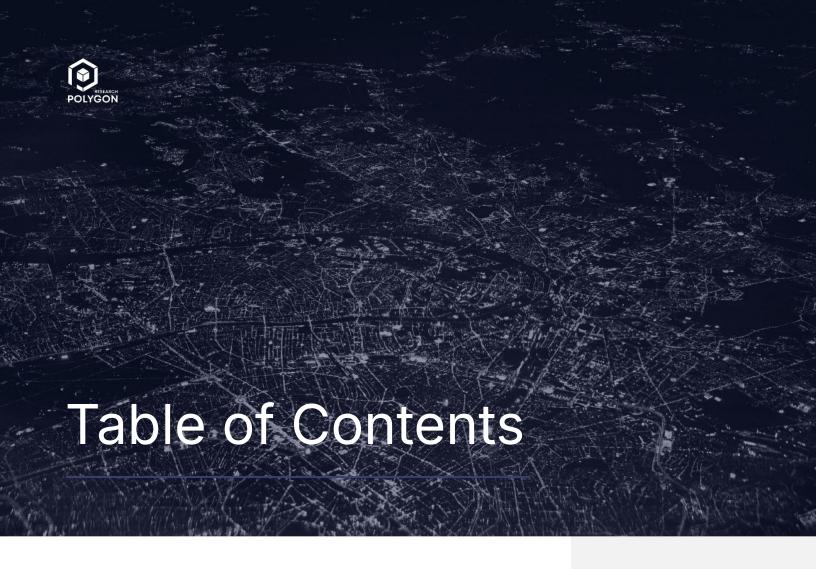


WHITE PAPER

UNLOCKING NON-QM MARKET INTELLIGENCE

A Data-Driven Approach Using HMDAVision®





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Polygon Research introduces a transparent, reproducible, loan-level methodology for classifying HMDA Loan/Application Register (LAR) records from 2018 through 2024 as Qualified Mortgage (QM), Non-Qualified Mortgage (Non-QM), or Out of Scope. The approach integrates all relevant elements of the Ability-to-Repay/Qualified Mortgage (ATR/QM) framework, including annualized pricing and cost thresholds and product-feature restrictions, while leveraging the expanded loan-level attributes available since the 2018 HMDA regime. It is deliberately conservative where the public data are privacy-modified or partially exempt, and it is designed for market intelligence rather than legal determinations. The methodology operates at annual (calendar-year) granularity, with explicit assumptions for the transition years: we treat 2021 as a year in which creditors could apply either the legacy DTI-based General QM or the optional price-based General QM, and we treat 2022 as a year under mandatory price-based General QM with the Temporary GSE Patch considered expired for the entire year.

framework with loan-level transparency, surfacing local market dynamics by geography, lender, product, lien status, and channel. The result is a practical and defensible lens for lenders, investors, and policymakers seeking to identify Non-QM opportunities, understand pricing behaviors, and benchmark competitive positioning.

To represent the market reality of investor lending, business-purpose loans - including DSCR loans - are incorporated into the Non-QM category for analytical purposes and flagged distinctly, even though ATR/QM does not govern business-purpose credit. Open-end credit, such as HELOCs, and reverse mortgages are out of scope for QM analyses and are thus classified "Out of Scope". This clear separation ensures that the whitepaper provides a comprehensive market view without conflating regulatory contexts.



Why QM Classification Matters

Qualified Mortgage standards are often viewed as a regulatory requirement, but in practice, the concept of "QM versus Non-QM" is far more complex, and sometimes confusing. Regulatory definitions are highly specific, while industry usage can be inconsistent. Many lenders advertise "Non-QM" products on their websites that don't perfectly align with the technical rules. Analysts, on the other hand, often rely on blunt methods—such as attributing all Non-QM loans to private securitizers while ignoring loans kept in portfolio. Others attempt to infer market size from incomplete county recorder data, which can distort the picture even further.

This creates a challenge: How can lenders truly understand market share, rankings, product mix, borrower profiles, and geographic trends in the Non-QM sector?

Our answer is a methodology grounded in loan-level HMDA data within HMDAVision, combined with the precise technical definitions from CFPB regulations. By applying these rules consistently across millions of records, we provide a transparent, data-driven view of the Non-QM market - one that bridges the gap between regulatory compliance and strategic insight.





Introduction and Objective

Under Regulation Z's Ability-to-Repay/Qualified Mortgage (ATR/QM) framework, creditors must make a reasonable, good-faith determination of a consumer's ability to repay most closed-end residential mortgage loans. Loans that satisfy one of the Qualified Mortgage (QM) definitions receive specified liability protections, while ATR-covered loans that do not meet a QM definition are generally referred to as non-QM.

The General QM definition was amended in December 2020 to replace the former 43 percent DTI limit with price-based thresholds, with optional early compliance beginning March 1, 2021 and mandatory compliance beginning October 1, 2022; on that mandatory date, the Temporary GSE Patch expired. Because non-QM is defined residually—by what does not qualify—any empirical analysis of this market segment must be explicit and transparent about how it operationalizes the QM versus non-QM distinction.

HMDA does not include an explicit QM flag, but since 2018 it has reported richer loan-level attributes, including points and fees, origination charges, discount points, lender credits, interest rate, debt-to-income ratio, and several product-feature indicators, that enable a robust modeling of QM status at scale.

Polygon Research's objective is to provide a transparent, loan-level framework that models QM versus Non-QM across the HMDA universe and renders those classifications interpretable within local market contexts. Polygon Research uses this framework to allow users of HMDAVision to interactively and instantly analyze the Non-QM market segment.

The approach is intended for strategy, pricing, product design, and portfolio analytics; it is not a legal determination of QM status.





The Current State of Non-QM Intelligence: A Fragmented and Incomplete Picture

Until now, the current landscape of Non-QM analytics remains fragmented, with analysts relying primarily on three categories of sources: deal-level disclosures from Non-QM Residential Mortgage-Backed Securities (RMBS) issuance, sample or survey data from small segments of the market, and aggregate market estimates from rating-agency surveillance reports and news/vendor data.

RMBS data and performance commentaries from rating agencies provide collateral characteristics, delinquency trends, and credit-enhancement levels for securitized pools.

These sources can be helpful for understanding secondary-market execution and investor appetite, particularly as Non-QM continues to represent a growing share of non-agency issuance.

Aggregate origination-volume estimates from established data providers and industry associations offer broader market sizing and macroeconomic context.

However, these sources carry material limitations that constrain strategic decision-making.

- RMBS-centric data is inherently selection-biased, reflecting only the securitized portion of the market while excluding whole-loan portfolio retention by depository institutions, IMBs, and private funds.
- Deal-level disclosures are geographically coarse, obscuring the local and lenderspecific dynamics that drive origination strategy.
- Aggregate reports frequently employ inconsistent Non-QM definitions, rely on sampled or extrapolated populations, and lack loan-level transparency into pricing spreads, points-and-fees structures, or prohibited-feature incidence, attributes that are decisive under the ATR/QM framework.

Critically, no public dataset has ever included an explicit QM flag, forcing analysts to apply ad-hoc, nonstandardized inference rules that vary widely across firms and over time.



A New Standard: Loan-Level Transparency from Public Data

In contrast, Polygon Research's HMDAVision delivers the industry's first transparent, reproducible, loan-level classification of the entire HMDA Loan/Application Register universe of 124+ mortgage applications and 67.12 million closed loans (2018–2024) into Qualified Mortgage (QM), Non-Qualified Mortgage (Non-QM), or Out of Scope.

By fully exploiting the expanded post-2018 HMDA fields - total points and fees, origination charges, discount points, lender credits, interest rate, debt-to-income ratio, and flags for balloon, interest-only, negative amortization, and other non-amortizing features - HMDAVision ingests the raw annual public LAR files, harmonizes enumerations across reporting vintages, and applies eraspecific pricing and cost thresholds precisely aligned with the evolving General OM rule.

The result is a deterministic, auditable framework that operates at true loan-level granularity while remaining fully grounded in open data.

This approach eliminates the sampling bias, definitional drift, and geographic blindness of traditional sources, yielding deeper, more holistic intelligence across the entire origination continuum.

- For RMBS strategy: pre-securitization visibility into regional investor concentrations, pricing-threshold compliance, and risk-layering patterns that directly inform pool construction and credit-enhancement calibration.
- For portfolio and origination strategy: lender-by-lender, MSA-by-MSA, and product-by-product benchmarking of QM/Non-QM mix, enabling precise competitive positioning, risk-adjusted pricing, and targeted growth in high-opportunity corridors (e.g., investor-heavy and self-employed-heavy markets).
- For enterprise risk and capital planning: consistent, year-over-year comparable signals that reveal structural shifts in the primary market well ahead of their appearance in securitization pipelines.

By transforming the most comprehensive public mortgage dataset into a scalable and instant classification engine, HMDAVision establishes a new standard for Non-QM market intelligence: one that is transparent, conservative, and strategically actionable at every level of the mortgage ecosystem.



Methodology

Our goal is to provide a transparent, regulation-informed view of the Qualified Mortgage (QM) and non-QM market using only observable data fields. To do that, we implement a rules-based classification in HMDAVision that tracks the structure of the Ability-to-Repay/Qualified Mortgage (ATR/QM) framework in Regulation Z, and then translate those legal standards into reproducible analytics on loan-level data.

Two core principles guide the design:

Reg Z alignment. The logic explicitly follows the structure of §1026.43 (Minimum standards for transactions secured by a dwelling), including the General QM price-based test, points-and-fees limits, and the agency QM pathways recognized by the rule.

Analytic, not legal. Our "QM flag" is a Reg Z-informed analytic categorization, not a substitute for lender-side legal or compliance determinations. It is designed for market sizing, competitor analysis, and policy insight, not for loan-level legal conclusions.





Regulatory foundation

Our Non-QM definition methodology is anchored in TILA §129C (15 U.S.C. §1639c) – the statutory Ability-to-Repay requirement; and in 12 C.F.R. §1026.43 (Regulation Z) – which defines:

- · The scope of covered transactions;
- General QM criteria, including product-feature restrictions;
- Price-based QM tests (APR vs. APOR, by loanamount tier);
- · Points-and-fees caps; and
- CFPB annual threshold rules which update the relevant dollar thresholds each year using CPI-U and specify the current tiers for both the pricebased test and the points-and-fees thresholds.

We encode these elements year-by-year so that a 2018 loan and a 2024 loan are classified against the correct thresholds for their application/origination period.

Defining the analytical universe

The first step is to identify the subset of loans where QM analysis is meaningful.

We approximate the Reg Z covered-transaction scope using loan-level data.

Included (analytic universe):

- Closed-end, dwelling-secured mortgages on 1- to 4unit dwellings;
- Consumer-purpose credit (home purchase, refinance, and certain other purposes consistent with consumer intent);
- First-lien and subordinate-lien loans, with lien status observed.

Excluded (or flagged separately):

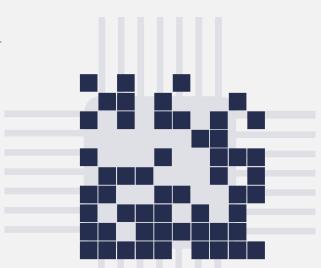
- HELOCs, reverse mortgages, and other explicitly excluded products;
- Short-term construction-phase loans (we proxy this using very short original terms, around 12 months);
- · Properties with more than 4 units;
- Other loans where available data suggest primarily business, commercial, or agricultural purpose.

In parallel, we maintain a broader "market-usage" view recognizing that the industry often uses "non-QM" colloquially to describe certain cash-flow or investor products that may fall outside strict Req Z coverage.

For analytical purposes, we keep that distinction clear: the primary QM flag is calibrated to the regulatory framework, and any broader segmentation is presented as a separate analytic lens, not as a legal classification.



This QM classification is a Reg Z-informed analytic categorization, not a substitute for lender-side legal/compliance determinations.





Constructing the QM Flag

Within the covered universe, we apply a layered logic that mirrors the structure of Regulation Z.

At a high level, a loan is classified as QM in HMDAVision if it passes both:

- The product-feature and documentation requirements embedded in the rule (to the extent observable); and
- All year-relevant QM pathways (price-and fees test, agency, loan term and other loan features).

Because we are working with public data, we do not see every feature (for example, detailed documentation type).

Where data is unavailable, we take a conservative approach and do not add any assumptions or inferences to our QM determination.





Limitations and interpretation

- Rate spread vs. full APR. As discussed above, using HMDAs rate spread as a proxy for APR-APOR is a practical necessity but may not be an exact replication of the regulatory calculation, particularly for ARMs.
- The definition of total points and fees in Reg Z and HMDA may not match exactly. Total Points and Fees has fairly narrow application in HMDA and is in an either/or reporting relationship with Total Loan Costs; full exploration of both fields is available in HMDAVision.
- Business-purpose credit. Section 1026.43 does not apply to an extension of credit primarily for a business, commercial, or agricultural purpose, even if it is secured by a dwelling. But industry marketing does not always follow this dividing line: a lot of DSCR / investor / fix-and-flip products are branded "non-QM". The Not for Business or Commercial filter is readily available to use in conjunction with the non-QM filter to perform analysis in the narrower scope of the regulation.
- Other QM paths. HMDA does not have fields for other QM paths like agency, small creditor portfolio, temporary balloon payment, and seasoned QMs. However, the logic in our QM flag in HMDAVision may overlap with these additional paths; for example: our QM flag's logic to set loans purchased by Ginnie Mae as QM.

· Construction loans.

- Because HMDA does not include an explicit flag for the construction phase of a construction-to-permanent loan, our treatment of construction loans in the HMDAVision QM flag relies on a practical proxy using loan term. Under Regulation Z, the construction phase of 12 months or less is generally treated as temporary financing and is outside the scope of the ATR/QM rule; accordingly, such loans are neither "QM" nor "Non-QM", but out of scope.
- The longer-term permanent financing that follows a construction phase is treated under our standard QM logic, but because HMDA does not perfectly distinguish between construction-only, construction-to-permanent, and other short-term products (such as certain bridge loans), users should interpret results involving very short-term loans with appropriate caution.



Because of these constraints, our QM flag should be read as a rigorous, transparent, and conservative approximation of the regulatory framework, suitable for benchmarking, market sizing, and policy analysis. It is not a replacement for loan-by-loan legal review or compliance determinations.



Validation Against Independent Market Benchmarks

Accurate Non-QM intelligence begins with regulatory fidelity.

HMDAVision evaluates every HMDA record against the complete, year-specific ATR/QM framework, eliminating the common misclassification of government-backed and agency-eligible loans that inflates or distorts every other market estimate.





Validation Sources Background

A rigorous, loan-level classification of the entire public HMDA universe has never previously existed. All prior estimates of QM vs. Non-QM market share, including those from rating agencies, trade associations, and data vendors, have relied on one or more of the following compromises:

- · sampled subsets of originations.
- · securitized-loan pools only.
- proprietary lender surveys with incomplete coverage.
- high-level proxy rules applied to aggregated data, such as simple DTI-only logic that ignores the full ATR/QM framework.

Because HMDAVision is the first implementation that evaluates every originated loan reported in HMDA (2018–2024) against the complete, year-appropriate regulatory tests, direct apples-to-apples comparisons with published industry figures do not exist.

Divergence from widely cited aggregates is therefore expected and, in fact, constitutes evidence of superior fidelity rather than error.

Looking at loan-level data analysis not only provides strategic insights, but it also uncovers patterns, that previously might have been misunderstood.





The four data sources in the Exhibit below describe different slices of the non-QM ecosystem. Polygon Research uses loan-level HMDA LAR and applies an explicit ATR/QM rule set to all funded loans at the census-tract level.

Data Provider	Data Source & Methodology	Non-QM Market Share	Key Context & Nuance
Polygon Research	HMDA LAR loan-level Census-level analysis of all funded loans using specific ATR/QM rule logic. HMDA LAR loan-level based on # of closed loans loans 5% based on dollar volume	based on # of closed loans	The "Ground Truth" Captures the "invisible" market of portfolio loans held by community banks that are never securitized.
		Transparent and inspectable data source - public HMDA LAR.	
Cotality	Aggregated loan performance and deed recording data.	5%	Corroborates the Polygon/HMDA figure. Notes ~4-5% market share today, validating the stability of the funded market.
Optimal Blue	Product and Pricing Engine (PPE) Analysis of daily rate locks and originator search activity - from system data.	8% based on lock volume - the highest on record, July 2025.	Diverges somewhat. Limited coverage of loans. But more current trends.
DBRS Morningstar	Tracking loans sold into private-label securitization trusts.	Non-QM RMBS \$20.9B in Q3'2025 Total Non-QMRMBS of \$41 B in 2024	Polygon Research calculated size of 2024 Non-QM Market (includes portfolio + RMBS): \$99.3 Billion



On this basis, we estimate that roughly 4% of closed loans (5% by dollar volume) in 2024 are non-QM, capturing both securitized and portfolio loans – including the "invisible" holdings of community banks that never enter the capital markets.

Cotality, <u>cited by NMN</u>, using aggregated loan performance and deed-recording data, reports a 5% non-QM share, which is broadly consistent with the Polygon/HMDA estimate and supports the view that the funded non-QM market today is in the $\sim 4-5\%$ range.

Optimal Blue, by contrast, analyzes lock volume and product search activity in its PPE system and reports 8% non-QM share in July 2025 and call it "the highest on record", reflecting a narrower but more real-time view focused on the subset of lenders and loans passing through its platform.

<u>DBRS Morningstar tracks only non-QM RMBS</u>, reporting \$41B of non-QM RMBS issuance in 2024. When mapped against Polygon Research's estimate of a \$99.3B 2024 non-QM market (portfolio + RMBS), this implies that less than half of non-QM production is securitized in private-label deals.

Taken together, these comparisons support HMDA-based, ATR/QM-informed measurement as a legitimate and robust way to analyze the non-QM market. Polygon Research's approach is grounded in a transparent, publicly available, loan-level dataset that covers all funded loans, including portfolio loans held on balance sheet and loans from smaller community banks that never appear in RMBS data or PPE systems.

The close alignment between Polygon's 4–5% non-QM share and Cotality's 5% estimate validates the level of our results for the funded market. Our numbers may or may not diverge from DBRS's RMBS-only issuance volumes, because our numbers are inclusive of portfolio loans. DBRS reports are answering different questions about pipeline mix and securitization flows rather than total funded production.





HMDAVision Analytics and Results

In this section, we share our insights from HMDAVision analysis of the Non-QM trends and patterns, based on the QM/Non-QM methodology discussed above. We provide five examples:

- 1. Size and High Level KPIs of the Non-QM Market
- 2. Non-QM QM Out of Scope market size and year-overyear change
- 3. Reasons/factors for Non-QM classification.
- 4. Example of mapping Non-QM originations at a metro area
 - Detroit MSA
- Example of mapping of Lender Specific Non-QM originations by LMI tract to discover patterns and opportunities





Size and High-Level KPIs of the Non-QM Market & Non-QM - QM - Out of Scope market size and year-over-year change

Given our assumptions, following Regulation Z rules, our analysis resulted in a Non-QM market that consisted of 237,757 loans, or \$99.245 Billion in 2024.

Average Non-QM Loan Amount: \$417,422
 Average Non-QM Interest Rate: 7.717%

Average Non-QM Applicant Income: \$448,095

Fig. 1: Non-QM Market Size in Number of Loans: 237,757 | \$99.245 Billion

2024 Production: 6,180,128 YoY: 8.14%					
2024 Rank	QM =	≡ ↓ □ Originations	≡ YoY		
-		6,180,128	8.1%		
1	QM	4,550,591	10.3%		
2	Out of Scope	1,391,780	3.3%		
3	Non-QM	237,757	-1.8%		

Source: Polygon Vision - HMDAVision, Accessed 12/03/2025

Further exploration (e.g. breaking down of Out of Scope loans) is available interactively in HMDAVision®, a key market analytics tool in Polygon Vision suite.

We observe a decline in Non-QM production volume, distinct from the stability seen in secondary market issuance. This trend correlates with a proprietary study of Non-QM volume through the lens of warehouse line originations performed by the Mortgage Bankers Association (for more info, please email the authors of this paper).

It is important to note that origination data (HMDA) and securitization data (RMBS) often yield different results due to timing lags and aggregation pipelines.

Our methodology captures the exact count of loans closed in 2024 that triggered Non-QM status under regulatory rules. This provides a precise view of the primary market's behavior, distinct from the liquidity trends visible in the secondary market.



Reasons/factors for Non-QM classification

Fig. 2 illustrates how we operationalize the ATR/QM rule set at the loan level and then make the results fully transparent.

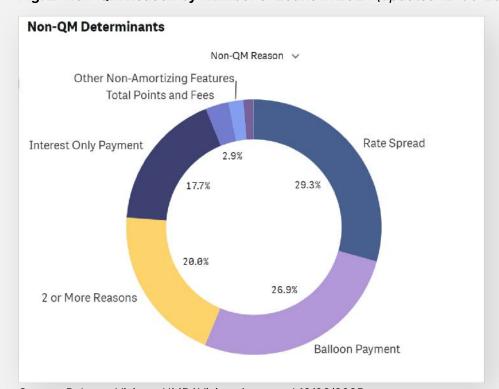


Fig. 2: Non-QM Reason by Number of Loans in 2024 (updated 12-06-2025)

Source: Polygon Vision - HMDAVision, Accessed 12/06/2025

Each loan that fails one or more of these tests is flagged as Non-QM. In HMDAVision, each loan can be inspected to see if it has a single or multiple triggers for Non-QM designation. The donut chart aggregates those reason codes across all 2024 Non-QM loans and shows that three features dominate our baseline Non-QM universe: elevated pricing (rate spread) at 29.3% of Non-QM loans), balloon payments at 26.9%, and interest-only payments at 17.7%. Longer terms (360+ months), high points and fees, and other non-amortizing features account for smaller but still meaningful slices of the Non-QM total.

Because this view is generated directly from loanlevel HMDA LAR using explicit loan-level logic, HMDAVision users can perform 3 powerful analytical tasks unique in mortgage analytics software:

- Select individual Non-QM reasons and quantify how they contribute to Non-QM levels – alone, and in combination with other Non-QM reasons. Select the QM flag, and then make further selections to refine the scope – for example, excluding Business or Commercial Purpose loans, or drilling into other HMDA fields.
- In this way, Fig. 2 is not a black-box statistic, but a visual summary of a transparent methodology that can be audited, customized, and extended to any geography, lender, or borrower segment in HMDAVision.
- Clearing the QM flag, users can build up the filters that comprise it from scratch interactively and immediately to gain insights into the overall distribution of the fields which triggered the Non-QM classification, and then refine the logic —for example, by tightening or relaxing the price thresholds, including or excluding particular product features, or adding business-purpose filters.



Example of mapping Non-QM originations at a metro area - Detroit MSA

Fig. 3 uses HMDAVision to map Non-QM production at the census-tract level for the Detroit–Warren–Dearborn MSA in 2024. Each shaded polygon represents a single census tract, with color intensity proportional to the number of Non-QM originations (from 1 up to 35 loans per tract in this example).

The filters at the bottom of the figure make the logic explicit: we restrict to 2024 originations, apply our ATR/QM-based Non-QM flag, and limit geography to the Detroit MSA counties (Livingston, Macomb, Oakland, St. Clair, and Wayne). In this view, the total Non-QM production in the metro is 3,195 loans, reflecting a year-over-year increase of roughly 43 percent.

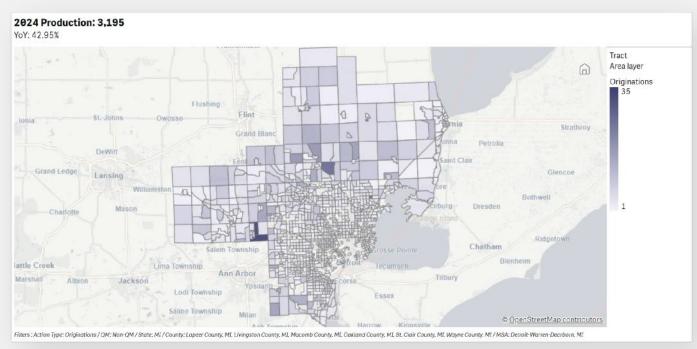


Fig. 3: Detroit MSA Non-QM Market by Census Tract: 2024

Source: Polygon Vision - HMDAVision, Accessed 12/03/2025

This map illustrates the level of geographic precision enabled by our methodology. Because the Non-QM designation is calculated on every loan in the HMDA LAR, we can aggregate results to any spatial unit supported by the data - down from state and county all the way to individual census tracts.

Lenders, investors, and policymakers can immediately see where Non-QM lending is concentrated, how it overlaps with existing branch footprints or broker networks, and how patterns differ across suburban, exurban, and urban neighborhoods. Users can further refine the map by layering borrower characteristics (e.g., income band, race/ethnicity, first-time homebuyer status), product features, or lender type, turning what is often a national-level talking point about "Non-QM" into a highly local, actionable view of risk and opportunity.



Example of mapping Lender-Specific Non-QM originations by LMI Tract - Detroit MSA

Fig. 4 illustrates how HMDAVision turns our Non-QM flag into an actionable fair-lending and strategy dashboard. In this view, we filter to Non-QM originations for a single lender in the Detroit MSA and overlay them on a tract-level map shaded by neighborhood income group (very low, low, moderate, middle, upper).

Each purple circle represents that lender's Non-QM loans in a tract, so users can immediately see where activity is clustered and where low- and moderate-income thinly served.

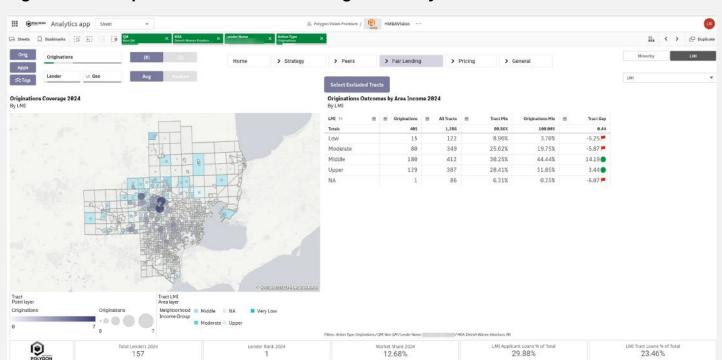


Fig. 4: Lender-Specific Non-QM Market Originations by LMI Tract: 2024

Source: Polygon Vision - HMDAVision, Accessed 12/03/2025

On the right, the table quantifies these patterns by comparing the tract mix (the share of all tracts in each income tier) with the lender's originations mix (the share of its Non-QM loans in those same tiers) and calculating a "tract gap."

Negative gaps and red flags highlight LMI segments where the lender's Non-QM footprint lags the opportunity in the market, while positive gaps and green markers show relative strength.

Together, the map and table provide a transparent, numerical way to assess whether Non-QM products are reaching LMI communities, supporting both business development (where to expand) and fair-lending oversight (where to ask "why not here?").





References & Acknowledgement



REFERENCE

Legislative/Statutory source

TILA §129C (15 U.S.C. § 1639c), title I of the Consumer Credit Protection Act,

Regulatory source

- 12 CFR Part 1026 Truth in Lending (Regulation Z) This is Title 12 of the Code of Federal Regulations, specifically:
- Title 12 Chapter X Part 1026 Subpart E § 1026.43 Its subparts have scope information, e.g. Subpart A.
- Subpart E Special Rules for Certain Home Mortgage Transactions is the heart of the definition, specifically:
- § 1026.43 Minimum standards for transactions secured by a dwelling.
- Located at each of the following:
- https://www.ecfr.gov/current/title-12/chapter-X/part-1026/subpart-E/section-1026.43
- https://www.govinfo.gov/content/pkg/CFR-2025-title12-vol9/pdf/CFR-2025-title12-vol9-sec1026-43.pdf
- https://www.consumerfinance.gov/rules-policy/regulations/1026/43/
- See also: https://www.consumerfinance.gov/rules-policy/regulations/1026/43/#43-_-Interp-2

ACKNOWLEDGEMENT

We are grateful to several industry colleagues who shared thoughtful perspectives on QM and Non-QM classification and its policy implications.

Any remaining errors or omissions are solely the responsibility of Polygon Research.



ABOUT POLYGON RESEARCH

Polygon Research is a privately owned mortgage datascience company based in Washington, D.C., USA. Our work centers on connecting growth (marketing and sales), compliance (fair lending and CRA), and risk (prepayment, default, and climate-related analytics) in a single, unified, loan-level view of the U.S. mortgage market.

We unlock and model microdata from 20+ public datasets—including HMDA, Census ACS and ACS PUMS, FHA Single-Family, agency RMBS, Fannie Mae and Freddie Mac loan-level and MBS data, Ginnie Mae, NCUA and FDIC call reports, CPS/ASEC PUMS, the Survey of Consumer Finance (SCF), and selected macroeconomic sources—into webbased, interactive, self-service market-intelligence tools. Rather than providing raw data downloads, we deliver insights through dashboards that combine maps, charts, peer comparisons, and exportable reports.

Our platforms cover the entire U.S. mortgage market across all 50 states, the District of Columbia, more than 3,200 counties, and all census tracts and ZIP codes. We maintain more than 124 million HMDA loan records at loan-level granularity, alongside over 25 years of historical and complementary datasets. Crosswalks across time and geography allow for robust longitudinal and spatial analysis, while monthly, quarterly, and annual updates support timely decision-making.

Polygon Research's product suites are designed to support different parts of the mortgage value chain:

- **Polygon Vision** a strategic market-intelligence suite that blends HMDA, Census, and branch data (HMDAVision, CensusVision, BranchVision) to support competitive market analysis, fair lending and CRA work, branch and channel strategy, and long-term planning.
- Polygon Risk a prepayment and credit-performance suite for GSE and Ginnie Mae loans that quantifies and predicts Conditional Prepayment Rate (CPR) and Conditional Default Rate (CDR) at the loan, cohort, and seller level. It includes TerraVision, which integrates FEMA National Risk Index (NRI) hazard metrics with mortgage and demographic data to understand value at risk from environmental hazards.
- Polygon Pulse a monthly updated suite focused on agency loan trends, pricing, and demographic shifts (MBS Pivot, CPS Pivot, FHA Pivot). It supports analysis of market size, volume forecasts, credit-box dynamics, firsttime homebuyer activity, loan-level pricing adjustments, and niche segments such as condominium, cooperative, and manufactured housing markets.
- Polygon Academy an on-demand education platform providing training and certification in mortgage data analytics, helping users build internal capacity to interpret and act on loan-level insights.

We serve IMBs, banks and credit unions, secondary market executives, government and investor-relations teams, marketing and strategy groups, fintech vendors, investors, consulting firms, mortgage brokers, compliance and risk teams, regulators, policy analysts, researchers, students, and interns. Across these audiences, a common need is the ability to perform comparative, loan-level analytics—for example, understanding borrower profiles, pricing and cost differences, channel and product mix, and fair-lending performance—without building and maintaining a large internal data infrastructure.

Our competitive advantage lies in fast, in-memory, loanlevel modeling of complete datasets rather than samples or pre-aggregated summaries. This enables:

- Consistent, multi-year, multi-dataset views for strategic planning and benchmarking.
- Detailed borrower, product, and geographic segmentation for marketing and fair-lending analysis.
- Granular CPR/CDR and climate-risk overlays that link origination, performance, and environmental exposure.
- Interactive, collaborative reporting, allowing teams to drill down in real time, export findings, and share live dashboards internally and externally.

Polygon Research's data and methods support industry organizations and initiatives, including work with NAHREP's State of Hispanic Homeownership and Hispanic Wealth Project, Fannie Mae's Future Housing Leaders program, ACUMA Benchmark Reports, and Vetted VA's comparative intelligence and member reporting.

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We model data at the microdata level.

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