

Global Markets Analysis Report

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



PREPARED FOR GINNIE MAE
BY STATE STREET GLOBAL ADVISORS
URBAN INSTITUTE, HOUSING FINANCE POLICY CENTER

CONTENTS

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

Barclays US Aggregate and Global Indices	5
Global 10-year treasury yields	6
Ginnie Mae yields and yield spreads—USD, JPY, Euro	7-9
Ginnie Mae yield spreads - Intermediate Credit	10
MBS yield per duration	11
Total return and Sharpe Ratios	12

State of the US Housing Market

Serious delinquency rates	13
National HPI, HPI by state	13-14
Ginnie Mae Agency issuance and Agency outstanding by state	15
FHA and VA Outstanding Loan Count Maps	16
Size and value of the US Residential housing and mortgage markets	17
Outstanding Agency MBS	18
Origination volume over time	19

US Agency Market, Originations

Agency Gross and Net Issuance	20-22
Purchase versus refi: Refi Issuance Breakdown	23

Credit Box

First time home buyer share—purchase only loans	24-25
FICO score distribution	26
Credit box at a glance (FICO, LTV, DTI)	27-29
Historical credit box (FICO, LTV,DTI)	30-31
Cumulative Default Rates: FHA and VA	32
High LTV credit box	33-34

Ginnie Mae Nonbank Originators

Nonbank originator share (All, Purchase, Refi)	35-36
Bank vs. nonbank originators historical credit box, Ginnie Mae vs. GSE (FICO, LTV, DTI)	37-40

Holder of Ginnie Mae Mortgage Servicing Rights

Top Holders of Ginnie Mae MSR	41-42
Non-bank Holders of Ginnie Mae MSR	42

Prepayments

Aggregate	43
Select coupon/origination year cohorts	44-46

Other Ginnie Mae Programs

HMBS	47
Multifamily	48

Market Conditions-Agency MBS

Average daily trading volume and turnover by sector	49
Dealer net positions, repo volume	50

MBS Ownership

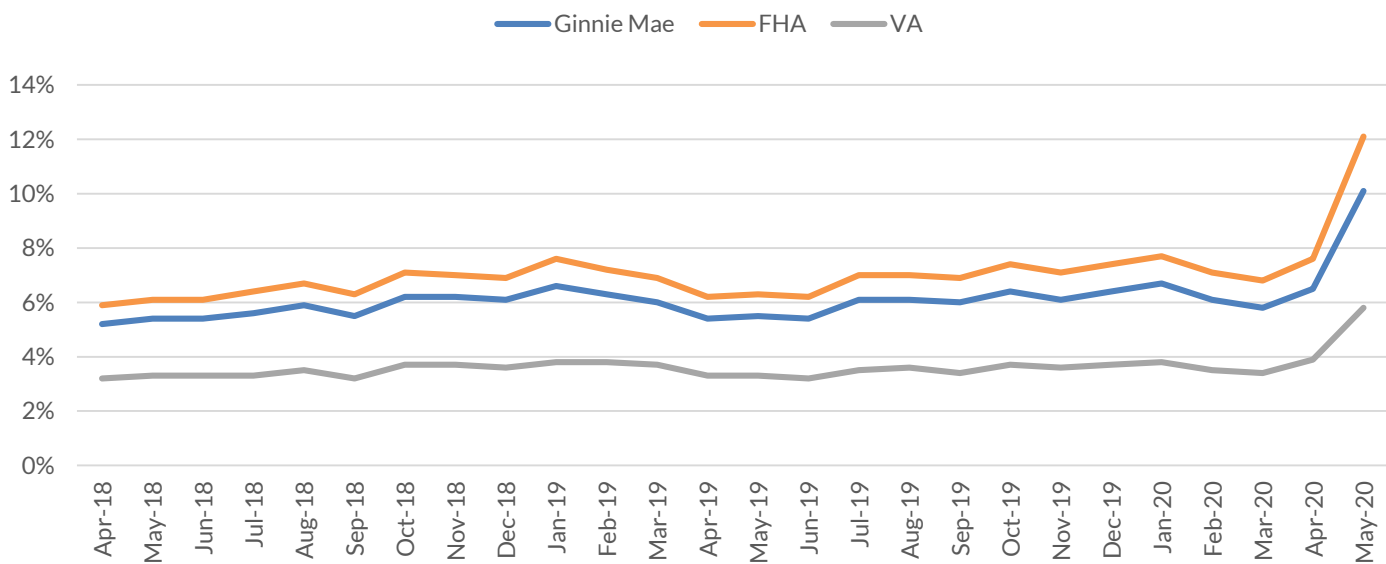
Ownership breakdown of total agency debt	51
MBS share of total agency debt and commercial bank ownership of MBS	52
Bank and Thrift Residential MBS Holdings	53
Foreign ownership of MBS	54-55
Fed Ownership of MBS	56

HIGHLIGHTS

Introduction

As the COVID-19 crisis has intensified, over 36 million Americans have lost their jobs and the US unemployment rate now stands at close to 15 percent. Although the Federal mortgage agencies, such as Department of Housing and Urban Development (HUD,) Ginnie Mae, Fannie Mae and Freddie Mac intervened swiftly to minimize financial disruption, millions of impacted households have already fallen behind on their mortgage payment. In addition, under the recently enacted CARES Act, borrowers with federal mortgages have the right to obtain payment forbearance up to 12 months provided they are impacted by COVID-19. Newly available delinquency data allow us to get an early read into the impact of COVID-19 on Ginnie Mae mortgage delinquencies.

Figure 1: Percentage of loans 30 days or more delinquent (D30+)



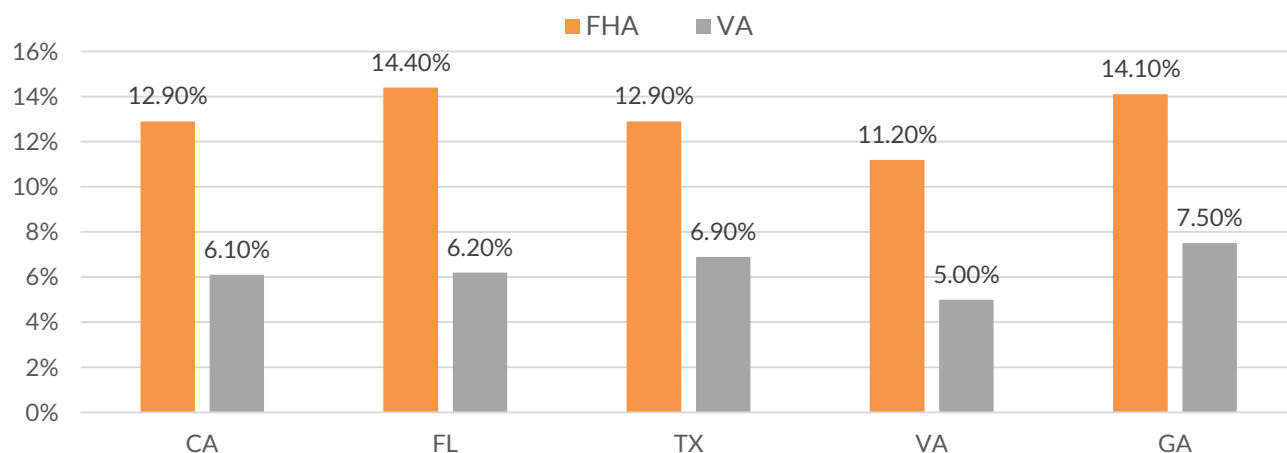
Source: Urban Institute calculations based on eMBS data. Data as of April 2020

Figure 1 above shows the monthly share of FHA and VA loans pooled in Ginnie Mae MBS that were 30 days or more delinquent. During the 2-year period preceding COVID-19, this share generally fluctuated between 5.5 and 6.5 percent for all loans backed by Ginnie Mae. In April 2020, delinquency rate almost doubled to over 10 percent. FHA mortgages account for \$1.3 trillion, or 63 percent of the total \$2 trillion in Ginnie Mae-guaranteed unpaid principal balance outstanding. Given its focus on serving first-time homebuyers and low- and moderate-income households, FHA-insured loans experienced a much greater rise in delinquencies, from around 7 percent in March to over 12 percent in April.

The nationwide reach of the COVID-19 pandemic suggests that the spike in delinquencies would be seen across states. Figure 2 shows FHA's and VA's D30+ rate as of April 2020 in 5 states with the largest number of Ginnie loans outstanding – i.e. CA, FL, TX, VA and GA. Together, these states account for 33 percent of all Ginnie Mae loans, thus wielding an outsized influence on the overall credit performance of Ginnie Mae loans.

HIGHLIGHTS

Figure 2: Percentage of loans 30 days or more delinquent (D30+) in April 2020, by State



Source: Urban Institute calculations based on eMBS data. Data as of April 2020

In the FHA space, as of April end, FL had the highest D30+ rate (14.4 percent) among these five states, followed by GA (14.1%), TX and CA (both 12.9%), and VA (11.2%). In each of these states, the D30+ rate was about 1.5 to 2 times the level in March, reflecting the sweeping magnitude of this crisis.

The D30+ rate for VA-guaranteed loans was much lower than FHA loans before the COVID crisis, but it also increased substantially in April. At 7.5 percent, GA's D30+ rate was the highest among the five states, followed by TX (6.9%), FL (6.2%), CA (6.1%), and VA (5.0%). These delinquency numbers reflect not just the scale of household distress caused by the crisis, but also the widespread and streamlined availability of COVID-19 federal forbearance.

Under the CARES Act, borrowers have the right to receive up to a total of 12-month forbearance by stating their hardship to the servicer. Borrowers also may elect to exit forbearance at any time. In the coming months, as the US economy gradually opens, it will be critical to examine what share of currently delinquent borrowers will resume making their monthly payments. Ginnie Mae has begun the process of collecting supplemental loan level data related to forbearance which will be shared in monthly disclosures.

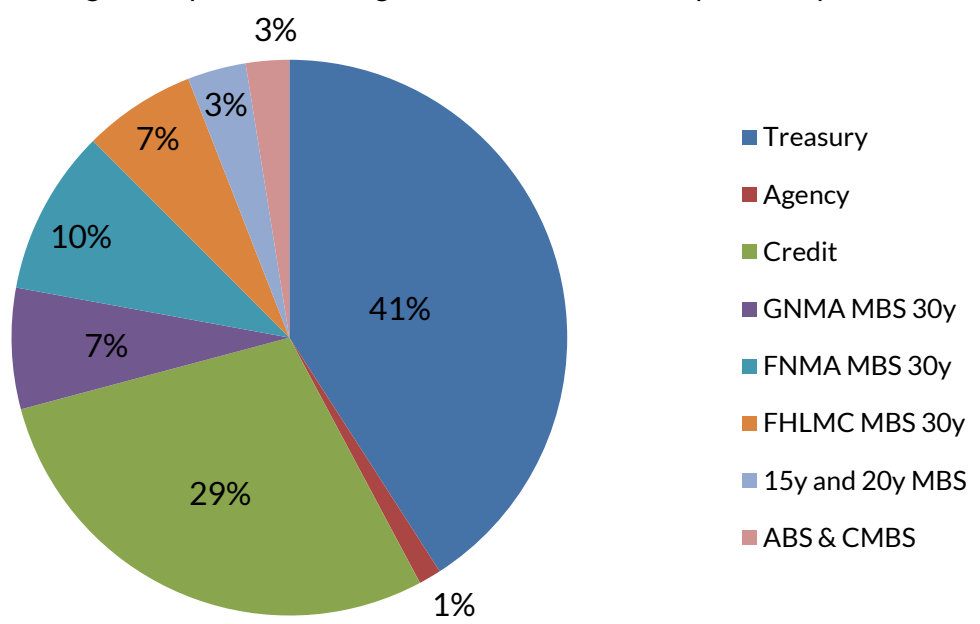
Highlights this month:

- In the first quarter of 2020, first lien originations totaled \$670 billion, up from the Q1 2019 volume of \$355 billion (page 19).
- Median FICO score for agency originations increased from 741 in Feb to 745 in March 2020, driven by increases in GSE FICOs even as Ginnie Mae median FICO remained unchanged (page 37).
- In April 2020, aggregate prepayments for Fannie and Freddie MBS exceeded those for Ginnie Mae II securities for the first time since 2013 (page 43).
- Agency MBS held by foreign investors increased in Jan 2020, driven by growth in both private and official holdings (page 54).

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

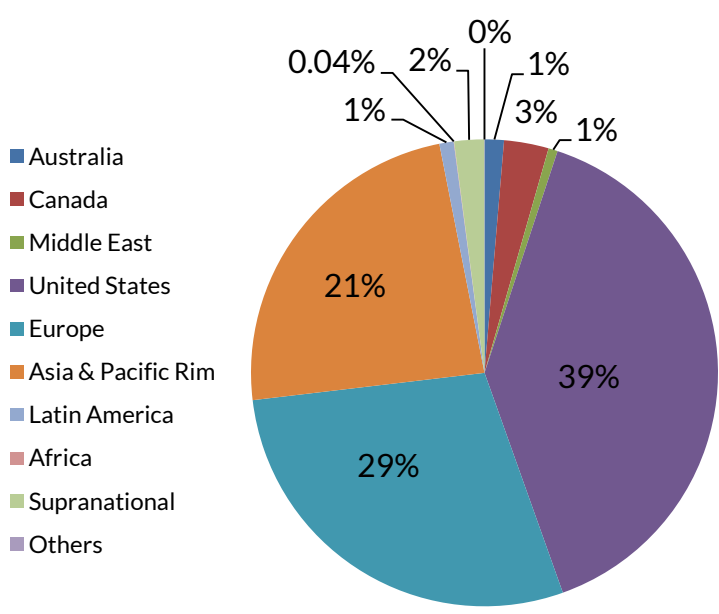
US MBS (Ginnie Mae, Fannie Mae, and Freddie Mac) comprise 27 percent of the Barclays US Aggregate Index- less than either the US Treasury share (41 percent) or the US Credit share (29 percent). Fannie Mae 30-year MBS accounts for 10 percent of the overall index, the largest MBS component, while Ginnie Mae 30-year MBS and Freddie Mac 30-year MBS both comprise 7 of the market. Mortgages with terms of 15 and 20 years comprise the remaining balance (3 percent) of the Barclays US Aggregate Index. US securities are the single largest contributor to the Barclays Global Aggregate, accounting for 39 percent of the global total. US MBS comprises 11 percent of the global aggregate.

Barclays US Aggregate Index



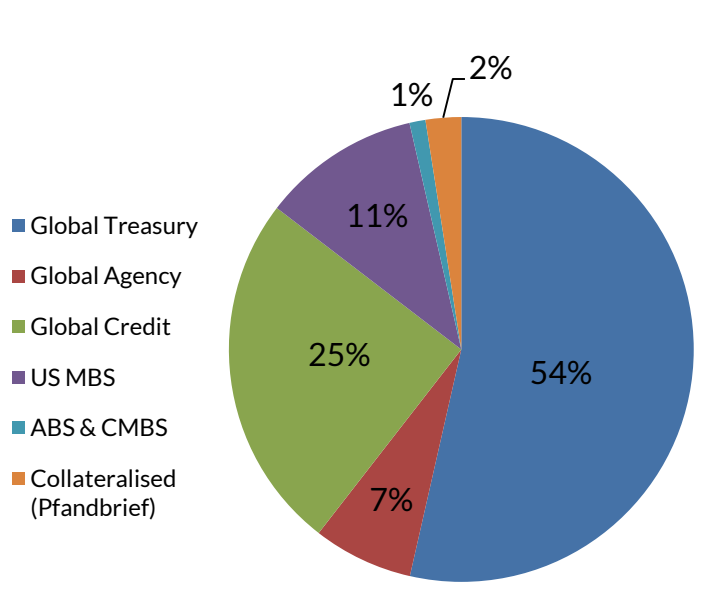
Sources: Bloomberg and State Street Global Advisors. Note: Data as of March 2020. Note: Numbers in chart may not add to 100 percent due to rounding.

Barclays Global Aggregate Index by Country



Sources: Bloomberg and State Street Global Advisors. Note: Data as of March 2020.

Barclays Global Aggregate Index by Sector

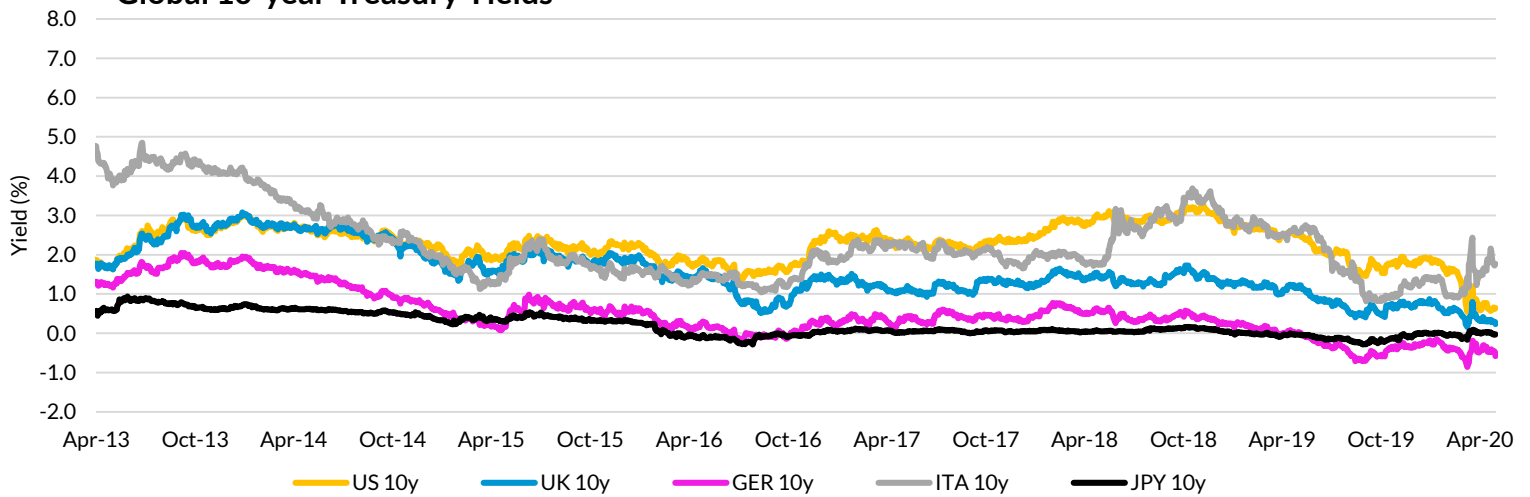


Sources: Bloomberg and State Street Global Advisors. Note: Data as of March 2020.

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

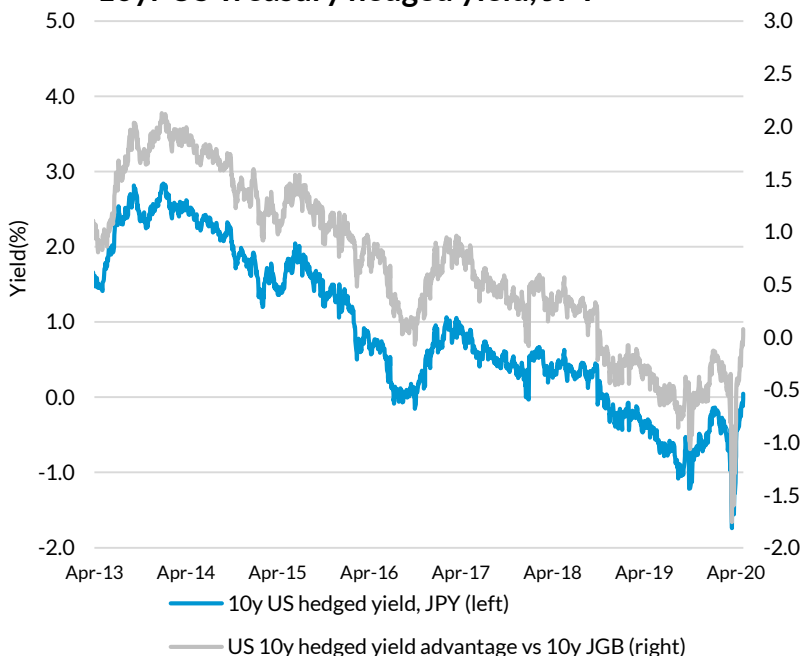
Government bond yields across the globe experienced significant volatility in the beginning of Q2 2020 in response to the economic impact of the COVID-19 shock. In April 2020, the yield on the 10-year treasury fell by 3 bps to 0.64 percent. After exceeding the yield on the US 10-year treasury in March, the Italian 10-year note yield increased by another 24 basis points in April to 1.76 percent. The yield on the UK 10-year bond fell by 13 bps to 0.23 percent, the Japanese 10-year government bond yield decreased by 5 bps to -0.03 percent, and the German 10-year yield was down by 12 bps to -0.59 percent in April. At the end of April, the hedged yield differential between the 10-year Treasury and the 10-year JGB stood at 0.07 bps, an increase of 95 bps since March 2020. The hedged yield differential between the 10-year Treasury and the 10-year Bund stood at 0.46 bps, an increase of 71 bps since the end of March 2020.

Global 10-year Treasury Yields



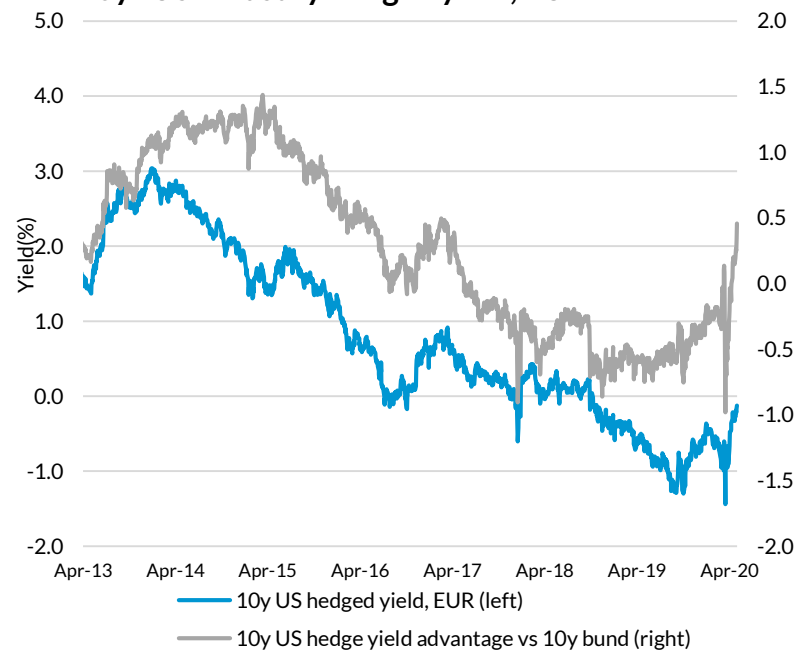
Sources: Bloomberg and State Street Global Advisors. Note: Data as of April 2020.

10yr US Treasury hedged yield, JPY



Sources: Bloomberg and State Street Global Advisors.
Note: Data as of April 2020.

10yr US Treasury hedged yield, EUR

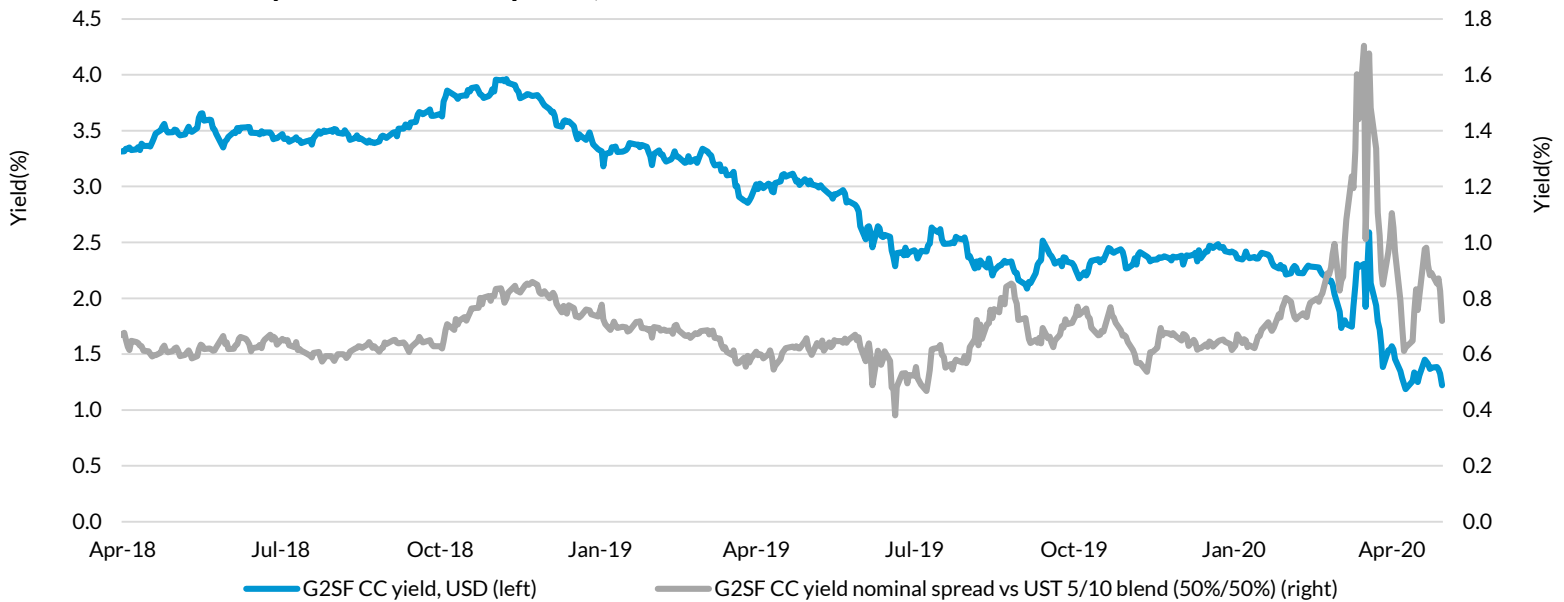


Sources: Bloomberg and State Street Global Advisors
Note: Data as of April 2020.

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

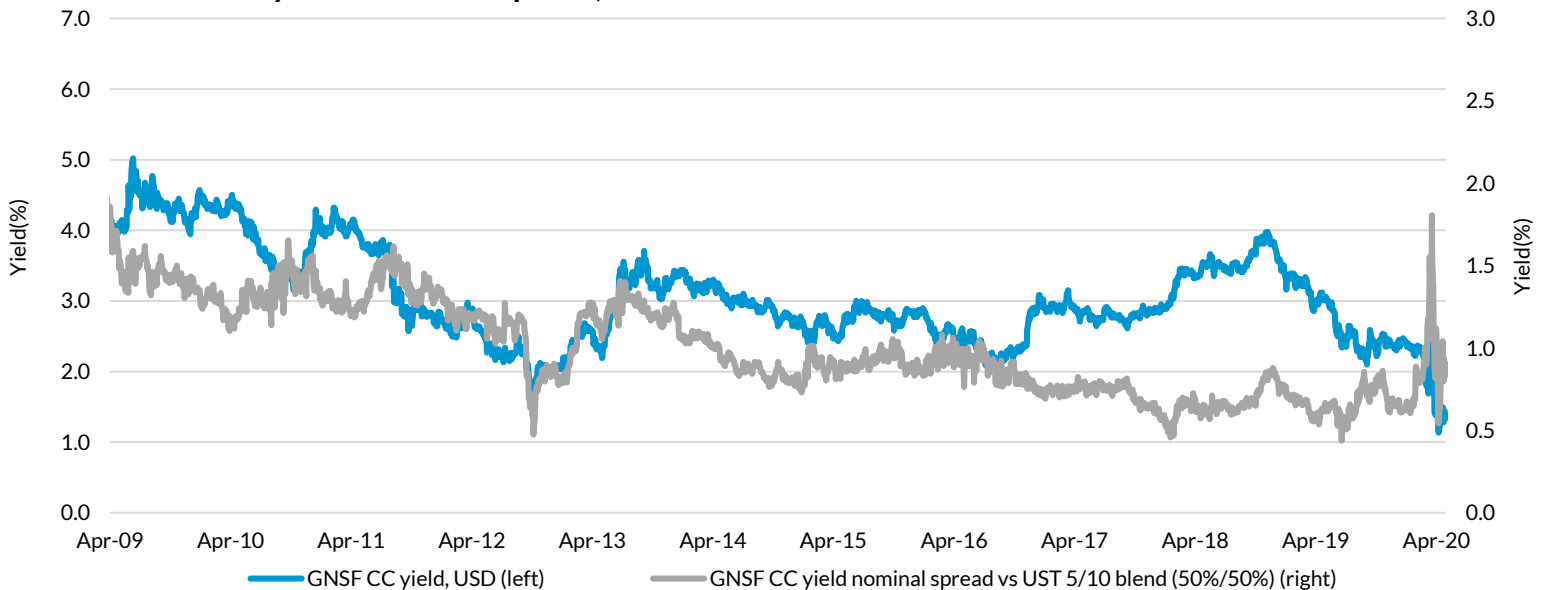
Nominal yields fell in April 2020, with GNMA II yields declining 32 bps to 1.22% and GNMA I yields declining 13 bps to 1.34% respectively. The spread between agency mortgages and U.S. Treasuries fell throughout the month as the Federal Reserve purchase of Agency MBS continued. At the end of April, current coupon Ginnie Mae securities outyielded their Treasury counterparts (relative to the average of 5- and 10-year Treasury yields) by 72 bps on the G2SF and 84 bps on the GNSF, a decrease of 29 and 10 bps respectively since last month.

G2SF CC yield & nominal spread, USD



Sources: Bloomberg and State Street Global Advisors. Note: Data as of April 2020.

GNSF CC yield & nominal spread, USD

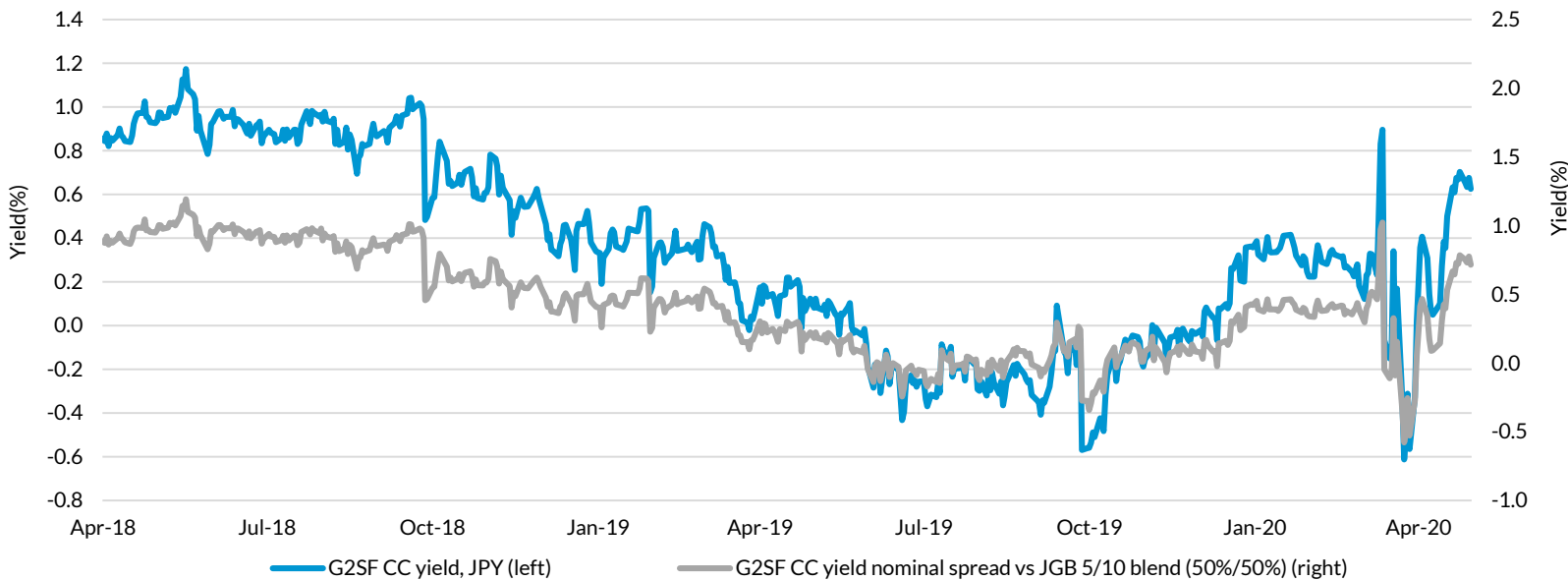


Sources: Bloomberg and State Street Global Advisors. Note: Data as of April 2020.

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

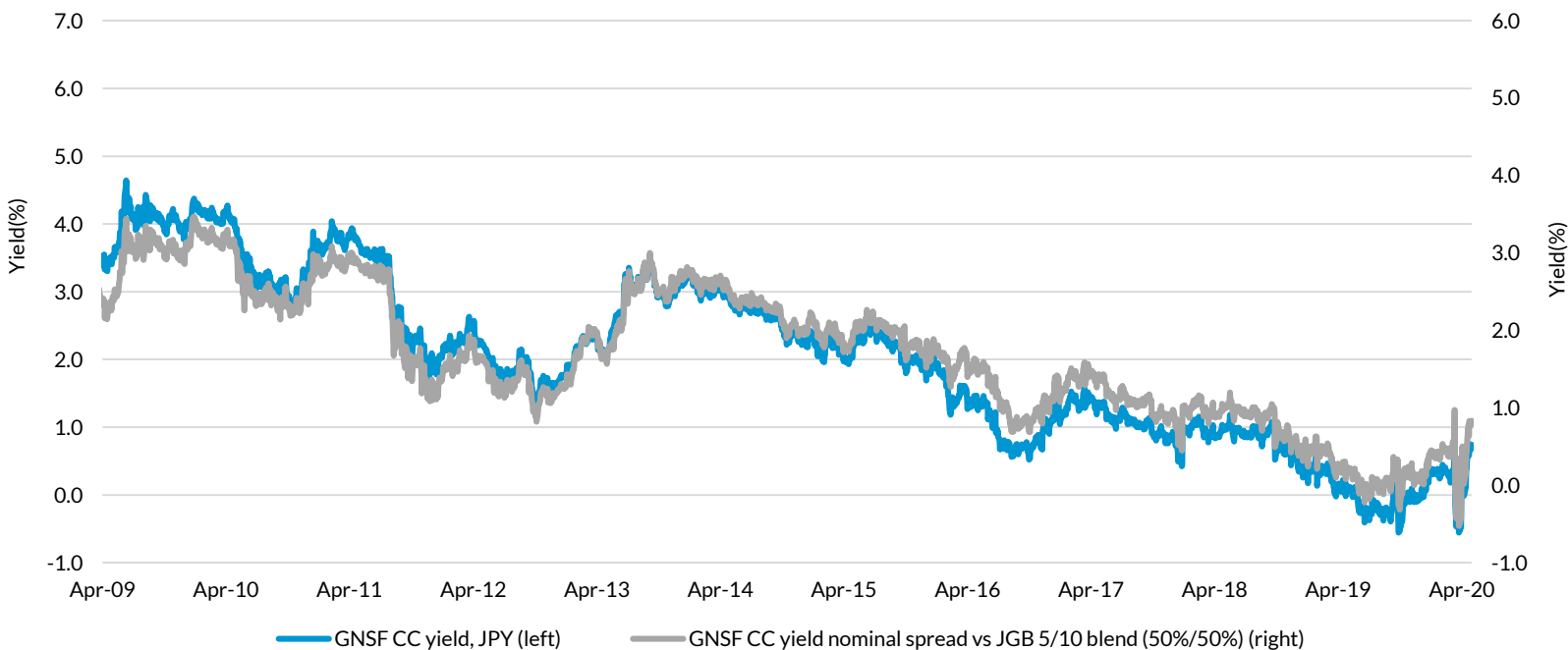
If Ginnie Mae securities are hedged into Japanese Yen, they look favorable on a yield basis versus the JGB 5/10 blend at the end of April. More precisely, hedged into Japanese yen, the G2SF and GNSF have a 72 and 83 bp yield versus the JGB 5/10 blend. This represents a 66 and 85 bp widening for G2SF and GNSF, respectively, since the end of March 2020.

G2SF CC yield & nominal spread, JPY



Sources: Bloomberg and State Street Global Advisors. Note: Data as of April 2020.

GNSF CC yield & nominal spread, JPY

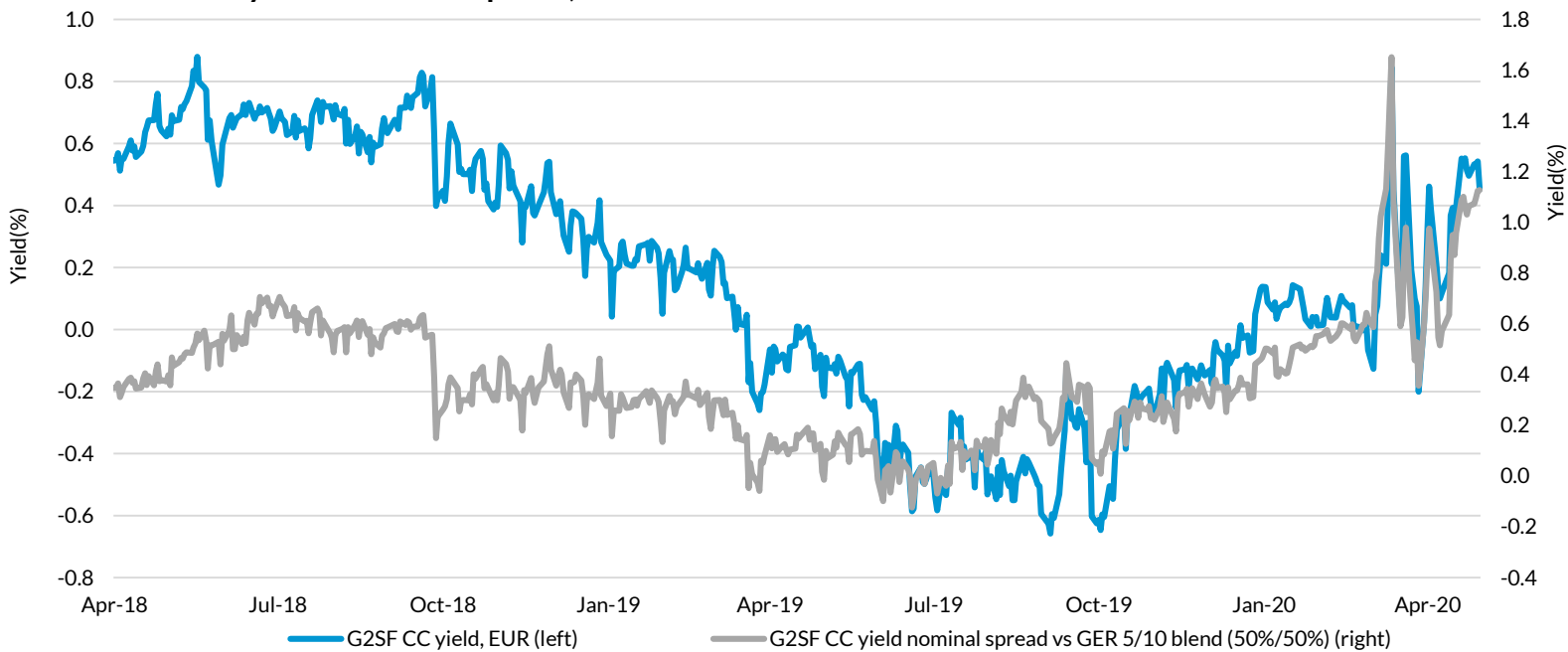


Sources: Bloomberg and State Street Global Advisors. Note: Data as of April 2020.

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

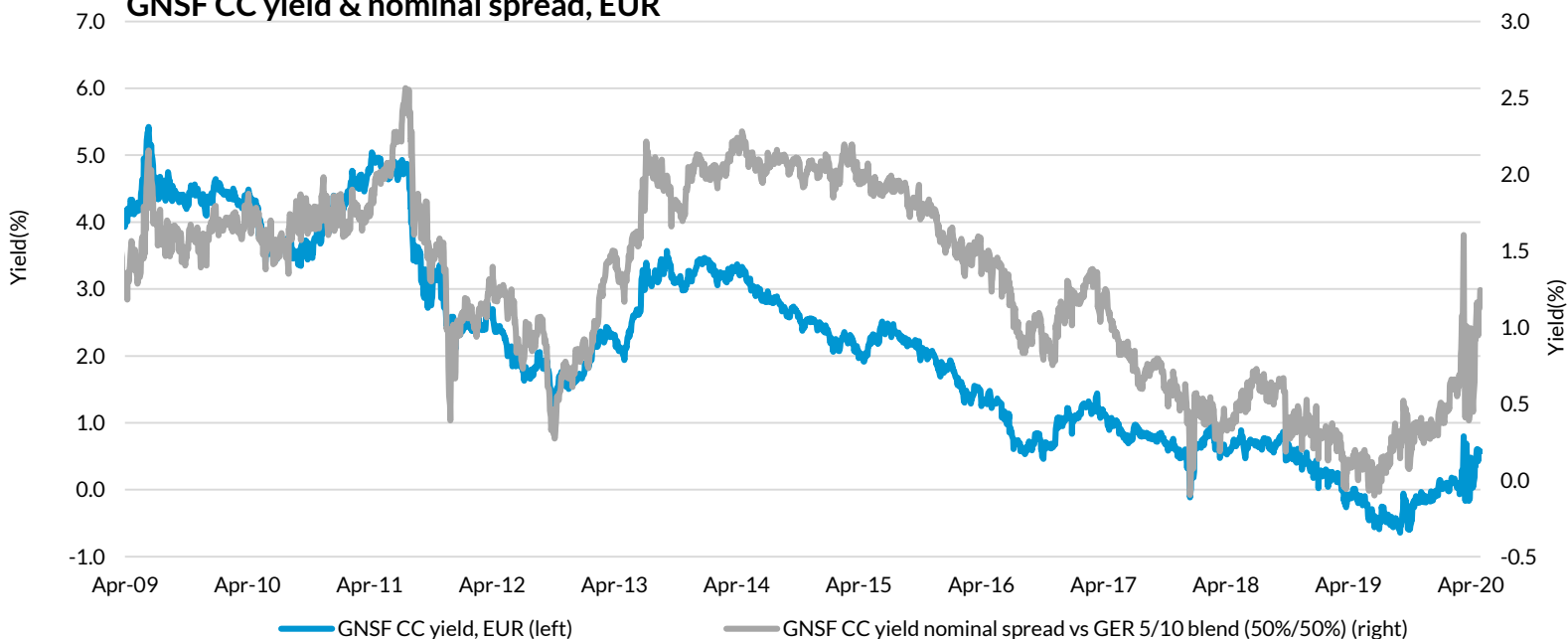
If Ginnie Mae securities are hedged into Euros, they look favorable on a yield basis versus the German 5/10 Blend. The figures below show that at the end of April, the current coupon G2SF and GNSF hedged into euros have a 113 and 124 bp higher yield than the average of the German 5/10, respectively. This represents an 42 bp increase for the G2SF and a 61 bp increase for the GNSF since the end of March 2020.

G2SF CC yield & nominal spread, EUR



Sources: Bloomberg and State Street Global Advisors. Note: Data as of April 2020.

GNSF CC yield & nominal spread, EUR

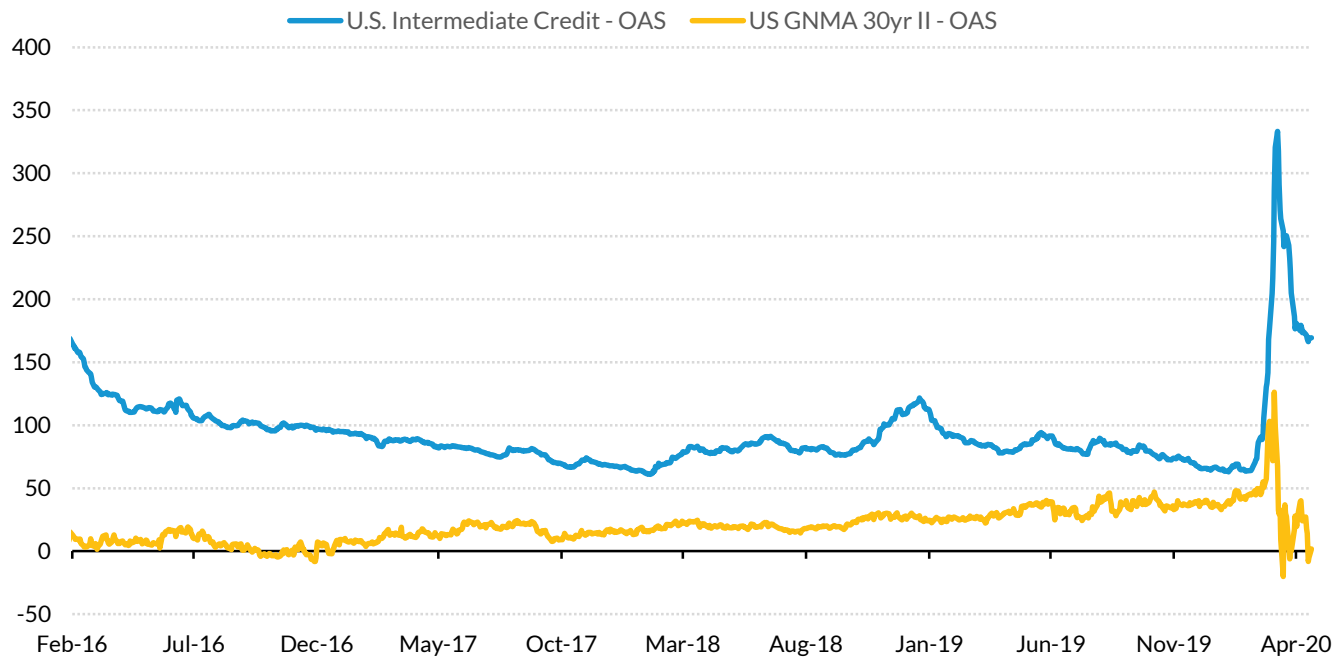


Sources: Bloomberg and State Street Global Advisors. Note: Data as of April 2020.

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

After tightening steadily from early 2016 to Jan 2020, the spread between US Intermediate Credit and GNMA II 30 year OAS skyrocketed in Feb 2020 in response to the COVID-19 panic. This was followed by substantial tightening over March and April. The OAS on intermediate credit partially recovered from its enormous widening early in the year, while the Ginnie Mae II 30-year fell to multi-year lows. Despite this drop, the spread between the two remains much elevated, ending April 2020 at 175 basis points in comparison to 21 basis points at the end of Jan, reflecting heightened investor concern about corporate credit risk.

G2 30 MBS versus Intermediate Credit



Sources: State Street Global Advisors. Note: Data as of April 2020.

Spread between Intermediate credit and 30-year GNMA MBS OAS

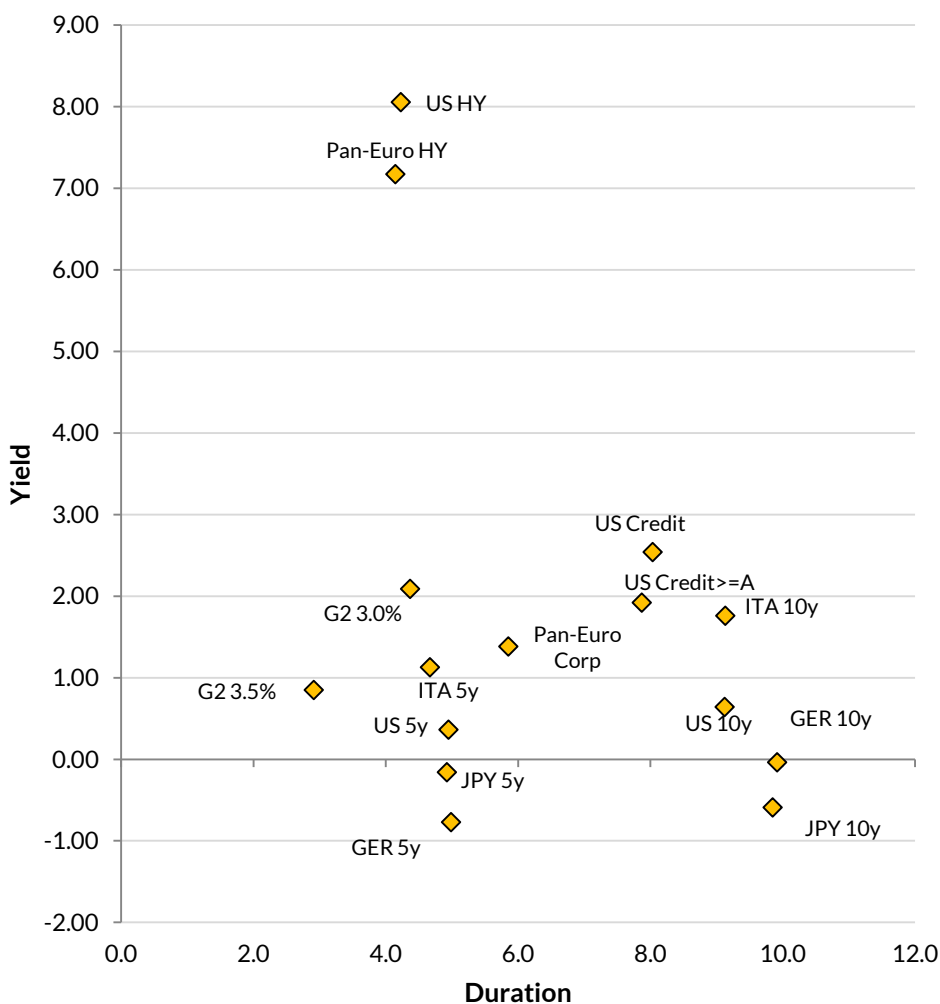


Sources: State Street Global Advisors. Note: Data as of April 2020.

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

US MBS yields are about the same or higher than most government securities with the same or longer durations. The only asset class with significantly more yields are the US and Pan-Euro high yield and credit indices. Duration, a measure of sensitivity to interest rate changes, does not fully capture the volatility of the high yield asset classes, as there is a large credit component, which has moved front and center in light of COVID-19.

Yield versus duration



Security	Duration	Yield
US 5y	4.9	0.36
US 10y	9.1	0.64
GNMA II 3.0%	4.4	2.09
GNMA II 3.5%	2.9	0.85
JPY 5y	4.9	-0.16
JPY 10y	9.9	-0.04
GER 5y	5.0	-0.77
GER 10y	9.8	-0.59
ITA 5y	4.7	1.13
ITA 10y	9.1	1.76
US credit	8.0	2.54
US credit >= A	7.9	1.92
US HY	4.2	8.05
Pan-Euro Corp	5.9	1.38
Pan-Euro HY	4.1	7.17

Sources: Bloomberg and State Street Global Advisors. Note: Yields are in base currency of security and unhedged. Data as of April 2020.

Relative Attractiveness of US Fixed Income and Ginnie Mae MBS

The average return on the Ginnie Mae index over the past decade is less than other indices. However, the standard deviation of the Ginnie Mae index is the lowest of any sector, as it has the least price volatility over a 1, 3, 5 and 10 year horizon. The result: The Sharpe Ratio, or excess return per unit of risk for the Ginnie Mae index is highest among all indices over a 1, 5 and 10-year horizon, and second only to the US Treasury Index over a 3-year horizon.

Average Return (Per Month)

Time Period	US MBS Ginnie Mae	US Treasury	US Credit Corp	Pan Euro Credit Corp	US High Yield*	Pan Euro High Yield*
1 year	0.61	1.13	0.83	0.09	-0.27	-0.38
3 year	0.32	0.48	0.47	0.13	0.18	0.05
5 year	0.24	0.32	0.39	0.13	0.31	0.16
10 year	0.27	0.32	0.44	0.35	0.50	0.49

Average Excess Return (Per Month)

Time Period	US MBS Ginnie Mae	US Treasury	US Credit Corp	Pan Euro Credit Corp	US High Yield*	Pan Euro High Yield*
1 year	0.49	1.01	0.71	0.14	-0.40	-0.33
3 year	0.18	0.34	0.34	0.19	0.05	0.11
5 year	0.15	0.23	0.29	0.18	0.22	0.22
10 year	0.23	0.27	0.39	0.37	0.45	0.52

Standard Deviation

Time Period	US MBS Ginnie Mae	US Treasury	US Credit Corp	Pan Euro Credit Corp	US High Yield*	Pan Euro High Yield*
1 year	0.52	1.53	2.94	2.74	3.84	4.67
3 year	0.67	1.21	1.86	1.62	2.41	2.77
5 year	0.61	1.13	1.62	1.46	2.22	2.38
10 year	0.66	1.07	1.44	1.39	2.03	2.03

Sharpe Ratio

Time Period	US MBS Ginnie Mae	US Treasury	US Credit Corp	Pan Euro Credit Corp	US High Yield*	Pan Euro High Yield*
1 year	0.94	0.66	0.24	0.05	-0.10	-0.07
3 year	0.27	0.28	0.18	0.12	0.02	0.04
5 year	0.24	0.21	0.18	0.12	0.10	0.09
10 year	0.34	0.25	0.27	0.27	0.22	0.26

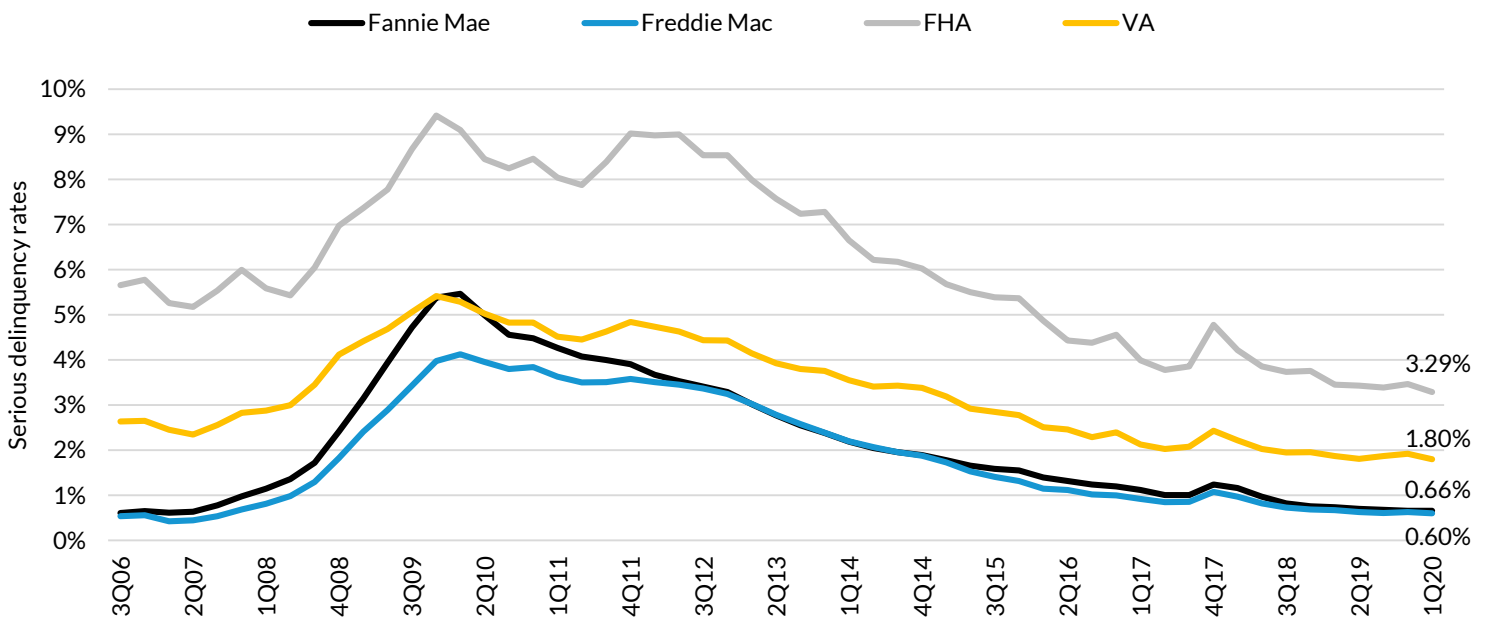
*Assumes 2% capitalization max per issuer on high yield indices

Sources: Barclays Indices, Bloomberg and State Street Global Advisors Note: Data as of April 2020.

State of the US Housing Market

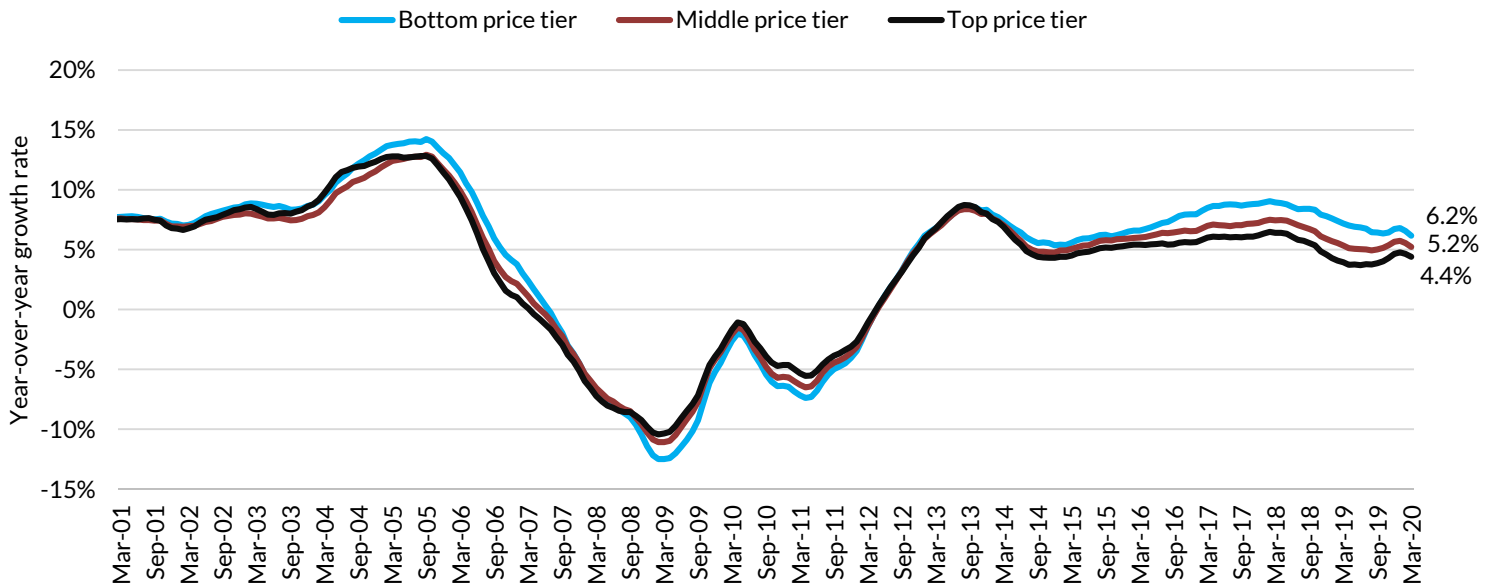
Serious delinquency rates for single-family GSE loans, FHA loans and VA loans all decreased in Q1 2020. GSE delinquencies remain just above their 2006-2007 level, while FHA and VA delinquencies (which are higher than their GSE counterparts) are well below 2006-2007 levels. The bottom chart shows nationwide house prices for the bottom, middle and the top quintiles by price. House prices have risen most at the lower end of the market where Ginnie Mae plays a major role. Prices at the lower end of the market rose by 6.2 percent for 12 months ended March 2020, much higher than the 4.4 percent for the top end of the market. Year-over-year price growth in March was lower than February for all price tiers.

Serious Delinquency Rates: Single-Family Loans



Sources: Fannie Mae, Freddie Mac, MBA Delinquency Survey and Urban Institute.
 Note: Serious delinquency is defined as 90 days or more past due or in the foreclosure process. Data as of Q1 2020.

National Year-Over-Year HPI Growth



Sources: Black Knight and Urban Institute. Note: Black Knight divides home prices in each region into quintiles; this figure shows the performance of the bottom, middle and top quintiles. Data as of March 2020.

State of the US Housing Market

Nationally, nominal home prices have increased by 56.7 percent since the trough, and now exceed their pre-crisis peak valuation on a nominal basis by 16.9 percent. The picture is very different across states, with many states well in excess of the prior peak, while Connecticut remains 12.8 percent below peak level.

State	HPI Changes				YOY	Current HPI % Above Peak
	2000 to Peak	Peak to Trough	Trough to Current			
National	75.2%	-25.4%	56.7%	4.4%	16.9%	
Alabama	35.9%	-15.2%	34.0%	5.7%	13.6%	
Alaska	69.4%	-3.0%	24.1%	3.0%	20.4%	
Arizona	109.9%	-47.9%	88.3%	7.2%	-1.9%	
Arkansas	41.5%	-9.7%	26.1%	3.5%	13.9%	
California	154.9%	-43.3%	94.4%	4.0%	10.2%	
Colorado	40.3%	-12.9%	83.4%	4.1%	59.8%	
Connecticut	92.2%	-24.7%	16.0%	2.6%	-12.6%	
Delaware	95.0%	-23.6%	32.3%	5.0%	1.1%	
District of Columbia	174.7%	-13.7%	59.2%	3.5%	37.5%	
Florida	128.5%	-46.9%	75.8%	5.2%	-6.6%	
Georgia	38.4%	-31.5%	68.5%	4.9%	15.4%	
Hawaii	163.1%	-22.5%	52.7%	2.9%	18.3%	
Idaho	71.5%	-28.6%	94.4%	11.3%	38.8%	
Illinois	61.6%	-34.4%	38.8%	0.9%	-8.9%	
Indiana	21.5%	-7.8%	38.2%	5.6%	27.4%	
Iowa	28.3%	-4.7%	27.3%	3.2%	21.3%	
Kansas	34.6%	-9.2%	43.7%	4.3%	30.5%	
Kentucky	29.7%	-7.6%	33.7%	4.2%	23.5%	
Louisiana	48.7%	-5.1%	24.3%	2.4%	17.9%	
Maine	82.1%	-12.4%	40.6%	6.2%	23.2%	
Maryland	129.3%	-28.6%	28.2%	2.7%	-8.5%	
Massachusetts	92.3%	-22.9%	57.8%	4.2%	21.6%	
Michigan	23.8%	-39.4%	78.2%	3.3%	7.9%	
Minnesota	66.4%	-27.8%	57.5%	3.9%	13.8%	
Mississippi	41.0%	-13.7%	29.1%	4.7%	11.4%	
Missouri	42.6%	-15.2%	38.1%	4.9%	17.0%	
Montana	82.3%	-11.2%	54.1%	5.9%	36.8%	
Nebraska	26.7%	-6.6%	43.6%	3.8%	34.1%	
Nevada	126.8%	-59.1%	124.5%	3.0%	-8.1%	
New Hampshire	90.7%	-23.6%	44.7%	6.2%	10.4%	
New Jersey	117.8%	-28.0%	28.6%	3.3%	-7.4%	
New Mexico	67.0%	-16.5%	29.1%	7.8%	7.9%	
New York	98.2%	-15.2%	43.5%	4.3%	21.7%	
North Carolina	40.7%	-15.7%	39.8%	5.0%	17.8%	
North Dakota	53.1%	-3.8%	57.6%	3.8%	51.6%	
Ohio	21.1%	-18.4%	39.0%	5.1%	13.4%	
Oklahoma	37.5%	-2.4%	22.3%	4.8%	19.3%	
Oregon	82.0%	-28.1%	82.4%	4.7%	31.2%	
Pennsylvania	70.1%	-11.7%	26.1%	3.3%	11.4%	
Rhode Island	130.7%	-34.6%	56.9%	7.4%	2.6%	
South Carolina	45.0%	-19.5%	38.6%	5.1%	11.6%	
South Dakota	45.1%	-4.0%	48.7%	4.4%	42.8%	
Tennessee	35.0%	-11.8%	48.5%	6.2%	31.0%	
Texas	33.5%	-5.8%	53.7%	3.9%	44.8%	
Utah	54.8%	-22.0%	81.0%	7.1%	41.1%	
Vermont	83.5%	-7.5%	36.9%	7.4%	26.7%	
Virginia	99.6%	-22.8%	30.0%	4.0%	0.3%	
Washington	85.2%	-28.7%	94.0%	6.7%	38.2%	
West Virginia	42.4%	-6.5%	27.6%	3.3%	19.2%	
Wisconsin	44.7%	-16.3%	36.9%	3.4%	14.5%	
Wyoming	77.4%	-5.7%	33.3%	6.4%	25.7%	

Sources: Black Knight and Urban Institute. Note: HPI data as of February 2020. Negative sign indicates that state is above earlier peak. Peak refers to the month when HPI reached the highest level for each state/US during the housing boom period, ranging from 09/2005 to 09/2008. Trough represents the month when HPI fell to the lowest level for each state/US after the housing bust, ranging from 01/2009 to 03/2012. Current is 02/2020, the latest HPI data period.

State of the US Housing Market

Ginnie Mae MBS constitute 28.5 percent of outstanding agency issuance by loan balance and 32.7 percent of new issuance over the past year. However, the Ginnie Mae share varies widely across states, with the share of outstanding (by loan balance) as low as 14.3 percent in the District of Columbia and as high as 49.7 percent in Alaska. In general, the Ginnie Mae share is higher in states with lower home prices.

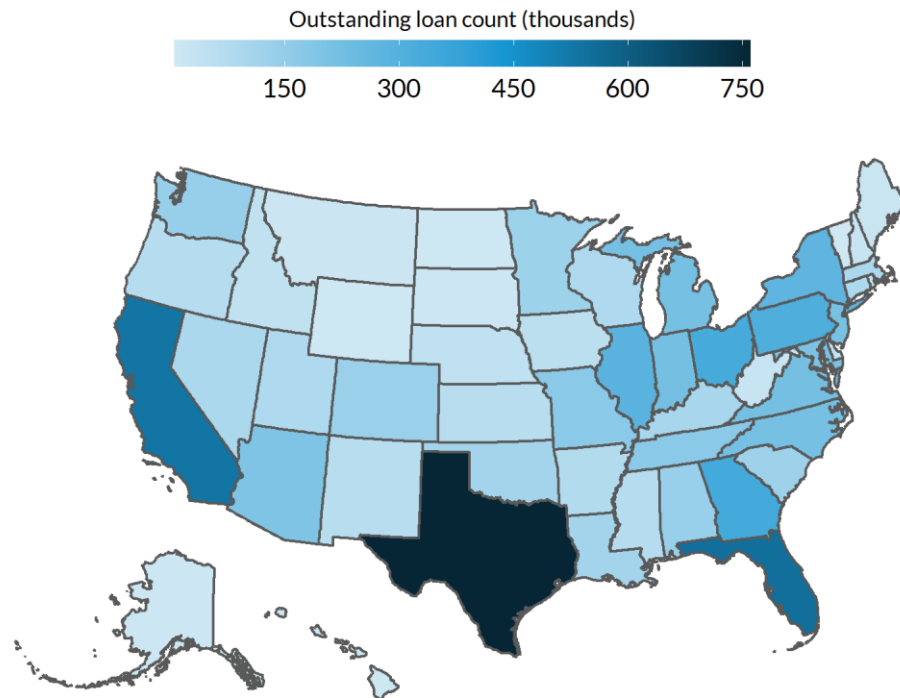
State	Agency Issuance (past 1 year)				Agency Outstanding			
	GNMA Share	GNMA Loan Count	GNMA Avg. Loan Size (000)	GSE Avg. Loan Size (000)	GNMA Share	GNMA Loan Count	GNMA Avg. Loan Size (000)	GSE Avg. Loan Size (000)
National	32.7%	2,281,009	242.4	262.1	28.5%	11,496,356	164.2	191.2
Alabama	45.0%	41,069	183.3	205.8	43.1%	239,346	128.7	153.6
Alaska	54.2%	6,534	300.5	268.4	49.7%	39,037	231.9	200.5
Arizona	32.9%	84,244	238.7	244.2	27.9%	320,987	166.1	183.5
Arkansas	43.0%	22,282	157.3	185.0	42.7%	140,468	111.3	139.2
California	26.5%	210,106	382.3	374.5	18.7%	793,464	266.5	272.3
Colorado	32.3%	71,409	321.8	310.8	24.1%	240,415	221.9	231.7
Connecticut	31.8%	18,467	228.0	247.8	28.4%	111,187	182.0	189.0
Delaware	39.1%	10,066	232.6	246.3	34.4%	52,671	179.1	185.8
District of Columbia	17.5%	1,799	459.6	412.7	14.3%	10,066	300.6	307.0
Florida	41.4%	197,097	232.5	229.3	33.8%	850,848	167.9	174.5
Georgia	41.0%	103,578	206.6	234.4	36.6%	522,069	144.1	172.8
Hawaii	45.1%	8,707	536.8	427.4	28.0%	32,095	384.3	319.8
Idaho	31.6%	18,309	239.3	236.9	28.3%	80,035	157.3	174.1
Illinois	24.5%	65,363	194.2	223.0	23.4%	377,026	140.5	161.3
Indiana	35.9%	55,846	161.7	180.2	35.2%	310,290	111.3	128.5
Iowa	24.5%	14,920	162.7	185.7	24.1%	88,087	114.0	133.1
Kansas	34.5%	17,462	172.2	198.8	33.9%	106,860	120.3	140.5
Kentucky	38.7%	31,171	166.8	187.2	37.2%	170,629	121.5	134.6
Louisiana	43.7%	33,007	184.2	212.2	40.6%	191,054	137.3	160.1
Maine	33.7%	8,238	204.1	222.5	30.2%	41,504	152.2	163.1
Maryland	43.8%	61,206	307.4	298.3	37.0%	308,541	230.4	220.9
Massachusetts	21.9%	28,837	320.9	323.8	17.7%	126,292	237.4	232.9
Michigan	23.5%	55,100	165.5	193.7	23.3%	312,142	113.5	136.9
Minnesota	23.2%	33,469	221.2	236.0	21.8%	192,231	156.3	173.5
Mississippi	51.2%	19,535	167.6	189.1	49.0%	117,157	120.8	143.3
Missouri	32.9%	47,298	170.6	196.6	33.0%	268,615	120.8	140.9
Montana	30.7%	7,150	242.2	244.4	27.2%	37,200	170.1	180.8
Nebraska	32.5%	12,146	185.5	190.3	31.0%	74,632	123.0	139.2
Nevada	38.8%	38,918	277.2	259.0	31.3%	144,276	190.5	197.4
New Hampshire	31.1%	9,750	258.0	251.1	26.9%	45,603	194.0	184.3
New Jersey	28.5%	48,126	275.4	298.4	25.4%	252,783	209.6	221.2
New Mexico	42.8%	15,985	200.9	211.1	40.6%	99,479	140.8	154.8
New York	24.3%	46,781	268.9	302.2	23.8%	340,517	186.8	217.7
North Carolina	35.4%	84,067	204.6	230.9	31.8%	436,173	141.8	169.1
North Dakota	27.9%	3,171	229.1	226.7	24.5%	17,028	167.4	168.6
Ohio	33.6%	74,429	160.7	177.1	33.7%	459,066	112.3	128.2
Oklahoma	45.9%	29,406	169.3	189.7	46.3%	198,489	119.7	141.7
Oregon	28.7%	31,799	287.2	286.4	21.3%	128,435	201.1	212.4
Pennsylvania	31.5%	65,878	183.7	217.8	30.8%	423,349	135.8	159.9
Rhode Island	36.3%	7,626	253.3	247.3	31.9%	37,639	190.0	185.3
South Carolina	41.0%	49,610	206.4	217.9	35.6%	231,215	147.9	163.4
South Dakota	35.3%	6,045	197.5	207.9	33.8%	31,481	143.6	152.4
Tennessee	39.6%	58,768	208.6	227.8	37.0%	300,350	140.0	168.3
Texas	35.9%	192,502	221.0	238.7	33.8%	1,100,462	144.6	178.4
Utah	26.3%	32,752	278.3	282.9	24.0%	127,856	193.7	214.9
Vermont	25.8%	2,390	207.2	221.9	19.6%	13,067	164.3	160.3
Virginia	44.3%	89,225	299.8	299.4	38.7%	456,826	220.0	219.2
Washington	30.8%	68,104	324.9	328.7	24.6%	274,781	221.4	236.3
West Virginia	51.0%	10,069	169.9	172.1	44.9%	55,807	126.1	127.9
Wisconsin	21.1%	25,723	187.6	201.2	19.2%	139,416	133.5	143.0
Wyoming	41.4%	5,470	232.4	239.5	37.8%	27,310	177.3	179.0

Sources: eMBS and Urban Institute. Note: Ginnie Mae outstanding share are based on loan balance as of March 2020. Ginnie Mae issuance is based on the last 12 months, from March 2019 to March 2020.

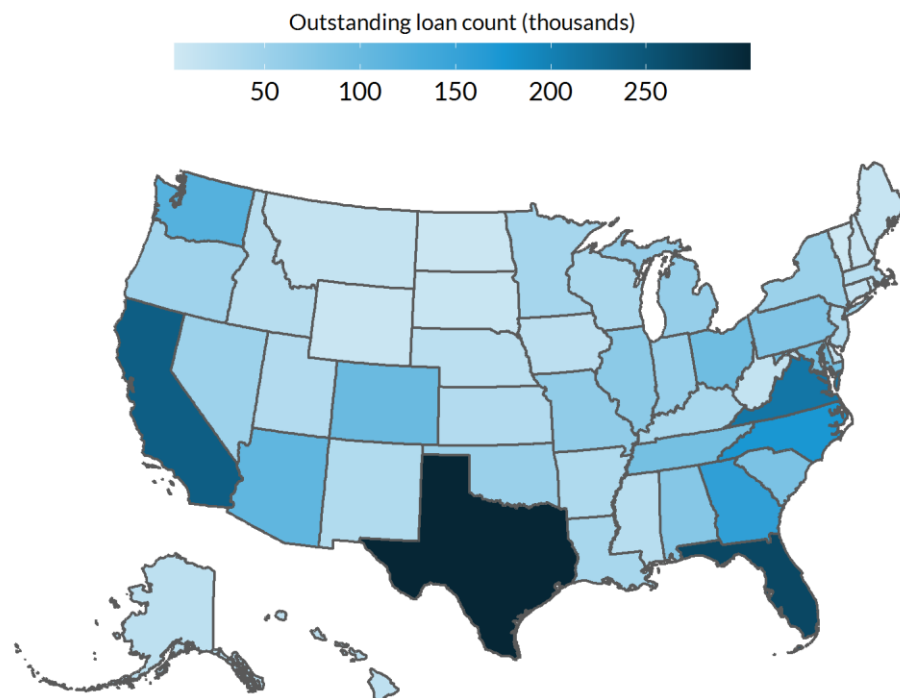
FHA and VA Outstanding Loan Count

Texas, Florida, and California are the top 3 states for FHA and VA lending as measured by the number of loans outstanding. As of March 2020, TX has 760,000 million FHA and 300,000 VA loans outstanding, FL had 550,000 FHA and 260,000 VA loans outstanding, and CA had 530,000 FHA and 240,000 VA loans outstanding. Virginia ranks 4th for number of VA loans outstanding and 13th for number of FHA loans outstanding.

FHA Outstanding Loan Count by State



VA Outstanding Loan Count by State

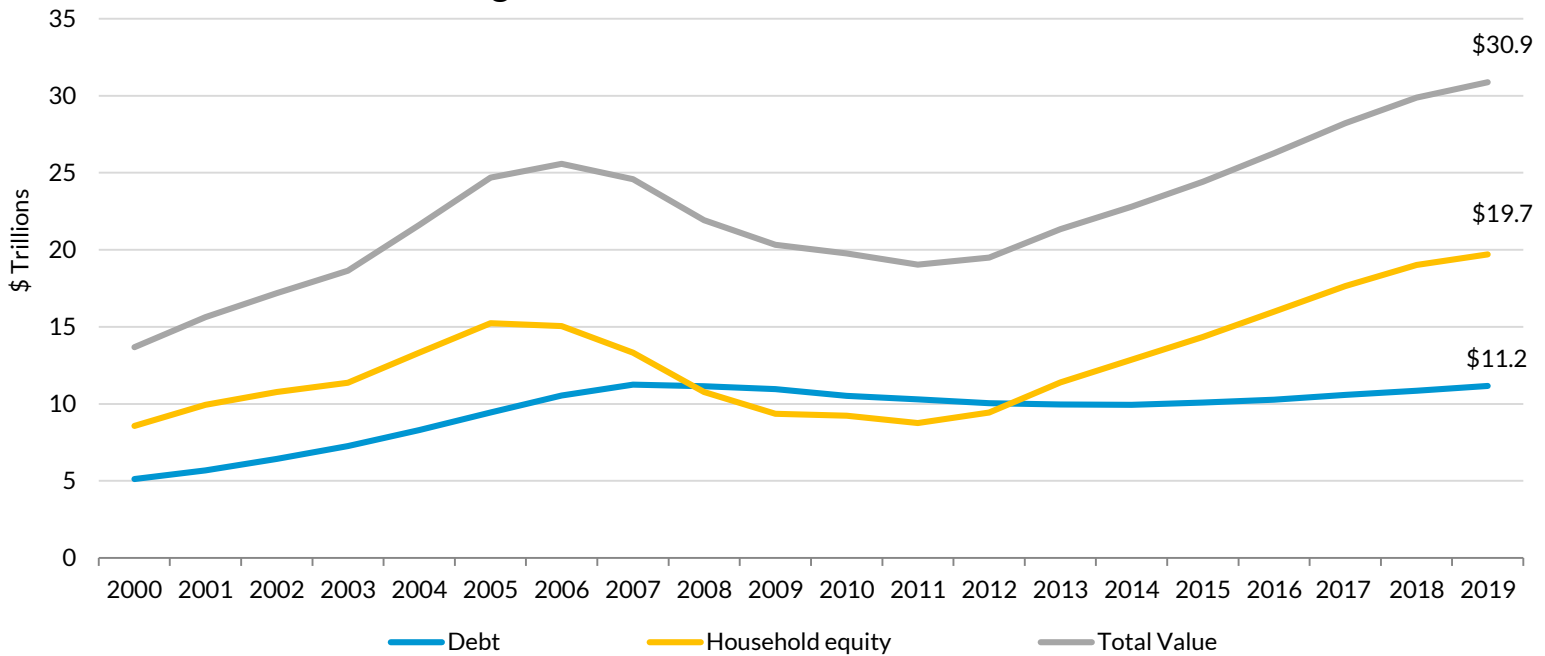


Sources: eMBS and Urban Institute. Note: Ginnie Mae outstanding share are based on loan balance as of March 2020.

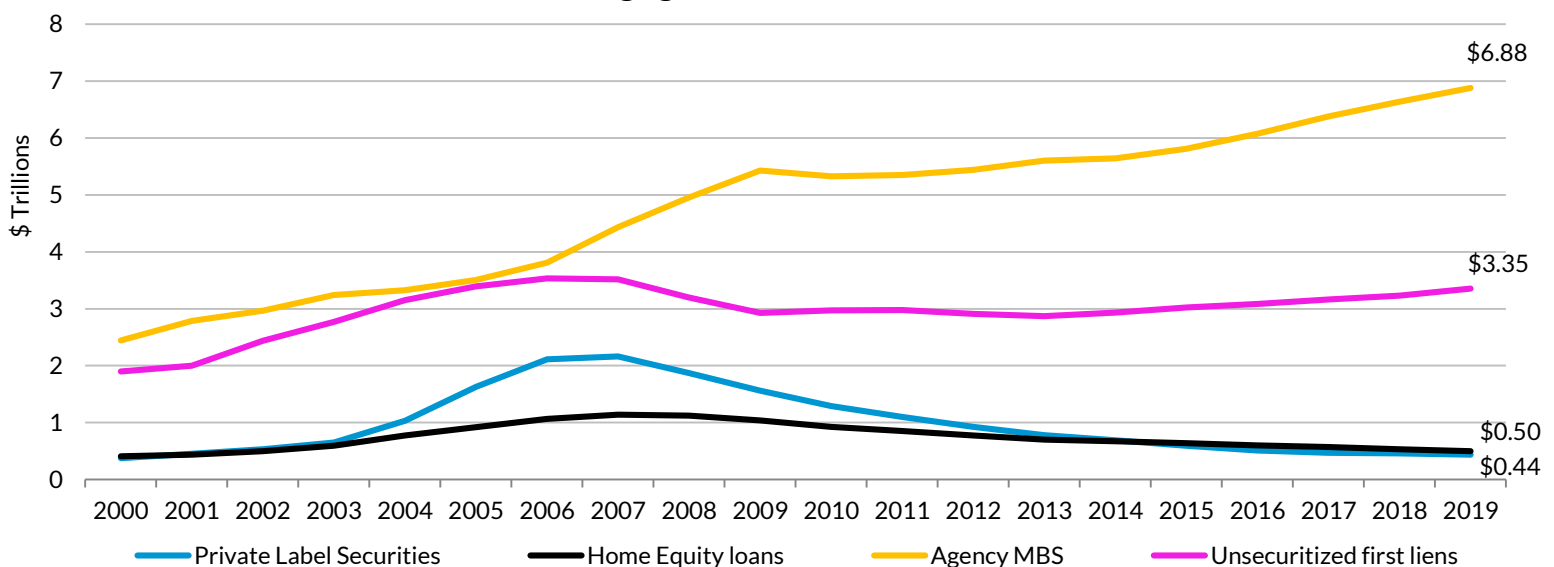
State of the US Housing Market

The Federal Reserve's Flow of Funds report has indicated a gradually increasing total value of the housing market driven by growing home equity since 2012, and Q4 2019 was no different. Total mortgage debt outstanding and household equity were up slightly from Q3 2019 to \$11.2 and \$19.7 trillion in Q4 2019, bringing the total value of the housing market to \$30.9 trillion as of the year's end. The market is now 20.8 percent higher than the pre-crisis peak in 2006. Agency MBS account for 61.6 percent of the total mortgage debt outstanding, private-label securities make up 4.0 percent, and unsecuritized first liens make up 30.0 percent. Second liens comprise the remaining 4.5 percent of the total.

Value of the US Housing Market



Size of the US Residential Mortgage Market



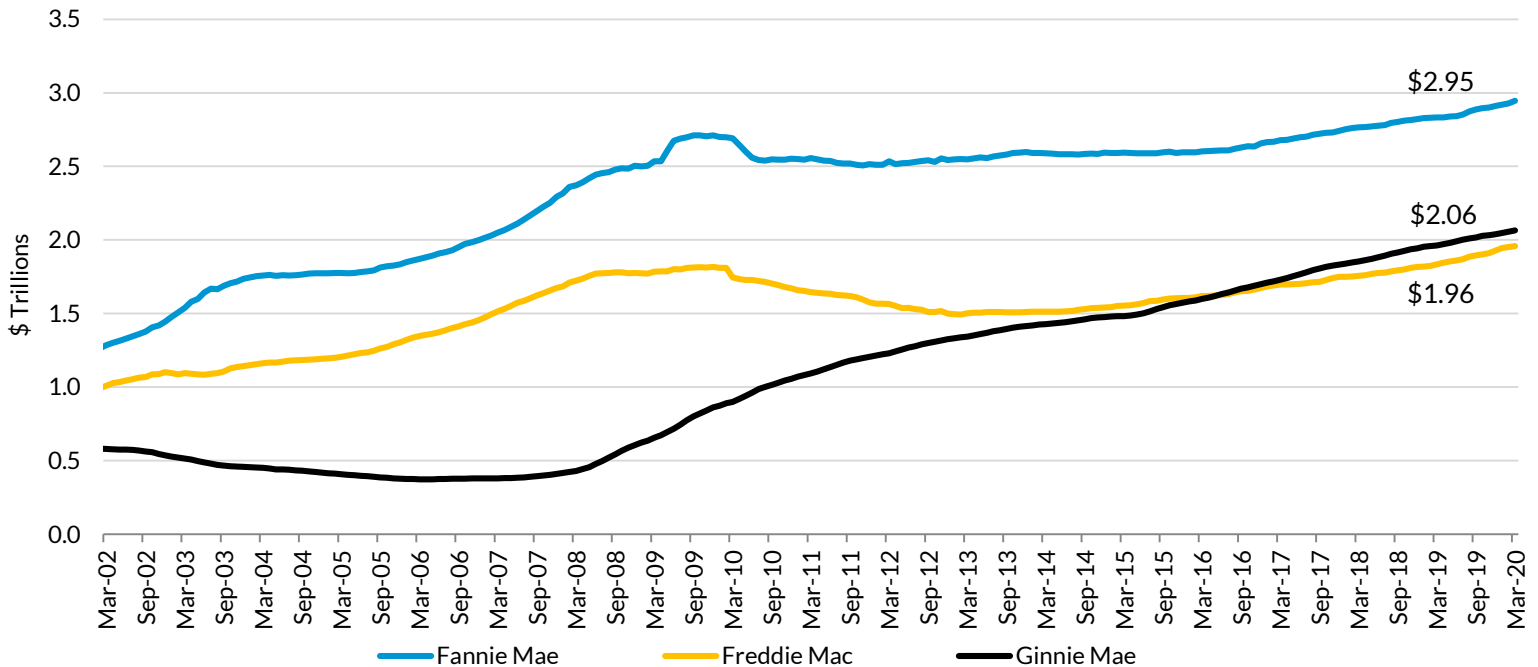
Sources: Federal Reserve Flow of Funds, eMBS and Urban Institute. Last updated April 2020.

Note Top: Single family includes 1-4 family mortgages. The home equity number is grossed up from Fed totals to include the value of households and the non-financial business sector. Note Bottom: Unsecuritized first liens includes loans held by commercial banks, GSEs, savings institutions, credit unions and other financial companies.

State of the US Housing Market

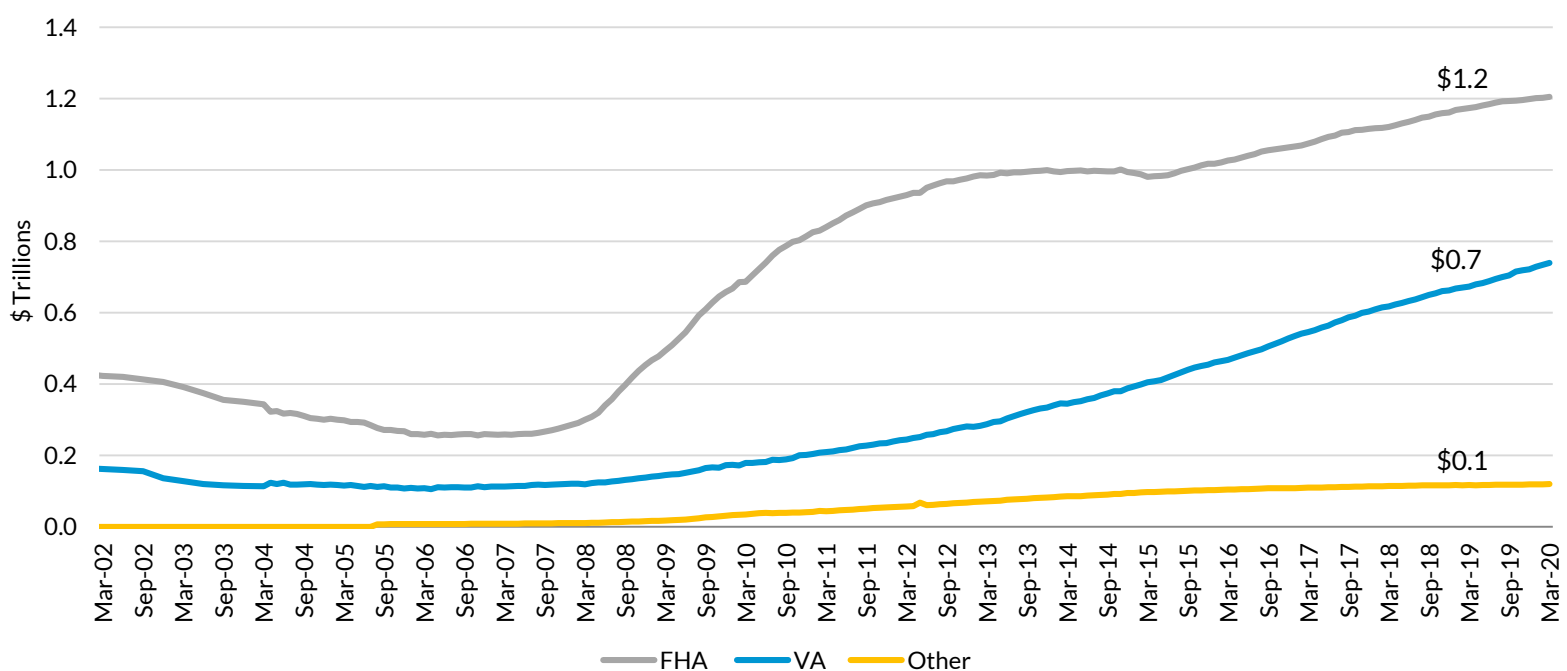
As of March 2020, outstanding securities in the agency market totaled \$6.97 trillion: 42.3 percent Fannie Mae, 28.1 percent Freddie Mac, and 29.6 percent Ginnie Mae MBS. Ginnie Mae has more outstandings than Freddie Mac. Within the Ginnie Mae market, both FHA and VA have grown very rapidly since 2009. FHA comprises 58.4 percent of total Ginnie Mae MBS outstanding, while VA comprises 35.8 percent.

Outstanding Agency Mortgage-Backed Securities



Sources: eMBS and Urban Institute Note: Data as of March 2020.

Outstanding Ginnie Mae Mortgage-Backed Securities

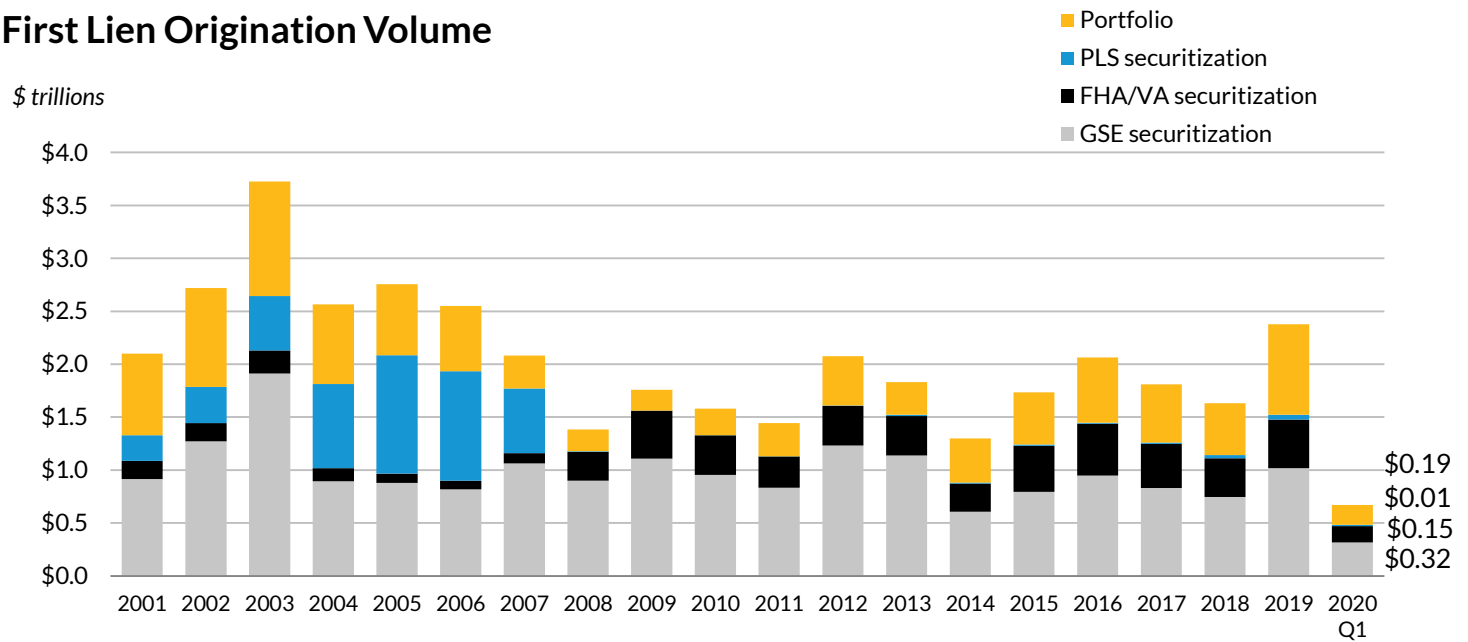


Sources: eMBS and Urban Institute. Note: Data as of March 2020.

State of the US Housing Market

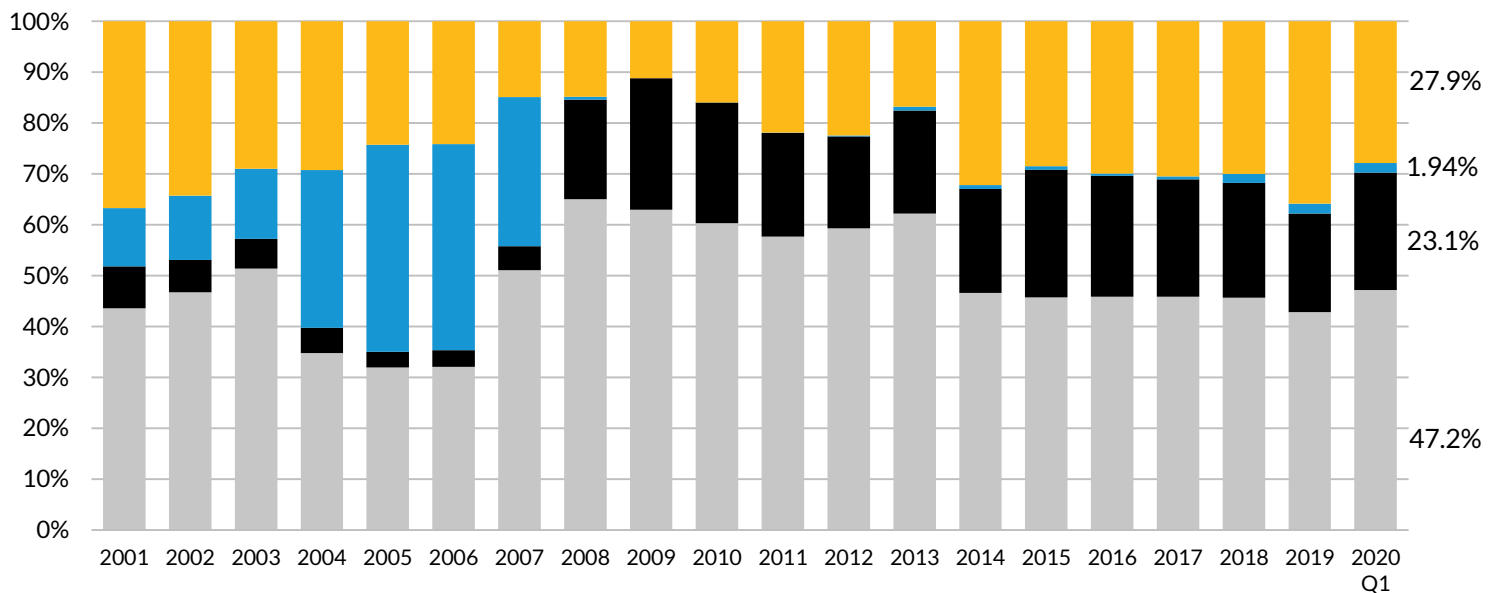
In the first quarter of 2020, first lien originations totaled \$670 billion, up from the Q1 2019 volume of \$355 billion. The share of portfolio originations was 27.9 percent in Q1 2020, a significant decline from the 37.3 percent share in the same period 2019. The Q1 2020 GSE share stands at 47.2 percent, up from 39.6 percent in Q1 2019. The FHA/VA share grew to 23.1 percent, compared to 21.0 percent last year. Private-label securitization currently tallies 1.94 percent, down from 2.9 percent one year ago, and a fraction of its share in the pre-bubble years.

First Lien Origination Volume



Sources: Inside Mortgage Finance and Urban Institute. Note: Data as of Q1 2020.

First Lien Origination Share



Sources: Inside Mortgage Finance and Urban Institute. Note: Data as of Q1 2020.

US Agency Market, Originations

Despite the rise in portfolio origination, agency gross issuance was a robust \$1.55 trillion in 2019, the strongest year for agency gross issuance since 2013. This reflected primarily strong borrower incentives to refinance, further buoyed by improved home purchase affordability. And this strong issuance trend continues through the first three months of 2020, with gross issuance of \$480.1 billion, up 103.7 percent from the same period in 2019. Ginnie Mae gross issuance was up by 102.6 percent and GSE gross issuance was up by 104.2 percent. Within the Ginnie Mae market, FHA was up by 69.4 percent and VA origination was up by 153.9 percent.

Agency Gross Issuance					
Issuance Year	Fannie Mae	Freddie Mac	GSE Total	Ginnie Mae	Total
2000	\$202.8	\$157.9	\$360.6	\$102.2	\$462.8
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	\$1,195.3
2019	\$597.4	\$445.2	\$1,042.6	\$508.6	\$1,551.2
2020 YTD	\$187.7	\$132.3	\$319.9	\$160.2	\$480.1
2020 % Change YOY	107.9%	99.2%	104.2%	102.6%	103.7%
2020 Ann.	\$750.6	\$529.0	\$1,279.6	\$640.9	\$1,920.6

Ginnie Mae Breakdown: Agency Gross Issuance				
Issuance Year	FHA	VA	Other	Total
2000	\$80.2	\$18.8	\$3.2	\$102.2
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 YTD	\$77.4	\$78.3	\$4.6	\$160.2
2020 % Change YOY	69.4%	153.9%	78.1%	102.6%
2020 Ann.	\$309.6	\$313.1	\$18.2	\$640.9

Sources: eMBS and Urban Institute (top and bottom).

Note: Dollar amounts are in billions. "Other" refers to loans insured by HUD's Office of Public and Indian Housing and the Department of Agriculture's Rural Development. All data is as of March 2020.

US Agency Market, Originations

2019 was a robust year for net agency issuance, with \$293.5 billion of net new supply, 32.6 percent of this Ginnie Mae. This trend continues into the third month of 2020, with net agency issuance totaling \$91.6 billion, up 105.7 percent compared with the first three months of 2019. Ginnie Mae net issuance was \$24.5 billion, comprising 31.2 percent of total agency net issuance. Ginnie Mae net issuance in the first three months of 2020 was comprised of 72.1 percent VA and 24.4 percent FHA.

Agency Net Issuance					
Issuance Year	Fannie Mae	Freddie Mac	GSE Total	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	\$172.5
2016	\$60.5	\$66.8	\$127.4	\$126.1	\$261.6
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	\$197.8	\$95.7	\$293.5
2020 YTD	\$36.4	\$30.7	\$67.1	\$24.5	\$91.6
2020 % Change YOY	304.1%	90.7%	167.2%	26.2%	105.7%
2020 Ann.	\$145.4	\$123.0	\$268.4	\$97.9	\$366.4

Ginnie Mae Breakdown: Net Issuance				
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	\$131.3
2018	\$49.2	\$61.2	\$3.5	\$113.9
2019	\$35.9	\$58.0	\$1.9	\$95.7
2020 YTD	\$6.0	\$17.7	\$0.8	\$24.5
2020 % Change YOY	-40.4%	89.5%	1153.9%	26.2%
2020 Ann.	\$23.9	\$70.6	\$3.4	\$97.9

Sources: eMBS and Urban Institute. Note: Dollar amounts are in billions. "Other" refers to loans insured by HUD's Office of Public and Indian Housing and the Department of Agriculture's Rural Development. All data is as of March 2020.

