MtgeFi

Market Segment Report:

US Residential Real Estate Automated Valuation Models (AVMs)

Review of the AVM market size, trends, industries, use-cases, top vendor profiles and products, through 2030.

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About

MtgeFi specializes in **research, insights, and actionable data** to develop investment and go-to-market strategies in housing finance, and related industries. Investors and finance professionals rely on MtgeFi to provide fact-based analysis of market dynamics, trends, and performance for improved decision-making.

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About this Market Segment

The Residential Real Estate Automated Valuation Model (AVM) market segment specializes in creating automated property valuations for use in a wide variety of industries, supporting many business-to-business (B2B) and business-to-consumer (B2C) use-cases. The AVM

What's Included	Related Industries
• Market Segment Report • Residential Real Estate AVMs	• Mortgage Origination & Servicing • Property & Casualty Insurance • Real Estate Marketing • Property & Asset Management • Fintech & Alternative Finance
Companies Profiled	**Related Terms**
• Clear Capital • Cotality (formerly Corelogic) • Experian • First American Data & Analytics • House Canary • ICE Mortgage Technology (including BKFS and Collateral Analytics) • Radian Homegenius (including Red Bell Real Estate) • Quantarium • Veros Real Estate Solutions • Xome (now Rocket Companies)	• Real Estate Valuations • Real Estate Appraisals • Broker Price Opinions • Residential Evaluations • Appraisal Management Software (AMS) • Appraisal Management Companies (AMCs) • Alternative Valuations
Primary Sources	
• MtgeFi • Home Mortgage Disclosure Act (HMDA) • Mortgage Bankers Association (MBA) Housing Forecast • Fannie Mae Housing Forecast • U.S. Census Bureau - American Community Survey (ACS) • Federal Reserve	

1. Executive Summary

The U.S. residential Automated Valuation Model (AVM) market is expanding as lenders, investors, regulators, and consumer brands increase adoption of automated property valuation tools for origination, servicing, collateral risk management and marketing.

Today, AVMs are established as critical components in mortgage and housing-finance workflows, replacing manual valuation steps in low-risk transactions and portfolio monitoring with statistically validated, data-based models. AVMs generate market value estimates using statistical, geospatial, and machine-learning methods applied to large datasets such as property records, MLS listings, imagery, and prior valuations.

Approximately 130 million of the nation's 148 million housing units have sufficient data for AVM coverage, mainly within 1–4 unit single-family housing. Coverage gaps remain in rural, small multifamily, and mixed-use properties where transaction data is limited.

The Total Addressable Market (TAM) for U.S. residential AVMs in 2025 is estimated to be $363 million, from 279 billion annual AVM valuations. AVMs are used extensively in real estate marketing, mortgage loan origination & servicing, home equity originations, asset management, loan trading, property & casualty insurance, and increasingly in consumer marketing. Market opportunities are projected to increase from 2025-to-2030 period resulting in a TAM of $408 million in 2030 from 340 billion AVM valuations.

Growth drivers include (a) broader use of AVMs in home-equity and credit-risk transfer programs, (b) integration with property-data collection and inspection systems, (c) use of rental and income-based AVMs in single-family rental and investor portfolios, and (d) greater regulatory alignment with automated valuation in collateral management, and (e) continued adoption of AVMs and related property data by consumer brands for customer profiling and personalized marketing.

There are 25 U.S. residential AVM providers, with 10 producing lender-grade models, 5 producing real-estate investor models and the remaining 10 producing broker/agent models and consumer-facing models. Additionally, there are 10 providers with specialist residential rental AVMs. In mortgage originations, the most accurate residential AVM model is often selected using a rule-based sequence of business rules, known as an 'AVM cascade'. Several providers offer AVM cascade products, with 4 providers also offering the Model Preference Tables (MPTs) that govern selection from a validated list of AVMs tested for accuracy, coverage, and confidence by geography and property type.

Regulatory standards taking effect in October 2025 require institutions to apply quality-control, validation, and nondiscrimination practices in AVM use. These requirements formalize independent testing, random-sample performance reviews, and data-governance procedures across mortgage origination, securitization, and servicing workflows. The result will be a more transparent and auditable AVM framework that supports both regulatory oversight and secondary-market consistency, and material increases in the accuracy, scope and applicability of AVMs.

2. Introduction & Objectives

Evolution of Property Valuation and AVMs

The residential property valuation industry has evolved significantly in recent decades. Historically, home values were determined exclusively through traditional appraisals conducted by licensed professionals using on-site inspections, neighborhood comparables, and standardized forms (e.g., the Uniform Residential Appraisal Report or 1004 form).

Before widespread use of AVMs, mass appraisal systems were used by municipalities for tax assessment, and statistical methods were used to value large sets of properties. These laid the groundwork for modern AVMs.In the 1990s, lenders and investors involved in mortgage risk and RMBS began experimenting with “automated valuation systems” to help evaluate collateral more efficiently. These AVMs were rule-based or simple regression models, drawing on basic public records and comparable sales data.

In the 2000s, lenders began using AVMs more broadly, especially for lower-risk loans, home equity lines of credit, portfolio valuation, and quality control. This was coupled with the emergence of consumer facing AVMs (E.g. Zillow’s Zestimate) which popularized the idea for homebuyers. The GSEs (Fannie Mae, Freddie Mac) started to integrate AVMs into underwriting and workflow processes. AVM outputs and appraisal waivers became tools in risk stratification. More systematic validation of AVMs by lenders, and testing of hit rate, bias, error metrics.

The financial crisis and housing bubble crash exposed some weaknesses with these early AVMs, notably overvaluation risk, issues with data lag, and model error in declining or volatile markets. Subsequent regulation placed more scrutiny on appraisals, collateral valuation, and risk management.

Post-crisis, the availability and cost effectiveness of property data sources improved. These sources include tax assessor data, Multiple Listing Sources (MLS) listing data & more frequent sales data, county recorder, other public records, satellite imagery, and proprietary appraisal and valuation records. Coupled with expanded property data sources, AVM vendors began to incorporate machine learning and hybrid AI frameworks into their modeling, and to leverage cloud compute and storage services to increase the size and frequency of model iterations.

New vendors and models emerged that quickly challenged existing providers and their rules-based regression and repeat-sales models. The resulting improvements in AVM speed, accuracy and costs led to other industries adding AVM information into their consumer profiling algorithms - incorporating property ownership and equity attributes into their assessments.

In 2025, a number of factors are driving increased interest and investment in this market segment. First, AVMs are now generally accepted for many low-risk residential valuations, including junior lien originations, secondary due diligence and portfolio monitoring. Second, recent government regulation has imposed more oversight on AVM users to ensure robust quality control, transparency, error measurement and bias testing. This will likely improve the scrutiny and performance of AVMs. And third, AVMs vendors are exploring generative AI models and incorporating unstructured data, condition assessments, imagery, neighborhood dynamics, and more granular geographic and temporal detail.

Definition of a Residential AVM

An AVM is a computer-based software program that produces an estimate of the market value of a real estate property at a specific point in time, based on market analysis of location, market conditions, and real estate characteristics from information that was previously and separately collected, and without a physical inspection. AVMs are not considered appraisals because a licensed appraiser does not provide an opinion of value.

Residential AVMs typically comprise:

- An estimated market value
- A low-high market value range
- A confidence score (indicating model certainty)
- A forecast standard deviation or range
- Flags or warnings about data quality or property eligibility

Residential AVM data sources may include:

- Public records (E.g., tax assessments, deeds and permits)
- MLS data (E.g. listing and prior sale prices)
- Geospatial data (E.g. location and neighborhood trends)
- Property characteristics (E.g. bedrooms, bathrooms & square footage)
- Images and condition indicators (E.g. condition and quality score)
- Proprietary valuations data (E.g. appraisals, BPOs & evaluations

Common AVM Accuracy Metrics

- PP10: % of valuations within ±10% of actual sales price
- Hit Rate: % of subjects receiving a usable AVM score
- FSD: Forecast standard deviation—predictive value spread
- Confidence Score: Vendor-defined reliability indicator

Related Products

- Rental AVMs
- Public Records AVMs
- Indexed AVMs
- Comparative Market Analysis (CMA)
- Broker Price Opinion (BPO)
- Home Price Index (HPI)
- Desktop Appraisals
- Hybrid Appraisals
- Traditional Appraisals
- Residential Evaluations
- Property Condition Reports (PCR)
- Uniform Property Data (UPD) Reports

This market report describes direct use-cases for commercially available residential AVMs. Residential AVMs, and the data they provide, are utilized as components in other products and use-cases.

3. U.S. Residential Real Estate Overview

Summary of U.S. Housing Units

The purpose of AVMs is to provide accurate and timely property valuations for U.S. residential real estate. The volume of AVMs ordered is primarily driven by the total number of U.S. properties and housing units, the number of newly originated mortgages, the number of currently serviced & traded mortgages, and the number of properties and housing purchased. The frequency of residential AVM orders has increased in recent years, with pricing agreements and availability allowing users to access monthly valuations rather than quarterly or periodic refreshes.

In the U.S. today there are a total of ~148 million housing units:

- ~86 million are owner-occupied, ~46 million are renter-occupied and ~15 million are vacant
- ~118 million are 1-4 single family properties and ~29 million are 5+ multifamily properties
- 10 U.S. states contain +80 million (53 percent) housing units, with the top 3 states - California, Texas and Florida - holding +38 million (26 percent).

Current mortgage debt is $13.53 trillion and 103 million loans:

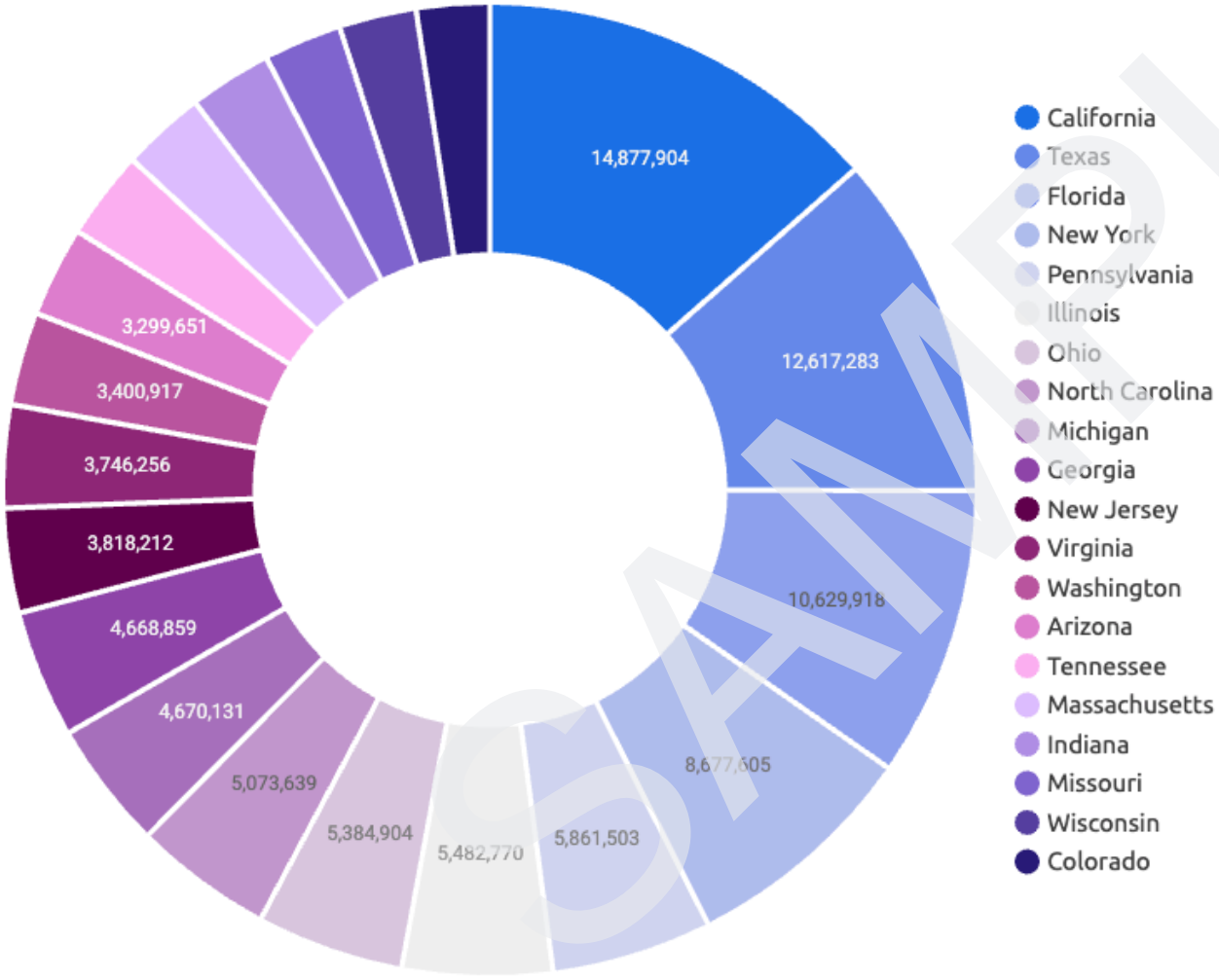
- 86.5 million are 1st lien mortgages, ~3 million are 2nd mortgages and ~14 million home equity lines of credit
- Of the 86.5 million 1st lien mortgages, 51 million are agency (GSE and government) issuance and 35 million are held for investment or private label issuance
- 40 million agency (GSE and government) loans are 1-4 unit single-family loans, and 12 million are 5+ unit multifamily loans.

Currently, some 120–130 million U.S. units have sufficient data for an AVM value at any given time; the remainder lack the data density or model coverage required. Key factors are:

- Data availability: AVMs require recent, verifiable sales, tax, and property-record data. Many of the ~148 million U.S. housing units (e.g., rural areas, small multifamily, co-ops, manufactured homes) have incomplete or outdated records
- Property type: AVMs are tuned mainly for 1–4 unit residential parcels. Large multifamily, mixed-use, or unique properties are excluded
- Market activity: AVMs need comparable sales; inactive markets reduce hit rates
- Regulatory and licensing constraints: Vendors filter out non-conforming parcels or owner types to avoid bias and Fair Lending exposure
- Operational coverage: Even the broadest vendor datasets cover only about 85–95% of single-family parcels and 65–75% of all residential units when adjusted for record quality.

Total Housing Units - by State

The top three states—California, Texas, and Florida—account for over 38 million (26 percent) of U.S. housing units, showing the concentration of housing supply in the largest population and employment centers. Each has over 10 million units, with California having over 14.8 million. The top ten states—California, Texas, Florida,New York, Pennsylvania, Illinois, Ohio, North Carolina, Michigan, and Georgia— account for over 80 million (53 percent) of U.S. housing units. These states drive national housing trends, mortgage volumes, and the use of property data and AVMs for valuation and collateral analysis.



4. Residential Real Estate AVM Use-Cases

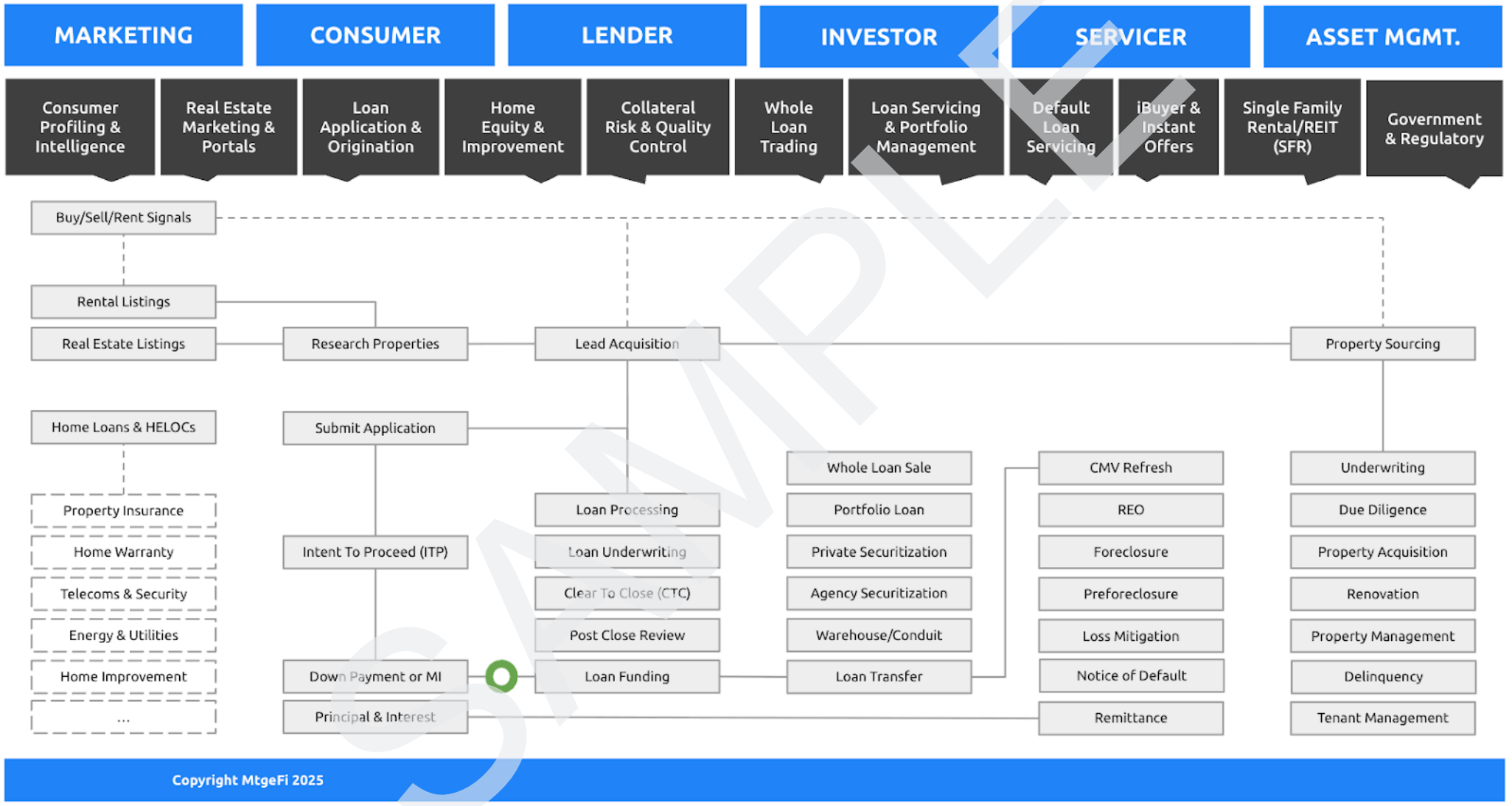
Primary AVM Use Cases

The primary use-cases for U.S. residential AVMs.

Use Case	Primary Purpose	Typical Users	Key Applications / Examples
Consumer Profiling & Intelligence	Personalized marketing and promotions, based on consumer & property data	Home security, warranty, telecoms, streaming, wealth mgmt., utilities…	Adding property, event and home equity data to improve consumer & customer profiles
Government & Regulatory	Market monitoring and policy oversight	FHFA, CFPB, OCC, HUD, state agencies	Bias testing, AVM rule compliance, systemic valuation risk measurement
Home Equity & HELOC Origination	Low-cost valuation alternative for second liens	Banks, credit unions, fintech lenders	CLTV validation, renewal decisions, line increase reviews
iBuyer & Instant Offer Platforms	Near real-time home price estimation for acquisition and resale	Opendoor, Offerpad,	Purchase offer pricing, repair ROI modeling, resale margin forecasting
Insurance & Property Risk	Market or replacement cost estimation for underwriting	Property insurers, reinsurers	Risk-based pricing, exposure modeling, catastrophe loss simulations
Mortgage Origination	Fast collateral valuation for underwriting and appraisal waiver eligibility	GSEs, lenders, mortgage insurers	Property data collection (PDR) validation, appraisal waivers, pricing, second-look QC
NPL / RPL & Distressed Asset Sales	Pricing collateral in delinquent, non-performing, or re-performing loan pools	Hedge funds, servicers, investors, FDIC / HUD contractors	Liquidation value estimation, bulk loan sale analysis, recovery forecasting
Real Estate & PropTech Platforms	Consumer engagement and market visibility	Zillow, Redfin, Opendoor, Realtor.com, Roofstock	Listing and rent valuations, investor dashboards, acquisition screening
Securitization & Risk Management	Collateral validation and risk stratification in loan pools	Rating agencies, issuers, investors	QC sampling, model back-testing, LTV / value dispersion analysis, CRT disclosures
Servicing & Portfolio Management	Ongoing collateral monitoring	Servicers, investors, GSEs	Portfolio LTV tracking, delinquency risk scoring, modification decisions, CRT collateral refresh
SFR / REIT Portfolio Valuation	Evaluate and monitor large-scale residential rental portfolios	Institutional landlords, REITs, asset managers	Bulk AVM refreshes, rent vs. value analytics, buy-sell hold modeling, disposition planning

Real Estate Assets & Life of Loan

Residential AVMs support many aspects of real-estate asset management and housing finance.



5. Total Addressable Market (TAM) - 2025-2030

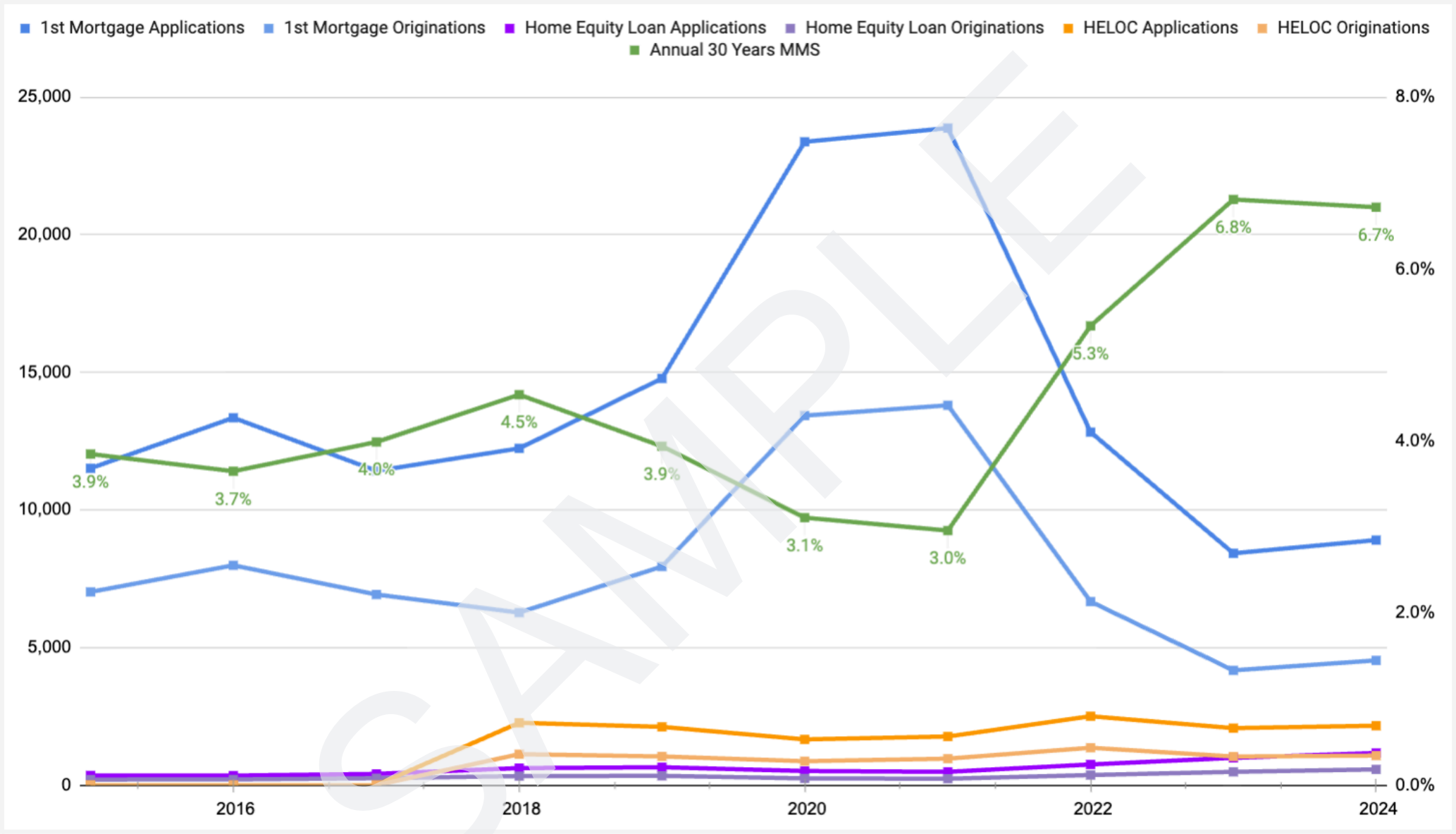
Mortgage Market Activity

Current AVM providers are either privately-held or business units of larger organizations that do not report segment revenues and performance. The estimated market size and projections are developed from housing finance market data, industry use-cases, customer feedback, and MtgeFi research.

Mortgage Activity ('000s) - from 2015 to 2024

Shows mortgage and home equity applications and originations from 2015 to 2024, with annualized 30-years fixed rate mortgage (FRM) rate. In 2024 there were an estimated 12.2 million mortgage & home equity applications and 6.2 million mortgage & home equity originations. In 2021, during the refinance boom, there were an estimated 26.1 million mortgage & home equity applications and 15.0 million mortgage & home equity originations, 213% and 243% higher respectively than 2024.

Mortgage Activity ('000s)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
1st Mortgage Applications	11,512	13,348	11,420	12,237	14,779	23,378	23,875	12,827	8,424	8,904
1st Mortgage Originations	7,020	7,988	6,927	6,269	7,945	13,428	13,803	6,669	4,170	4,532
Home Equity Loan Applications	350	345	408	618	650	513	482	750	989	1,167
Home Equity Loan Originations	202	206	250	329	338	245	233	367	483	572
HELOC Applications	0	0	0	2,264	2,117	1,661	1,767	2,503	2,071	2,158
HELOC Originations	0	0	0	1,124	1,042	869	962	1,358	1,039	1,073
Annual 30-Years FRM (%)	***3.9%***	***3.7%***	***4.0%***	***4.5%***	***3.9%***	***3.1%***	***3.0%***	***5.3%***	***6.8%***	***6.7%***



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