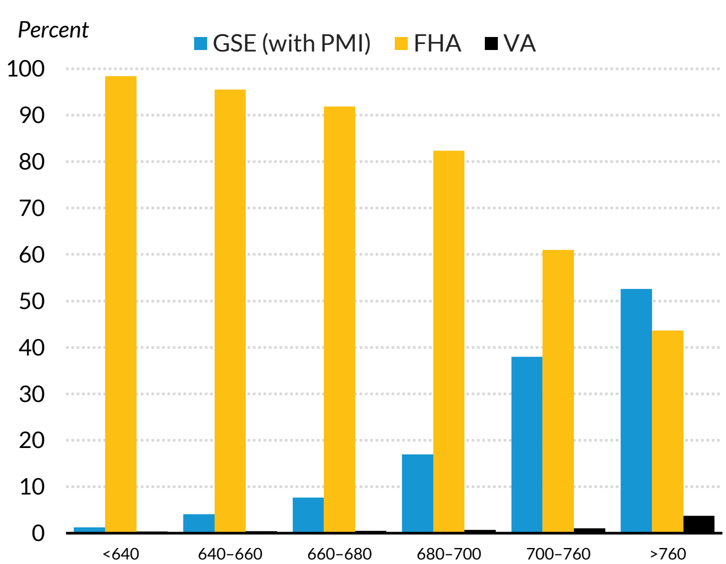
FICO Score Distribution, by Channel, for Loans with LTV Ratios up to 80 Percent



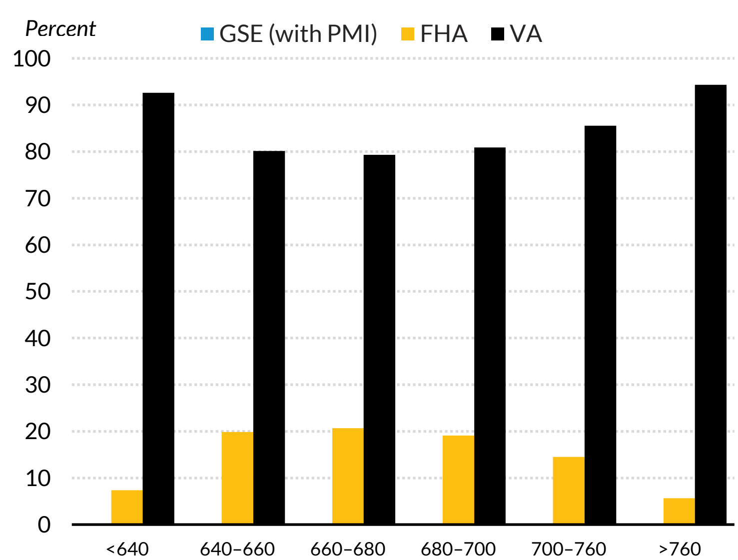
FICO Score Distribution, by Channel, for Loans with LTV Ratios from 80 to 95 Percent



FICO Score Distribution, by Channel, for Loans with LTV Ratios from 95 to 97 Percent



FICO Score Distribution, by Channel, for Loans with LTV Ratios above 97 Percent

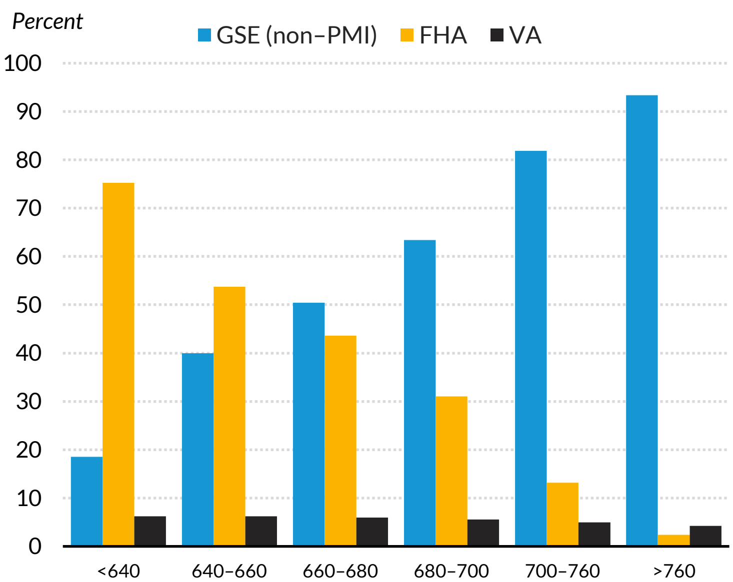


Sources: eMBS and the Urban Institute. **Notes:** FHA = Federal Housing Administration; GSE = government-sponsored enterprise; LTV = loan-to-value ratio; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. Data are based on agency originations in 2024. PMI numbers are for GSE loans only.

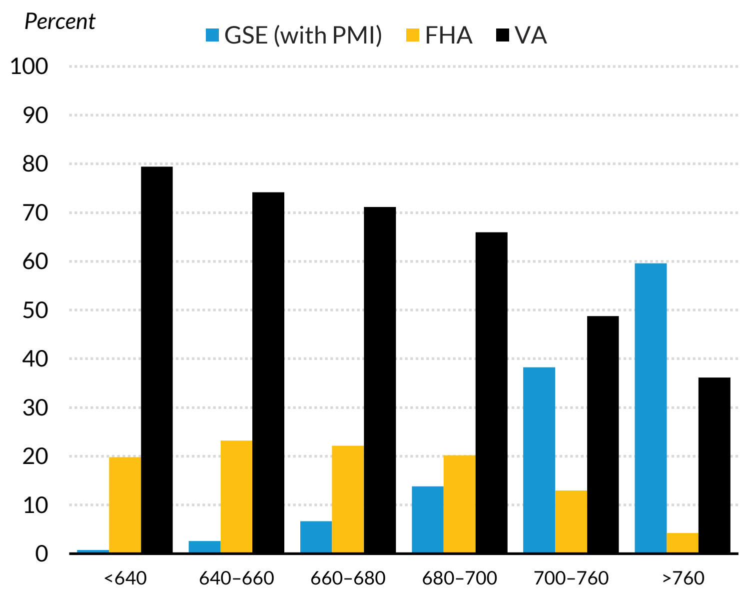
Channel, by FICO Score and LTV Ratio: Refi Loans

For 2024 refinance originations, borrowers with LTV ratios up to 80 percent were likely to choose non-PMI GSE mortgages over any other channel for those with FICO credit scores 660 and above, and FHA mortgages for those with FICO credit scores below 660. Borrowers with LTV ratios from 80 to 95 percent were more likely to be VA borrowers than FHA or PMI borrowers, except for those with credit scores 760 and above. Most refinance originations with LTV ratios from 95 to 97 percent were VA and FHA loans, with the VA share being the highest across all FICO credit score bands, except for those with credits between 680 and 700. In the market with LTV ratios above 97 percent, VA loans dominated all FICO credit score buckets. Amid high interest rates in 2024, most refinances were cash-out refinances. The VA insured more refinance loans with LTV ratios above 80 percent because of higher LTV ratio caps for cash-out refinances.

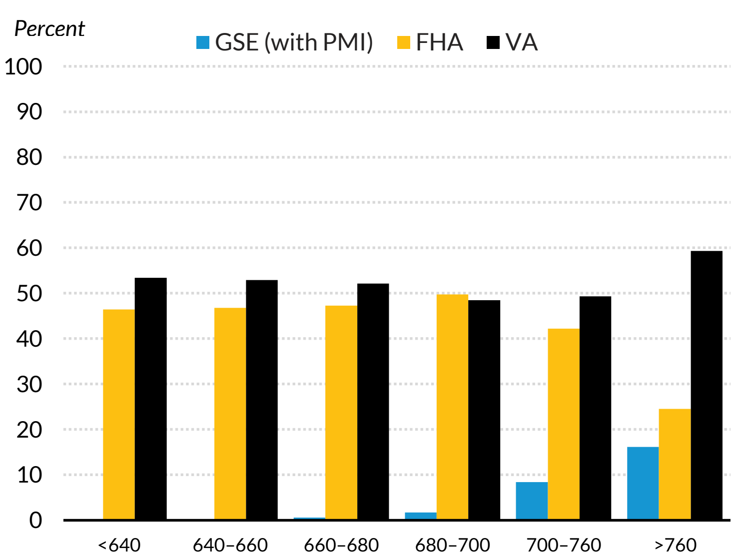
FICO Score Distribution, by Channel, for Loans with LTV Ratios up to 80 Percent



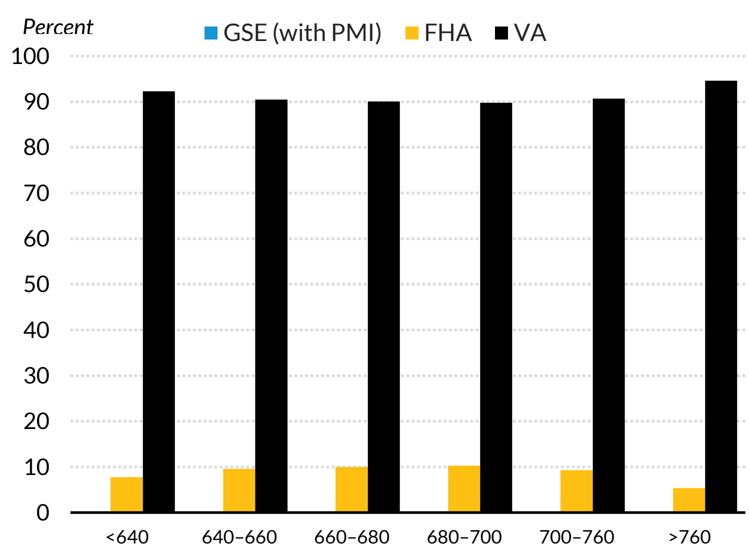
FICO Score Distribution, by Channel, for Loans with LTV Ratios from 80 to 95 Percent



FICO Score Distribution, by Channel, for Loans with LTV Ratios from 95 to 97 Percent



FICO Score Distribution, by Channel, for Loans with LTV Ratios above 97 Percent

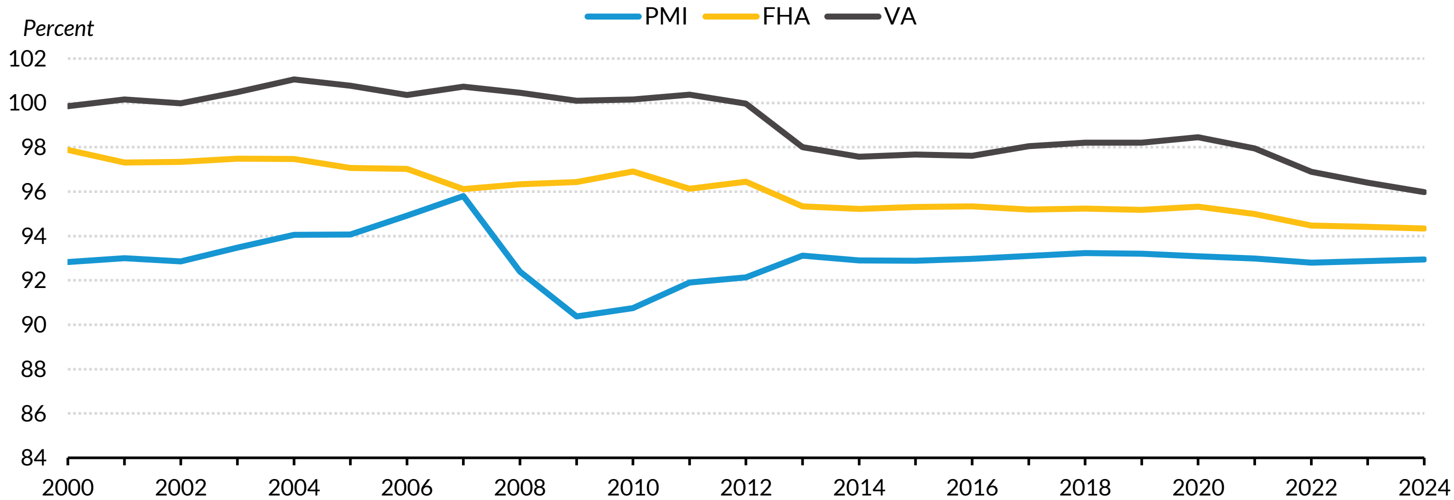


Sources: eMBS and the Urban Institute. **Notes:** FHA = Federal Housing Administration; GSE = government-sponsored enterprise; LTV = loan-to-value ratio; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. Data are based on agency originations in 2024. PMI numbers are for GSE loans only.

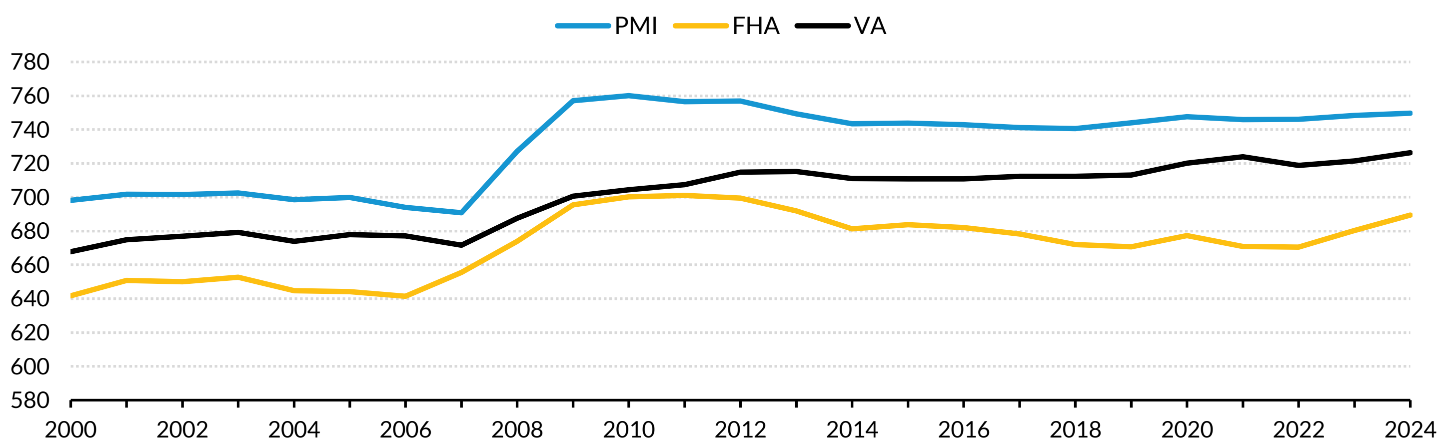
Average LTV, DTI, and FICO Score Trends

Conventional loans with PMI have lower LTV ratios and higher FICO credit scores than FHA or VA loans. Post-crisis, conventional loans with PMI have exhibited lower DTI ratios than loans insured by the FHA and VA. Since 2020, DTIs for all loans have increased, driven by rising interest rates. Note that the increase for GSE loans with PMI is less than for FHA and VA lending.

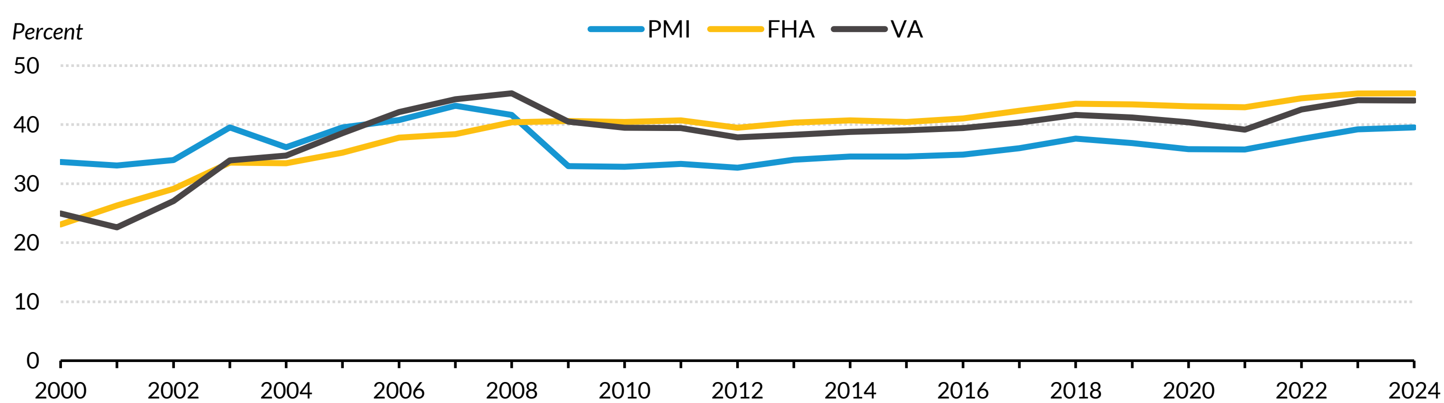
Average LTV, Purchase Originations



Average FICO Score, Purchase Originations



Average DTI Ratio, Purchase Originations



Sources: Before 2016, data are from Laurie Goodman et al., *Mortgage Insurance at a Glance* (Washington, DC: Urban Institute, 2017); after that, they are from eMBS and the Urban Institute.
Notes: DTI = debt-to-income ratio; FHA = Federal Housing Administration; LTV = loan-to-value ratio; PMI = private mortgage insurance; VA = US Department of Veterans Affairs. Private-label securities are excluded. Data are based on purchase loans only. PMI numbers are for government-sponsored enterprise loans only.

GSE Loan-Level Credit Data

Composition

From 1994 to 2024, 24.7 percent of 30-year fixed rate, full-documentation, fully amortizing GSE loans had PMI. This share was as low as 8.9 percent for 2009–10 originations and was 30.5 percent for 2021–24 originations. From 1999 to 2024, the average PMI coverage share was 25.3 percent. Compared with GSE loans without PMI, GSE loans with PMI are slightly smaller, are more heavily purchase loans, have higher LTV ratios, have lower FICO credit scores, and have higher DTI ratios. These data include full documentation fixed rate amortizing mortgages only; it excludes non-traditional products that were common prior to the financial crisis, as well as streamlined refinance programs such as the Home affordable refinance program.

Loan Count and Share for GSE Loans, by PMI Category

	Loan Count		Share		
Origination year	PMI	Non-PMI	PMI	Non-PMI	Average PMI coverage
1994–2004	3,781,707	13,804,922	21.5%	78.5%	24.3%
2005–2008	1,510,793	7,123,478	17.5%	82.5%	24.4%
2009–2010	524,585	5,374,728	8.9%	91.1%	23.2%
2011–2018	5,800,408	14,556,376	28.5%	71.5%	25.8%
2019–2020	3,074,879	6,940,788	30.7%	69.3%	25.1%
2021–2024	3,734,574	8,503,201	30.5%	69.5%	26.1%
Total	18,426,946	56,303,493	24.7%	75.3%	25.3%

Origination Loan Characteristics, by PMI Category

	Average Loan Size ($ Thousands)		Note Rate (%)		Purchase (%)		LTV Ratio (%)		FICO Score		DTI Ratio (%)	
Origination year	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI
1994–2004	139.1	158.2	6.9	6.5	65.4	32.0	91.1	68.2	731.8	746.0	35.7	32.9
2005–2008	181.9	199.5	6.3	6.2	66.5	40.3	91.2	68.0	721.6	733.3	39.6	37.0
2009–2010	216.1	234.4	4.9	4.9	58.3	25.3	90.9	67.1	756.4	762.5	32.7	32.9
2011–2018	234.5	237.7	4.3	4.2	82.7	42.2	93.0	70.5	748.6	755.1	35.1	33.8
2019–2020	284.3	292.3	3.6	3.5	75.2	29.8	91.9	67.0	751.7	761.0	35.9	33.9
2021–2024	331.8	302.6	4.7	4.2	92.0	42.1	92.5	65.8	750.8	753.9	37.5	35.3
Total	238.1	229.6	5.0	5.0	77.8	36.3	92.1	68.1	744.1	751.4	36.2	34.2

Sources: Fannie Mae, Freddie Mac, and the Urban Institute.
Note: DTI = debt-to-income ratio; GSE = government sponsored enterprise; LTV = loan-to-value ratio; PMI = private mortgage insurance; REO = real estate owned.

Defaults: 180 or More Days Delinquent

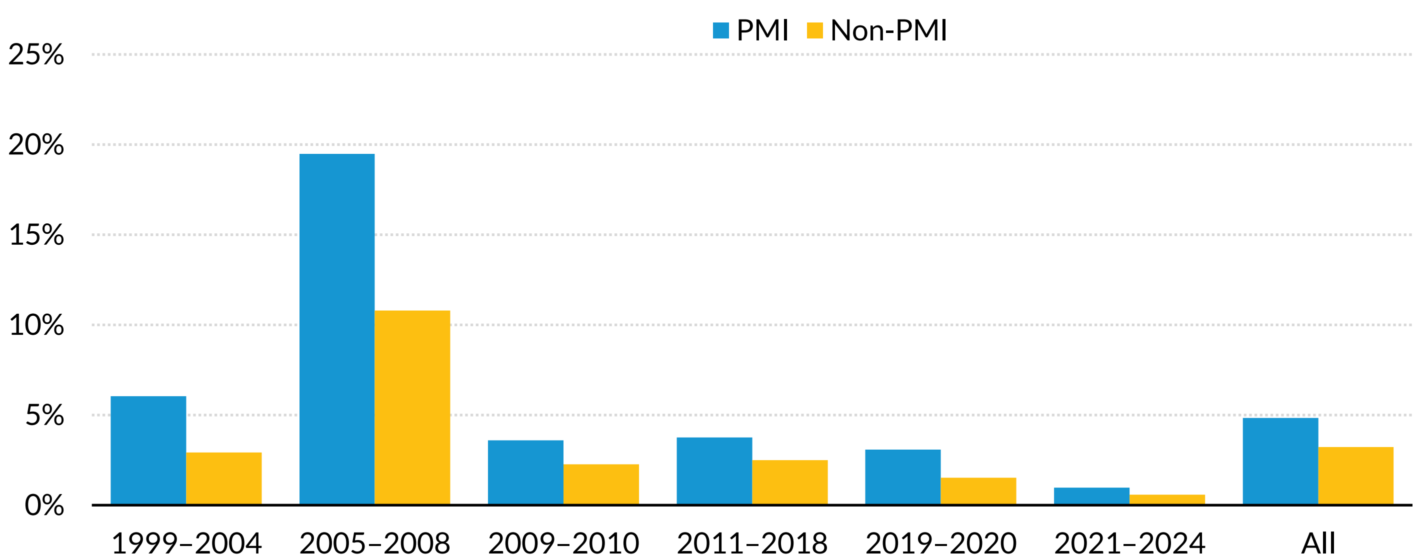
GSE loans with PMI go 180 or more days delinquent (d180+) more frequently than GSE loans without PMI. Borrowers who are in forbearance and do not pay their mortgage are counted as delinquent for this purpose. From 1994 to 2024, 3.2 percent of GSE loans without PMI went 180 or more days delinquent, versus 4.8 percent of loans with PMI. For the highest delinquency issue period, 2005 to 2008, the share of loans that went 180 or more days delinquent were 10.8 percent and 19.5 percent, respectively. For 2011–18 vintages, the rates were 2.5 percent for GSE loans without PMI and 3.8 percent for those with PMI. GSE loans with PMI have higher LTV ratios and weaker credit characteristics than non-PMI GSE loans, hence the higher default rates.

Loans Ever 180 or More Days Delinquent

	D180+ Rates (by Loan Count)		D180+ Rates (by UPB)	
Origination year	**PMI**	**Non-PMI**	**PMI**	**Non-PMI**
1994–2004	6.0%	2.9%	4.8%	2.2%
2005–2008	19.5%	10.8%	19.6%	10.1%
2009–2010	3.6%	2.3%	3.1%	1.8%
2011–2018	3.8%	2.5%	3.5%	2.2%
2019–2020	3.1%	1.5%	3.1%	1.5%
2021–2024	1.0%	0.6%	1.0%	0.6%
Total	4.8%	3.2%	3.8%	2.6%

Historical Default Rates (D180+) for GSE Loans, by Origination Year

By loan count



Sources: Fannie Mae, Freddie Mac, and the Urban Institute.
Notes: D180+ = loans that have been delinquent for 180 or more days; PMI = private mortgage insurance; UPB = unpaid principal balance; Q1 = first quarter. Government-sponsored enterprise credit data include 30-year fixed-rate, full-documentation, fully amortizing mortgage loans only. Fannie Mae data include loans originated from Q1 1999 through Q3 2024; performance data for these loans are also available through Q3 2024. Freddie Mac data include loans originated from Q1 1999 to Q2 2024; performance data for these loans are available through Q3 2024. Default is defined as six months delinquent or disposed of via short sales, third-party sales, deeds in lieu of foreclosure, or real-estate-owned acquisitions.

Defaulted Loans and Loss Severity

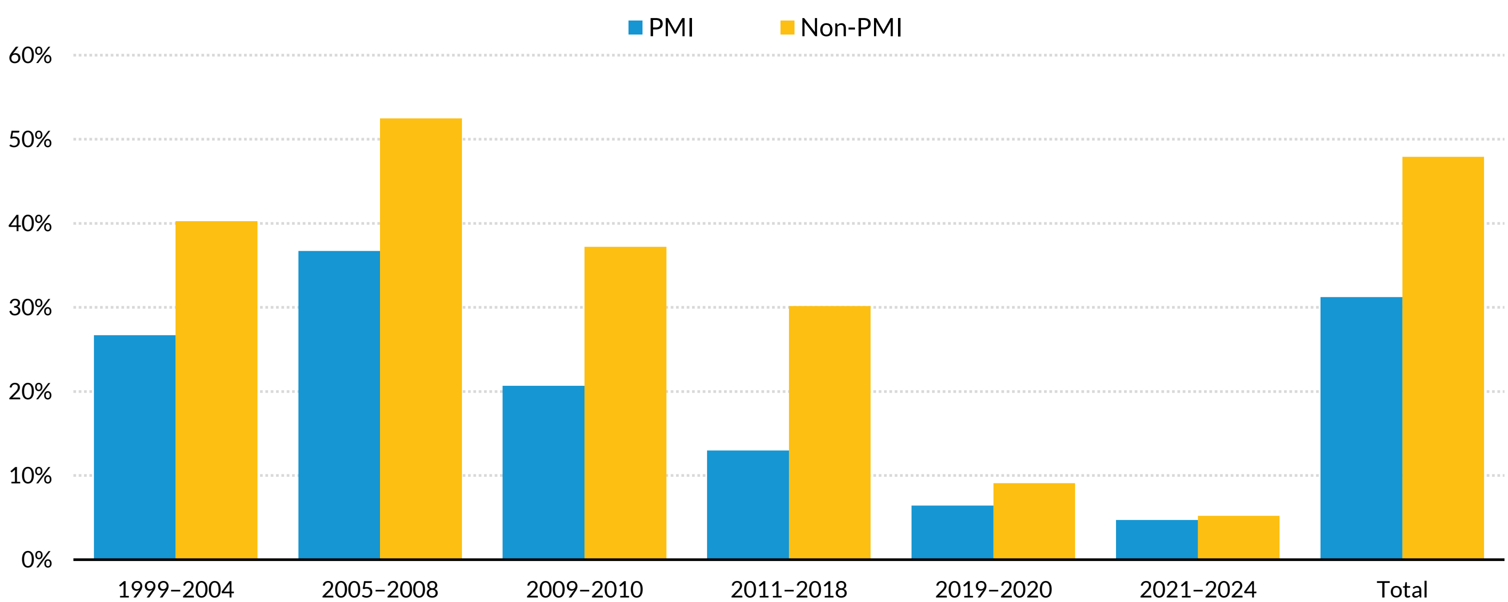
Once they are more than 180 days delinquent, GSE loans with PMI are less likely than those without PMI to become current or to prepay and are more likely to liquidate for each set of origination years. From 2021 to 2024, 4.3 percent of GSE loans with PMI were liquidated, versus 1.8 percent of loans without PMI. But once the loan is liquidated (through real estate ownership or a foreclosure alternative), the loss severity the GSEs experience is lower for loans with PMI than for those without, because mortgage insurance recoveries reduce losses.

What Happens to Defaulted Loans?

Share, by loan count

	Current		Prepay		REO or Foreclosure Alternatives		Persistently Delinquent	
Origination year	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI	PMI	Non-PMI
1994–2004	4.2%	6.0%	28.9%	39.2%	62.6%	48.7%	4.2%	6.1%
2005–2008	3.7%	5.0%	24.9%	32.0%	66.4%	56.1%	5.0%	6.9%
2009–2010	10.3%	14.3%	28.2%	40.3%	55.4%	36.0%	6.1%	9.4%
2011–2018	34.8%	36.2%	39.9%	42.5%	11.3%	9.6%	14.0%	11.7%
2019–2020	47.1%	48.9%	32.0%	35.5%	2.0%	1.1%	18.9%	14.5%
2021–2024	33.1%	36.7%	7.9%	11.5%	4.3%	1.8%	54.8%	49.9%
Total	17.7%	15.5%	29.8%	35.9%	41.9%	39.1%	10.6%	9.5%

Loss Severity for GSE Loans with and without PMI



Sources: Fannie Mae, Freddie Mac, and the Urban Institute.
Notes: GSE = government-sponsored enterprise; PMI = private mortgage insurance; REO = real estate owned; Q1 = first quarter. Foreclosure alternatives include short sales, third-party sales, note sales, and reperforming sales. GSE credit data include 30-year fixed-rate, full-documentation, fully amortizing mortgage loans only. Fannie Mae data include loans originated from Q1 1999 through Q3 2024; performance data for these loans are also available through Q3 2024. Freddie Mac data include loans originated from Q1 1999 to Q2 2024; performance data for these loans are available through Q3 2024.

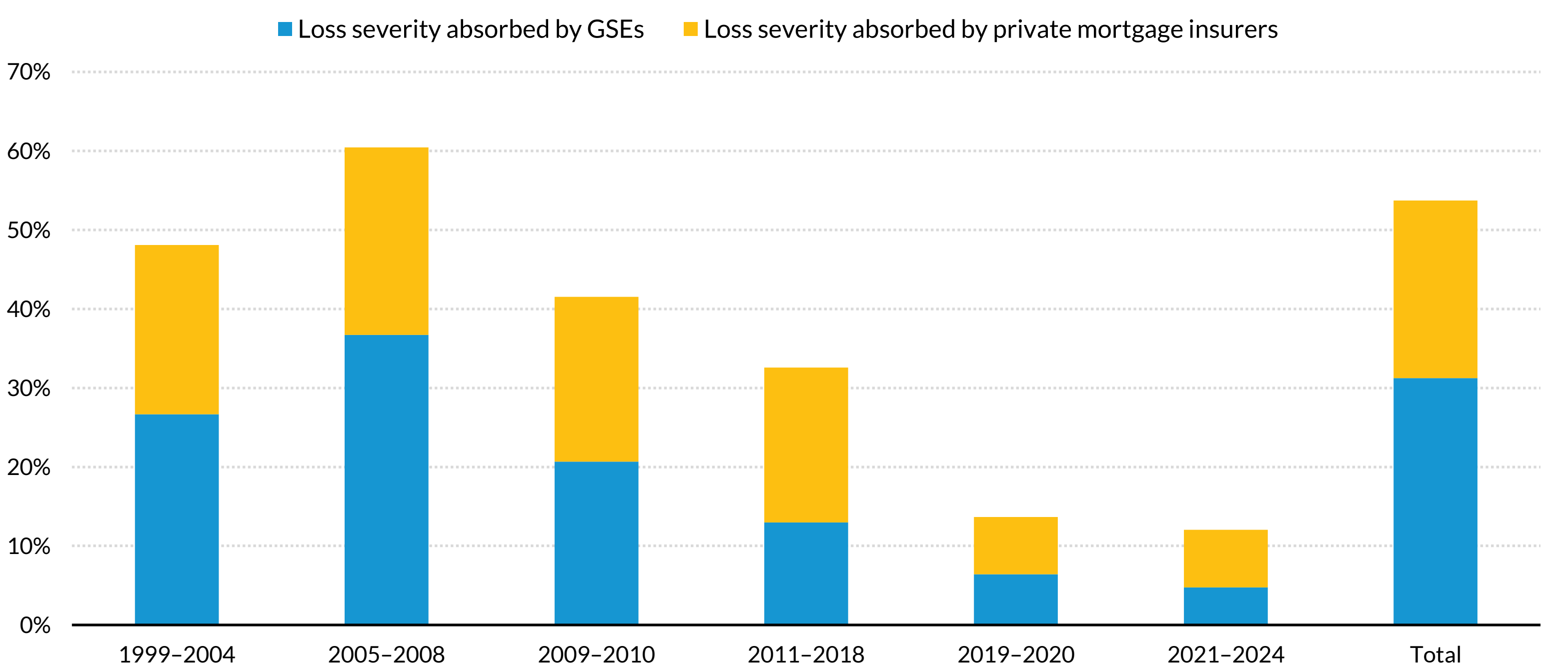
Loss Severity

For the 1994–2024 origination period, the loss severity of GSE loans without PMI was 47.9 percent, higher than the 31.2 percent severity for loans with PMI. For loans with PMI, mortgage insurance recovery was 22.5 percent. Absent PMI recovery, loss severity for GSE loans with PMI would be 53.7 percent (or 31.2 percent plus 22.5 percent). The pattern of higher severity for PMI loans than for non-PMI loans before the mortgage insurance recovery and the reduced loss severity for the GSEs attributable to PMI holds across all origination years. Standard coverage levels, which set PMI coverage at a certain threshold based on LTV, make it so that even though severity without PMI fluctuated significantly between 1994 and 2018, the PMI recovery remained relatively stable through these periods.

Total Loans

Origination year	Loss severity for loans without PMI	Total severity for PMI loans	Severity without MI recovery	MI recovery
1994–2004	40.3%	26.7%	48.1%	21.4%
2005–2008	52.5%	36.7%	60.5%	23.7%
2009–2010	37.2%	20.7%	41.5%	20.8%
2011–2018	30.2%	13.0%	32.6%	19.6%
2019–2020	9.1%	6.4%	13.7%	7.2%
2021–2024	5.2%	4.7%	12.0%	7.3%
Total	47.9%	31.2%	53.7%	22.5%

Reduction in GSE Loss Severity Because of PMI



Sources: Fannie Mae, Freddie Mac, and the Urban Institute.
Notes: GSE = government-sponsored enterprise; PMI = private mortgage insurance; REO = real estate owned; Q1 = first quarter. Foreclosure alternatives include short sales, third-party sales, note sales, and reperforming sales. GSE credit data include 30-year fixed-rate, full-documentation, fully amortizing mortgage loans only. Fannie Mae data include loans originated from Q1 1999 through Q3 2024; performance data for these loans are also available through Q3 2024. Freddie Mac data include loans originated from Q1 1999 to Q2 2024; performance data for these loans are available through Q3 2024.

Loss Severity: Foreclosure Alternatives and REOs

For the 1994–2024 origination period, the GSEs' loss severity from both foreclosure alternatives and real estate ownership was higher for loans without PMI than for those with PMI. Note that because of standard coverage levels the MI recovery percentage fluctuates much less than severity without PMI recover.

Foreclosure Alternatives

Origination year	Loss severity for loans without PMI	Total severity for PMI loans	Severity without MI recovery	MI recovery
1994–2004	24.0%	18.2%	30.6%	12.4%
2005–2008	44.6%	27.4%	49.8%	22.4%
2009–2010	29.1%	13.6%	33.0%	19.3%
2011–2018	24.6%	9.8%	25.5%	15.7%
2019–2020	6.9%	5.7%	12.2%	6.6%
2021–2024	5.6%	5.1%	14.9%	9.8%
Total	38.8%	22.6%	41.9%	19.4%

REOs

Origination year	Loss severity for loans without PMI	Total severity for PMI loans	Severity without MI recovery	MI recovery
1994–2004	48.1%	29.0%	52.8%	23.8%
2005–2008	58.6%	41.5%	66.0%	24.4%
2009–2010	45.0%	26.3%	48.3%	22.0%
2011–2018	39.3%	16.1%	39.6%	23.5%
2019–2020	13.7%	7.4%	15.6%	8.1%
2021–2024	4.6%	4.3%	8.9%	4.6%
Total	54.7%	35.4%	59.3%	24.0%

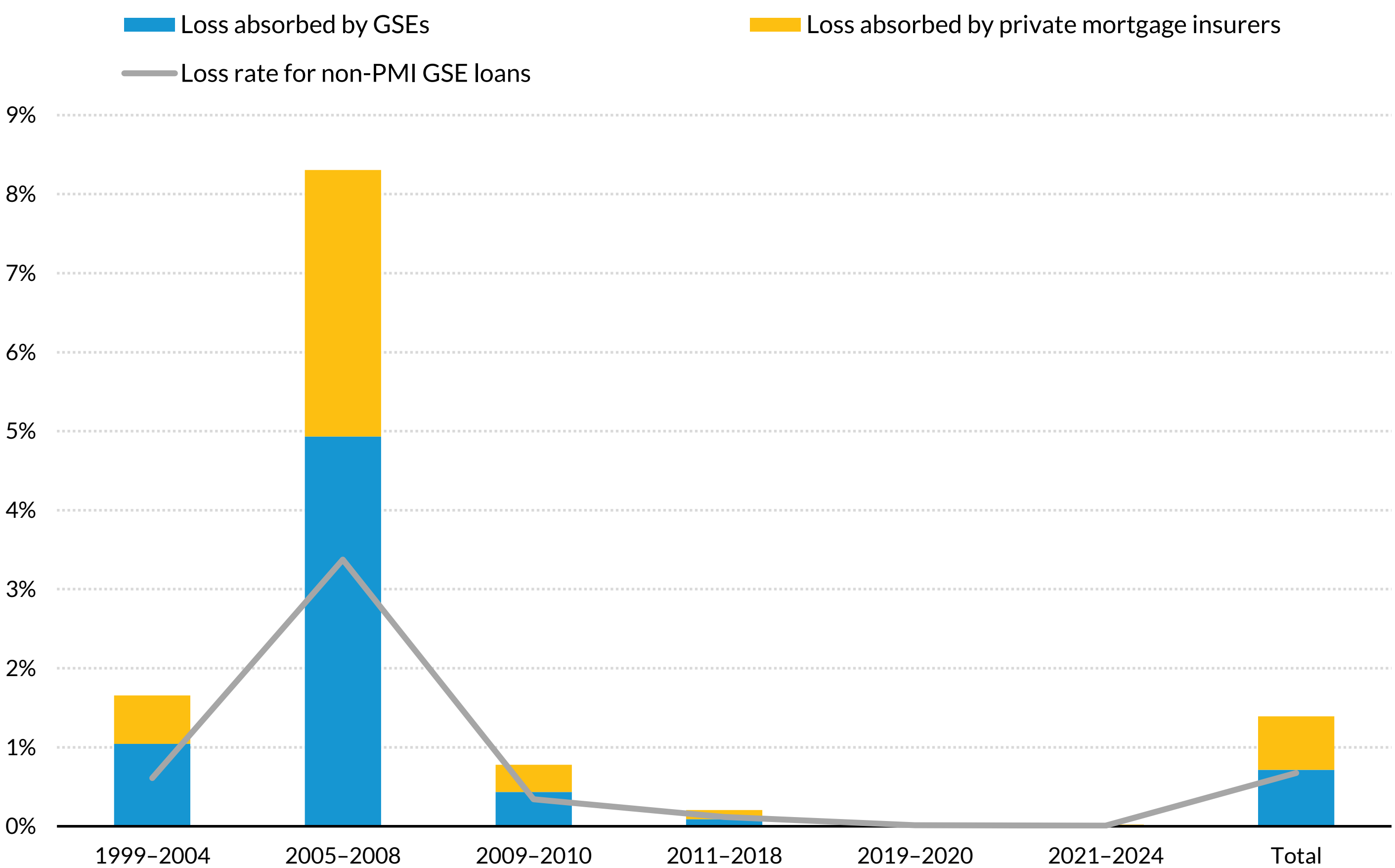
Sources: Fannie Mae, Freddie Mac, and the Urban Institute.
Notes: GSE = government-sponsored enterprise; PMI = private mortgage insurance; REO = real estate owned; Q1 = first quarter. Foreclosure alternatives include short sales, third-party sales, note sales, and reperforming sales. GSE credit data include 30-year fixed-rate, full-documentation, fully amortizing mortgage loans only. Fannie Mae data include loans originated from Q1 1999 through Q3 2024; performance data for these loans are also available through Q3 2024. Freddie Mac data include loans originated from Q1 1999 to Q2 2024; performance data for these loans are available through Q3 2024.

Loss Rate for GSE Loans with PMI

The loss rate is the ratio of total losses to the dollar volume of GSE mortgages. It combines the probability of default (loans going 180 or more days delinquent), the probability of a loan that is 180 or more days delinquent (d180+) resulting in the loss of a home (REO or foreclosure alternative), and the loss severity rate upon the liquidation of the home. This figure shows loss rates separately for GSE loans with and without PMI. The loss rate for GSE loans without PMI (the gray line) is consistent with the portion of the loss rate the GSEs absorb for loans with PMI (the blue bars). The yellow bars show the portion of the loss rate the private mortgage insurers absorbed that would have otherwise been borne by the GSEs.

The presence of PMI reduces the losses the GSEs experience on loans with LTV ratios above 80 percent to the same levels as the losses they experience on loans with LTV ratios up to 80 percent. This indicates that PMI is highly effective in reducing losses to the GSEs.

Loss Rate for GSE Loans



Sources: Fannie Mae, Freddie Mac, and the Urban Institute.
Notes: GSE = government-sponsored enterprise; PMI = private mortgage insurance; REO = real estate owned; Q1 = first quarter. Foreclosure alternatives include short sales, third-party sales, note sales, and reperforming sales. GSE credit data include 30-year fixed-rate, full-documentation, fully amortizing mortgage loans only. Fannie Mae data include loans originated from Q1 1999 through Q3 2024; performance data for these loans are also available through Q3 2024. Freddie Mac data include loans originated from Q1 1999 to Q2 2024; performance data for these loans are available through Q3 2024.
The following formula is used to calculate the loss rate: 180 Day Delinquency Rate * (Real Estate Owned) or Foreclosure Alternatives + 0.5*180 Day Delinquency Rate)*Loss Severity Rate

PMI Industry Trends

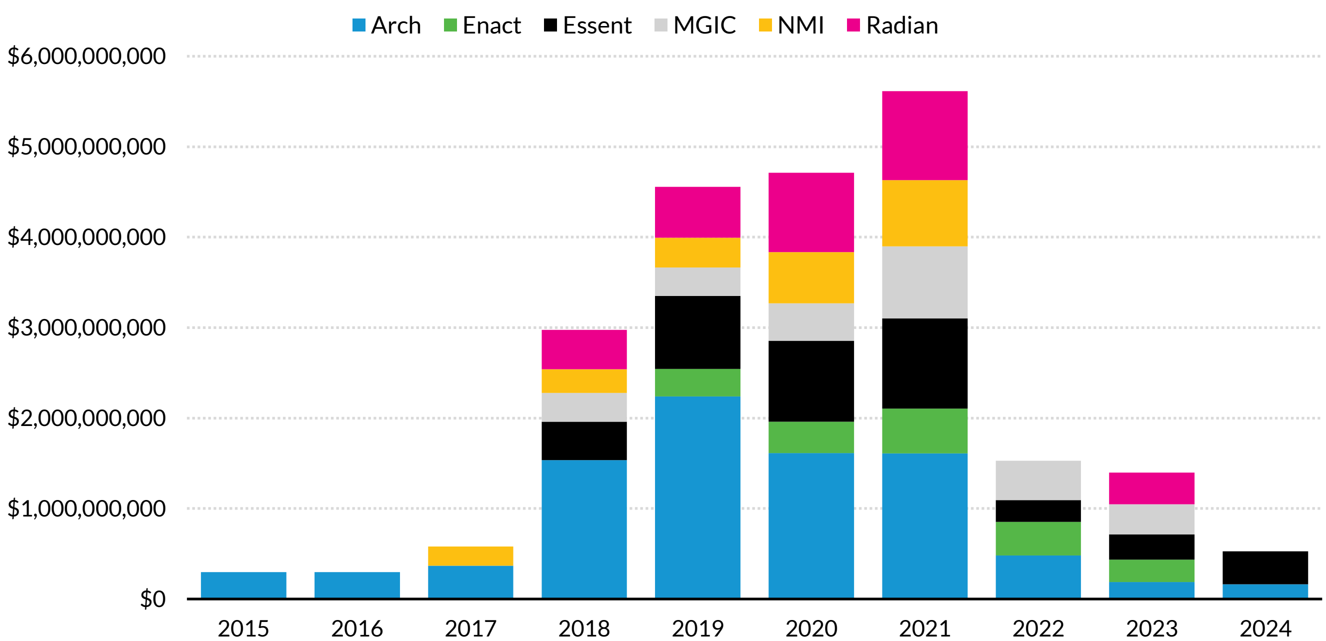
Mortgage Insurance-Linked Notes

Private mortgage insurers have become increasingly proactive in managing credit risk. In 2015, the industry expanded its credit risk transfer capabilities and issued $298.9 million in mortgage insurance-linked notes (MILNs), covering $32.4 billion of insurance in force. By 2021, the annual issuance increased to $6.3 billion, protecting $652.2 billion in mortgage loans. Because of rapidly changing market conditions, MILN issuance dropped significantly in 2024 to $526 million, protecting $16.1 billion in risk in force and $75.7 billion in mortgage loans. From 2015 to 2024, private mortgage insurers executed 59 reinsurance deals, ceding $47.1 billion in risk on approximately $2.5 trillion of insurance in force using excess of loss (XOL) and quota share reinsurance (QSR) transactions. The bottom chart shows annual MILN volume issued by individual private mortgage insurers.

MILN Issuance Metrics

	MILN issues	IIF	RIF
2015	$298,900,000	$32,370,000,000	$8,250,000,000
2016	$298,600,000	$26,020,000,000	$6,640,000,000
2017	$579,420,000	$60,190,000,000	$13,002,000,000
2018	$2,975,491,000	$298,301,000,000	$60,433,000,000
2019	$4,555,327,000	$389,755,440,732	$86,634,140,080
2020	$4,712,746,000	$511,147,912,753	$115,526,044,566
2021	$6,287,153,000	$652,230,000,000	$146,539,286,057
2022	$1,157,868,000	$205,897,042,756	$41,447,049,592
2023	$1,151,340,017	$219,073,000,000	$41,987,000,000
2024	$526,566,000	$74,700,000,000	$16,125,000,000
Total	$22,543,411,017	$2,469,684,396,241	$536,583,520,295

MILN Issuances, by Year and Company

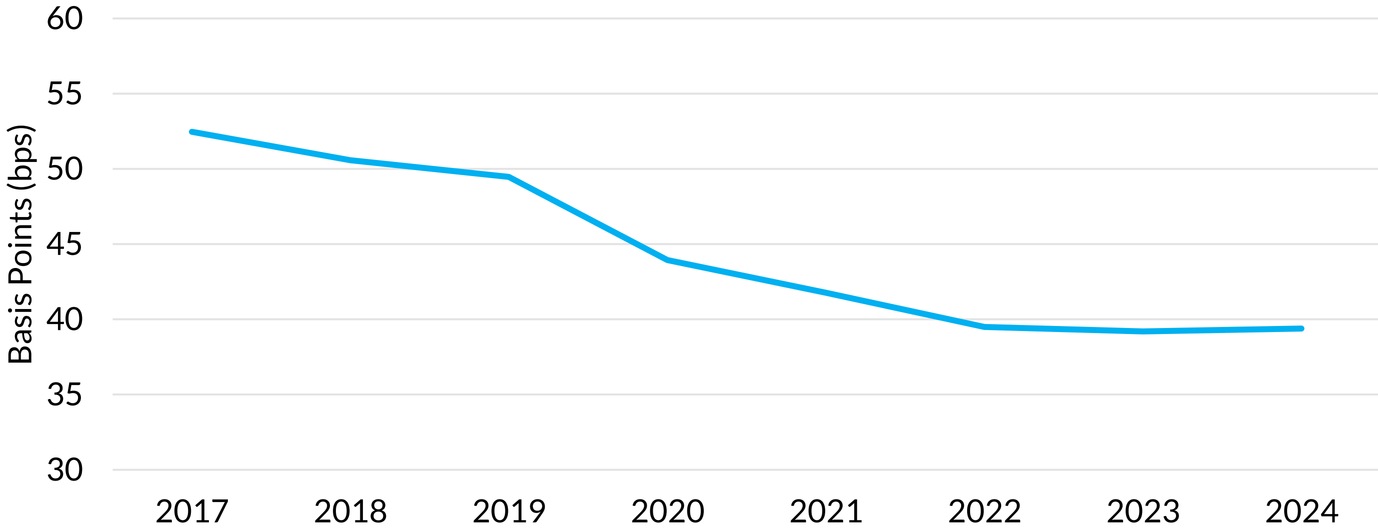


Sources: U.S. Mortgage Insurers.
Note: IIF = insurance in force; MILN = Mortgage insurance-linked notes; MGIC = Mortgage Guaranty Insurance Corporation; NMI = National Mortgage Insurance Corporation; QSR = quota share reinsurance; RIF = risk in force.

Industry Premium Yields and Capital

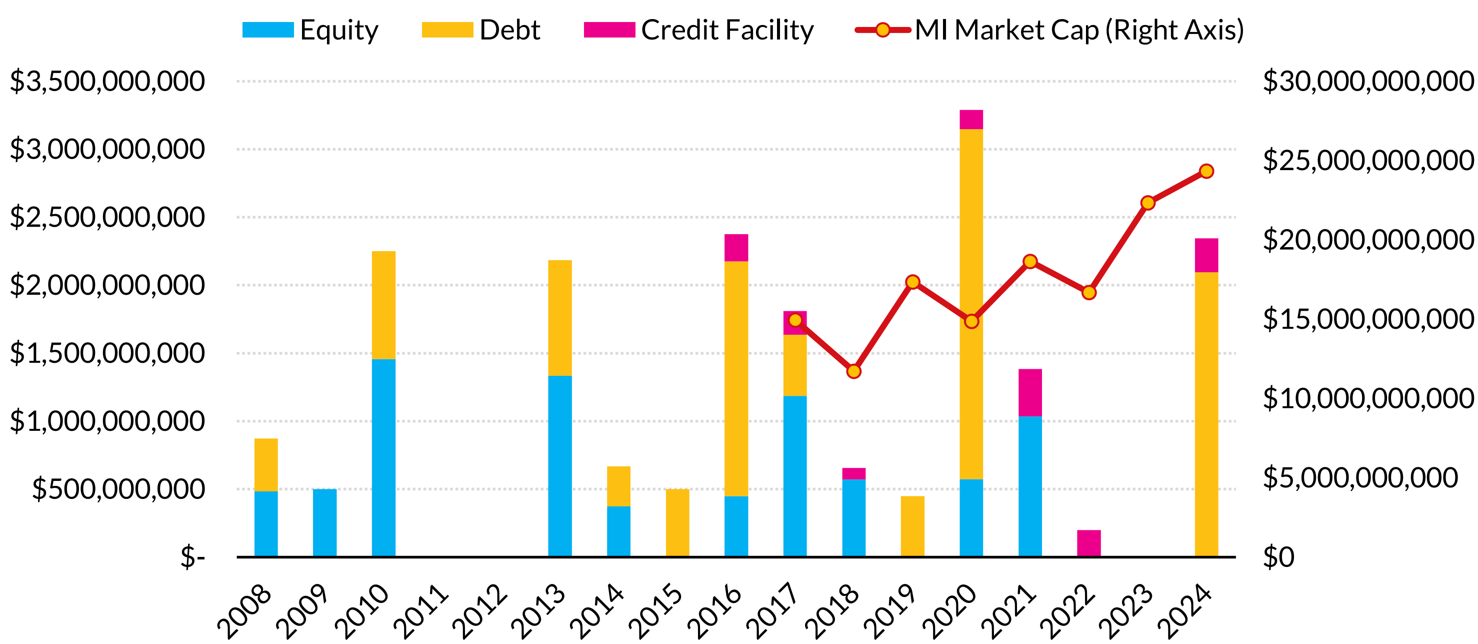
PMI rates have declined by 13.1 percentage points since 2017 while other costs of homeownership, such as homeowners insurance and property taxes, increased during the same period. Better than expected delinquency performance and a highly competitive market have put downward pressure on premiums. The industry has also adopted the use of risk-based pricing engines that more granularly tailor pricing to the risk of an individual loan also putting downward pressure on premiums. The PMI industry is much better capitalized (bottom figure) than it was before and during the great financial crisis. The growth of capital plus the changes in risk management practices through programmatic credit risk transfer put PMI companies in a much stronger financial position than ever before.

Private MI In Force Premium Yield



Sources: Quarterly SEC filings & financial supplements. Average of annual in force portfolio premium yields, calculated as annualized premiums earned, excluding MI-CRT & revenue from single premium cancellations, divided by average IIF for the period.

Capital attracted by MI companies since 2008, by Year and Capital Type



Sources: PMI companies' press releases and SEC filings.
Note: IIF = insurance in force; ILN = insurance-linked notes; MGIC = Mortgage Guaranty Insurance Corporation; NMI = National Mortgage Insurance Corporation; QSR = quota share reinsurance; RIF = risk in force. Market cap for MI companies after 2017 shown without Arch group which includes a substantial amount of business that is outside of MI.

Acknowledgments

The Housing Finance Policy Center (HFPC) was launched with generous support at the leadership level from the Citi Foundation and John D. and Catherine T. MacArthur Foundation. Additional support was provided by The Ford Foundation and The Open Society Foundations. Ongoing support for HFPC is also provided by the Housing Finance Innovation Forum, a group of organizations and individuals that support high-quality independent research that informs evidence-based policy development. Funds raised through the Forum provide flexible resources, allowing HFPC to anticipate and respond to emerging policy issues with timely analysis. This funding supports HFPC's research, outreach and engagement, and general operating activities.

This report was funded by U.S. Mortgage Insurers, a trade association representing private mortgage insurers doing business in the United States. Although USMI was given an opportunity to review a draft of this publication, the Urban Institute was under no obligation to incorporate any feedback. Additionally, the Urban Institute at all times had full control of the methodology, analysis, and insights of this report. We are grateful to USMI and to all our funders, who make it possible for Urban to advance its mission. The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, or its funders. Funders do not determine research findings or the insights and recommendations of Urban experts. Further information on the Urban Institute's funding principles is available at www.urban.org/support.

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