Fannie Mae

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Written Testimony of Lyle Radke
Senior Director, Collateral Policy, Fannie Mae
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"Public Hearing on Appraisal Bias"
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Members of the Appraisal Subcommittee (ASC), thank you for the opportunity to provide testimony on behalf of Fannie Mae about our real estate appraisal policies and how we aim to prevent appraisal bias.

Our Mission

Fannie Mae's mission is to facilitate equitable and sustainable access to homeownership and quality, affordable rental housing for millions of people across America. Since we were established by Congress in 1938, Fannie Mae has provided a reliable source of affordable mortgage financing across the country. As a secondary market investor, Fannie Mae proactively sets standards for the loan manufacturing process to drive loan quality for the loans we purchase. We also provide tools for approved lenders to help ensure that the mortgages we purchase meet our requirements. We hold the participants in that process – including ourselves – to high standards and continuously evaluate and refine our monitoring and controls to uphold our standards of excellence.

To quote our CEO Priscilla Almodovar in our Q2 2023 financial results, "Fannie Mae continues to serve as a stabilizing force for America's housing finance system in even the most challenging markets. After nearly 15 years of transformation, today, Fannie Mae is safer and stronger. This is thanks to our team's dedicated efforts to improve the resiliency of our business and our steadfast focus on risk management."

We are fully committed to equity in housing, including the right of every borrower to an accurate appraisal. As one of the largest consumers of residential appraisals in the United States, we play an important role in setting expectations for appraisal quality including the fight against bias. We have a comprehensive program for addressing appraisal quality including bias.

Single-Family Business Model

Because our position is in the secondary market, our influence over the loan manufacturing process, including the appraisal process, is indirect. We set standards which approved lenders must follow for their loans to be eligible for purchase by Fannie Mae. Our standards are described in our *Selling Guide*. When lenders deliver loans to us, they represent and warrant that they have followed our *Selling Guide* policies for that loan. We provide tools such as Desktop Underwriter® (DU®) that help approved lenders follow the *Selling Guide*.

After we acquire loans, we pool loans and securitize them by issuing mortgage-backed securities (MBS). A full discussion of capital markets is beyond the scope of this hearing (and beyond my expertise), but familiarity with the basics helps to understand the importance of accurate appraisals to us.

MBS are backed by the revenue coming from borrowers making their mortgage payments. We guarantee payment to MBS bondholders regardless of whether borrowers make their payments to us, so one principal risk to Fannie Mae is loan default (borrowers failing to make their mortgage payments). One characteristic of the 2008 housing crisis was an elevated rate of mortgage loan defaults rippling through all parts of the mortgage market.

We use several methods to reduce and manage default risk while continuing to provide liquidity to housing markets:

- Setting high quality standards for loan eligibility and documenting those requirements for originating loans for sale to Fannie Mae in our *Selling Guide*.
- Validating loan eligibility and pricing through automated tools and layers of quality control checks.
- Creating incentives for loan sellers to comply with our standards by requiring them to repurchase loans that don't pass our quality control checks.

- Requiring borrowers to provide mortgage insurance (we are required by law under our charter to obtain a credit enhancement, typically mortgage insurance, for loans with loan to value ratios, or LTVs, above 80%).
- Executing credit risk transfers (a type of reinsurance) through capital markets.

One important aspect of our mission is to promote housing affordability. Because loans delivered to Fannie Mae are secured by properties that must meet our valuation and eligibility standards, bond investors have greater confidence that they will be repaid which enables us to obtain funding at lower rates and pass that savings on to all Fannie Mae borrowers.

Role of Appraisals

Appraisals play a key role in our business model. They are integral to the methods mentioned above for reducing and managing default risk. We rely on them for determining loan eligibility, pricing, and mortgage insurance requirements for most loans. We rely on the appraisal data to help us improve business performance and to determine value acceptance (appraisal waiver) eligibility. Ensuring that appraisals are accurate, transparent, and reproducible is a key policy objective.

The Uniform Standards of Professional Appraisal Practice (USPAP) defines an appraisal as “an opinion of value.” Implicit in the definition is that when the appraiser follows a professional standard such as USPAP, the result is a *professional* opinion of value. The expertise and rigor required to follow USPAP sets a professional appraisal apart from a personal opinion of property value that anyone can form.

To determine the value of the property, Fannie Mae requires appraisals for most loans that we acquire. Appraisers must be state-licensed or certified and must follow USPAP. They also must follow our *Selling Guide* appraisal requirements.

There are three basic approaches to appraisal valuations: the Market Approach (sometimes referred to as the Sales Comparison Approach), the Cost Approach, and the Income Approach. These approaches are not only used for residential appraisals, but in fact are the same basic approaches used to value any property including stocks, bonds, commodities, personal property, works of art, and so on. The three approaches should produce similar results if done correctly. The preference of one approach over another typically depends on the quality of the data available to the appraiser and the assumptions or limitations under which the appraiser performs the task. There is some interdependency in the approaches. For example, an appraiser performing a Cost Approach may need to use the Market Approach to determine the land value and the depreciation rates. Similarly, an appraiser using the Income Approach may need to derive the capitalization rate through market research.

Fannie Mae requires at a minimum the Market Approach for two main reasons. First, reliable market data on residential sales is widely available and sufficiently detailed to enable appraisals for almost all residential properties in the United States. This ubiquity is consistent with our mission to provide liquidity in all areas of the country during all market cycles. Second, because the collateral in the event of a default is meant to ensure repayment through the sale of the property, the Market Approach is the most direct evidence of what the property would be expected to sell for, requiring fewest assumptions. Appraisers may exceed our minimum requirement by performing the cost or income approaches when helpful to producing credible results.

In addition to determining the value estimate, appraisers also may fill the function of an independent observer of the property characteristics. This helps the lender determine if the property meets our eligibility requirements. For example, if the property is not structurally sound, it must be repaired before the loan can be delivered to us. Similarly, if the property is not used as a residence, the loan is not eligible for delivery.

While appraisals help ensure Fannie Mae operates safely and soundly, they also benefit borrowers. By informing the borrower of the market value, an appraisal can help a borrower make well-informed financial decisions. This can help borrowers avoid pitfalls such as paying too much for the property, borrowing more than the property is worth, or buying a property with serious structural damage. Of course, there are potential risks related to the accuracy of the appraisal. For example, an inflated appraisal may cause the borrower to overpay or overleverage while a low appraisal may impede the borrower from buying or refinancing.

Evolution of Appraisal Controls

Prior to the 2008 housing crisis, appraisal reports were typically delivered to lenders on paper or in PDF format. While we always required lenders to follow our appraisal policies, because of the logistical challenges of handling paper reports or PDF attachments, we did not normally require lenders to give us the actual appraisal report. Only if the loan later defaulted or some other situation occurred that caused us to revisit the loan file would we then ask the lender to share the appraisal report. As we worked through the aftermath of the crisis, it became apparent that lax appraisal quality was a contributing factor to that event. Since then, we have implemented newer, stronger appraisal controls.

The first step in this journey was the creation of the Uniform Appraisal Dataset (UAD) in 2010. The UAD was developed by Fannie Mae and Freddie Mac with the Federal Housing Finance Agency, and it enables digitization of appraisal reports.

Then, in 2011 we launched the Uniform Collateral Data Portal® (UCDP®). It is a portal used jointly by Fannie Mae and Freddie Mac for lenders to deliver their appraisal reports in UAD format. Together, UAD and UCDP solve the problem of paper or PDF appraisal reports, making GSE appraisals machine-readable.

With appraisal reports in digital format, the next step was to create a quality control (QC) platform for proactively reviewing and analyzing appraisals. In 2012, our internal QC team began testing a prototype appraisal review platform now called Collateral Underwriter® (CU®). It incorporates the UCDP appraisal data together with other tools such as maps, aerial photos, and public records to provide context to appraisal reviewers. More importantly, it uses modeling to critique the appraisal results, allowing users to triage higher risk appraisals and focus scarce review expertise where it is most beneficial. CU delivers a risk score that encapsulates Fannie Mae's risk-based approach. In 2015, we made the CU tool available to approved lenders, giving them the same context that we have for their appraisal underwriting and quality control.

The engine driving CU results is its model. CU is not an automated valuation model (AVM) in the sense that its purpose is not to generate an automated value, but a high-level understanding of AVMs is helpful to understanding how CU works. The mortgage industry has used AVMs for decades as an alternative to appraisals or as a tool to critique appraisals. AVMs rely on proprietary statistical algorithms to generate a property value. AVM results can be generated quickly on demand at very low cost. They typically provide a measure of reliability such as a confidence score. Performance is dependent on the quality and quantity of data available to the model as well as the efficacy of the model logic. AVM logic often incorporates proprietary information, so the results are not transparent. Because they often rely on unstandardized data such as public records, AVMs are typically limited to analyzing only a few of the many factors that can influence property value.

CU solves some of the historic AVM limitations because it is built on the large body of standardized property data from UCDP. CU works by creating idealized appraisals as benchmarks for the actual appraisals we receive through UCDP. CU mimics the steps that an actual appraiser would follow for the Market Approach – identifying subject property characteristics, identifying potential sales comparables, deriving adjustment rates for property characteristics from the market data, adjusting comparables for differences with the subject, and weighting the adjusted comparables. When the actual appraisal and the idealized benchmark agree closely, the CU risk score is low. The more that the real appraisal diverges from the idealized version, the higher the risk score. This approach enables CU to identify at what points in the process the appraisal and the model diverge, creating actionable intelligence for lenders and appraisers.

CU messages point users to the factors that need further attention in order to reduce the risk or improve the appraisal. Two key CU messages are the "undervaluation risk flag" and the "overvaluation risk flag." They are symmetrical in design and identify appraisals with elevated probability of mis-valuation. When either of these flags fires, CU also generates an accompanying message or reason code that identifies the appraisal issue causing the mis-valuation concern.

CU makes it possible for Fannie Mae to monitor appraisals and appraisers and provide insight similar to how DU informs credit underwriting and quality control. Today, our Loan Quality Center (LQC), which we describe below, relies on CU to inform our post-acquisition quality control processes. Many lenders also use CU for their underwriting and QC processes.

Appraisal Bias

In recent years, news media reports alleging bias in residential appraisals have increased attention on appraisal processes used in the mortgage industry. As one of the largest consumers of residential appraisals in the United States, we've asked ourselves if we are doing all we can to identify and help fight against appraisal bias.

Our longstanding *Selling Guide* policy explicitly states that unacceptable appraisal practices include "…development of a valuation conclusion based on factors that local, state, or federal law designate as discriminatory, and thus, prohibited." We additionally state that it is unacceptable for an appraiser to develop a valuation conclusion "based either partially or completely on the sex, race, color, religion, handicap [disability], national origin, familial status, or other protected classes of either the prospective owners or occupants of the subject property or the present owners or occupants of the properties in the vicinity of the subject property."

Determined to do more, in 2020 we launched a six-pillar plan to combat appraisal bias. Our six pillars are: 1) research, 2) monitoring / quality control, 3) the Appraiser Diversity Initiative™ (ADI), 4) industry engagement, 5) appraisal process, and 6) technology. Since then, we have made considerable progress in executing our plan.

Research

Our Economic and Strategic Research (ESR) team of economists and market researchers study major aspects of housing and the economy. Their research incorporates the industry data we have collected through DU and CU, shedding light on industry trends. This research informs our work to enhance policies and appraisal quality controls.

ESR research related to appraisal bias includes our working paper Appraising the Appraisal which describes four key findings:

- Black borrowers refinancing their homes on average received a slightly lower appraisal value relative to automated valuation models.
- Homes owned by white borrowers were more frequently overvalued than homes owned by Black borrowers.
- The frequency of "undervaluation" did not have a notable racial pattern.
- Six states accounted for nearly 50% of the overvalued homes of white owners in majority-Black neighborhoods.

Additional research on related themes is ongoing. Please see our website for more information about ESR research.

In addition to the academic research from ESR, other business units use data and analytics to identify potential appraisal bias concerns. We focus on detecting detrimental outcomes including mis-valuation and prohibited factors. The undervaluation risk flag is one important tool for identifying potential bias. We also use analytics to identify references to prohibited factors in appraisal reports.

Monitoring / Quality Control

Collateral Compliance Reviews

Our LQC conducts collateral compliance reviews on appraisals that were used to originate loans delivered to Fannie Mae. This includes reviews on a random sampling of loans to assess the overall quality of Fannie Mae's book of business and targeted sampling that may include items such as adverse selections and lender self-reported loans. The purpose of the review is to ensure that the collateral value of the loan was supported, the property was eligible for sale to Fannie Mae, and property specific value-related *Selling Guide* requirements were met. Specific guides and action matrixes are followed to ensure consistency of the review and recording of the results. Each appraisal sampled undergoes several levels of review for completeness and accuracy.

Collateral reviewers report if they observed bias or suspect bias in the appraisal based on the language or photographic evidence in the report. If the bias is deemed conclusive by management, it will be reported as a defect to the lender. Both observed bias and suspected bias are reported by the reviewer to the Appraiser Quality Monitoring (AQM) team in LQC which will conduct further research.

If the collateral review results in the discovery of deficiencies that impacted the eligibility of the loan, the lender is notified. Moderate defects known as findings are provided to the lender as feedback. Significant defects result in the lender receiving a repurchase request. The lender does have a rebuttal period and may choose to provide additional documentation and information to resolve the issue(s). If the lender's appeal does not resolve the defect(s), the loan is repurchased or a repurchase alternative is imposed.

Appraiser Quality Monitoring

In addition to our collateral compliance reviews, LQC also executes AQM processes focused on improving the quality and consistency of appraisals. AQM is a multi-level process that promotes reliable appraisals and sound appraisal practices through a structured framework for detecting and managing collateral risk issues at the appraiser level (rather than the loan level or lender level). AQM leverages UCDP data to identify appraisers whose work exhibits *patterns* of data integrity and data quality issues or egregious deficiencies that significantly impact the credibility of the appraisal results. This includes patterns of mis-valuation or bias.

Appraisers with a high rate of errors within a review cycle are notified of these deficiencies by educational letters and follow-up letters that encourage improvements in the quality of their appraisals. After sending the letters, we monitor the appraisers' work for improvement and, for most appraisers, we do see substantial improvement.

For those appraisers who do not show improvement, the consequences become more severe. Ultimately this may cause us to refer the appraiser's work to a state agency or to refuse to accept loans that rely on appraisals by that specific appraiser.

Subjective and Bias Language

Fannie Mae's introduction of the groundbreaking appraisal text scanning review process has led the way in appraisal compliance through scanning millions of appraisals for prohibited and subjective terms, including references to race, ethnicity, or religion in appraisal report commentary sections. We began the appraisal text scanning process to identify the presence of subjective terminology, including, but not limited to, the terms listed in *Selling Guide* B4-1.1-04, Unacceptable Appraisal Practices.

Using the results of the scan, AQM follows a prescribed matrix of actions including educational letters, detailed warning letters, placement on the AQM "100% Quality Control" list, placement on the AQM "No Longer Accepted" list, and reporting to the state appraisal regulatory agency, depending on the frequency and severity of the language.

The AQM team also researches specific appraisers (identified during the collateral review) if they submit a report suspected of bias. The research includes examining a sample selection of the appraiser's body of work to determine if a pattern of inappropriate language use or material valuation issues exists, either undervaluation or overvaluation. If the appraiser is found to have potential bias within their body of work, additional files may be selected for targeted review; further actions follow the same AQM matrix of actions.

As a result of our first text scanning in 2021, we sent 1,553 AQM letters to appraisers with multiple findings reminding them that the use of the subjective phrases or terms may be evidence of a non-objective valuation process and indicate the possibility of discriminatory bias in determining a property's value. Following up with further appraisal text scanning in 2022, we found significant performance improvements compared to the 2021 results, including:

- The overall rate of appraisal reports with findings decreased from 0.15% (2021 review) to 0.11% (2022 review).
- 78.6% of the appraisers who received a letter in 2021 had no new text findings on appraisals submitted after the letter date.
- The number of appraisers with findings declined from 3,193 (2021) to 1,557 (2022).

Based on the results of the 2022 appraisal text scanning review, Fannie Mae sent more than 400 new AQM letters to appraisers with multiple findings. The most common findings were the use of the subjective phrases "desirable location," "desirable neighborhood," and "good neighborhood." In 2022, we referred 20 of these cases to state regulatory agencies based on our identification of egregious appraisal issues. Examples of egregious issues include racial and ethnic descriptions of the population in a specific area.[1]

Appraiser Diversity Initiative (ADI)

Exact estimates vary, but there is consensus that the appraiser workforce is overwhelmingly white and male[2] and is certainly not reflective of the country's diversity as a whole. While many factors can contribute to potential bias in appraisals, having an appraiser workforce that better represents the communities where they work could instill more confidence in the process and mitigate bias.

In 2018, recognizing the benefits of a more diverse appraiser workforce, Fannie Mae collaborated with the National Urban League to launch the ADI. The Appraisal Institute and Freddie Mac have since joined forces with us. ADI is committed to addressing the lack of racial, ethnic, and gender diversity in the appraisal industry by attracting new entrants to the residential appraisal field, overcoming barriers to entry (such as education, training, and experience requirements), and fostering diversity. We do this through outreach events that raise awareness of real estate appraisal career opportunities, especially in underserved communities; based on our latest results, these events have reached over 14,000 individuals through social media and other methods. ADI awards scholarships that pay for qualifying education and other requirements, made possible by donations from industry sponsors, including lenders, appraisal companies, AMCs and others. We're proud to say that the ADI is successfully attracting diverse, aspiring appraisers, awarding them education scholarships, and seeing them launch their careers. ADI scholarship winners represent a new generation of appraisers.

Since its inception, ADI has continued to increase engagement with community organizations to assist in identifying potential trainees through local workshops and outreach events. This year alone ADI has reached more than 400 aspiring appraisers across

[1] Source: https://www.fanniemae.com/research-and-insights/perspectives/manage-appraisal-quality

[2] Source: The Appraisal Foundation https://appraisalfoundation.sharefile.com/share/view/s3070f5ad18bb41e4beaf26999bc1b4a7

the country including: Phoenix, Arizona; Columbus, Ohio; Las Vegas, Nevada; Houston, Texas; and Detroit, Michigan. We have also reached underserved communities through virtual events accessible to nationwide audiences.

Since 2018, ADI has awarded 518 qualifying education scholarships. We recently expanded scholarship offerings to cover not only qualifying education but also post-trainee traditional education and the new path for Practical Applications of Real Estate Appraisal (PAREA). The PAREA path is designed to help aspiring appraisers satisfy the experience requirements to become a licensed appraiser as set forth by The Appraisal Foundation's Appraiser Qualification Board (AQB).

Industry Engagement

Since procurement of the appraisal is a primary market function facilitated by lenders, we don't generally have a contractual relationship or direct communications with appraisers at the loan level or in the loan origination process. To compensate for this, we carry out a robust program of communication and educational outreach to the appraiser community. This includes frequent participation in webinars and conferences designed for appraisers, lenders, and valuation service providers. We have numerous publications for appraisers on our web page, including job aids, frequently asked questions, training videos, and our quarterly newsletter. Recently, our newsletter has featured several articles related to appraisal bias that restate our policy requirements and suggest tips and best practices for appraisers to mitigate bias.

Appraisal Process

The traditional appraisal process requires the appraiser to visit the property to observe its characteristics. The property visit may expose the identity of the occupant to the appraiser which in turn raises the possibility of an appraiser's personal bias impacting the appraisal results. One way to counteract this risk is to adopt alternative scope appraisals such as desktop appraisals and hybrid appraisals that do not require the appraiser to personally visit the property.

Working with FHFA and Freddie Mac, we added a desktop appraisal option for certain purchase loans to the *Selling Guide* in March 2022. Then, in April 2023, we launched a new collateral option called value acceptance + property data, which does not involve an appraisal but instead leverages technology to capture property characteristics and validate the lender's estimate of value. We are also testing a hybrid appraisal option in a pilot program; it combines our property data collection process with a desktop appraisal. using the property data to inform the appraiser.

These alternatives to the traditional appraisal not only help reduce the possibility of personal bias in the appraisal process but can potentially lead to lower costs and faster loan decisions for borrowers.

We continually monitor our appraisal policies with an eye towards better risk management, better process, and better support of our mission. The following sections address recent developments related to appraisal process topics that ASC asked us to address today.

Reconsideration of Value (ROV)

Lenders have utilized ROV processes for decades and have natural incentives to ensure customer satisfaction for borrowers, including accurate property valuations. Each lender has typically created its own individualized processes, but there is no unifying framework for industry consistency. The Interagency Task Force on Property Appraisal and Valuation Equity (PAVE) identified a need for industry standardization, including greater focus on mitigating appraisal bias. As a result, Fannie Mae is working with FHFA, Freddie Mac, the U.S. Department of Housing and Urban Development (HUD), and others to develop policies that will establish minimum expectations for how lenders respond to ROV requests. Key principles in this effort include establishing borrower rights and borrower education while protecting appraisers from coercion and other forms of inappropriate influence. To operationalize these principles, our policy discussions have focused on five mechanisms:

1. Communicating ROV options to the borrowers and other interested parties.
2. Standards for responding to borrower requests for ROVs.
3. Guidance for when to obtain a replacement appraisal.
4. Tracking and reporting of ROV outcomes.
5. Actions to take if an appraisal has indications of unlawful bias.

Tracking and reporting of ROV may depend on future technology enhancements.

We also set standards to safeguard the independence, objectivity, and impartiality of appraisers and other independent parties throughout the valuation process in our Appraiser Independence Requirements (AIR) first published in October 2010. Last updated in August 2023, the AIR standards support the requirements in our *Selling Guide,* providing more details on the roles and responsibilities during the loan origination process to ensure the lender's valuation procedures not only meet our requirements but also help prevent coercion on the appraiser.

Rural Challenges

Rural appraisals can be challenging. Properties tend to be more individualistic than in suburban or urban developments and often have distinctive features such as outbuildings. Site characteristics such as acreage can vary widely. Heterogeneity increases the complexity of the valuation analysis.

The controls we have established for appraisal quality are well suited to rural appraisals. For example, CU does not assess appraisals based on arbitrary rules like distance to comparables. Instead, it looks at the appraisal in context of the available data in that marketplace. Also, the educational aspects of our AQM program are as beneficial to rural appraisers as they are to urban or suburban. Rules around prohibited factors and ROV are the same for all appraisers.

In addition to the valuation challenges, another issue is the scarcity of appraisers. Due to lower population density, there may not be enough demand for appraisal services in rural communities to sustain a local appraisal business. Rural appraisers commonly cover large geographic areas and spend a lot of time driving. Our appraisal process innovations can help with the scarcity problem. For example, desktop appraisals do not require the appraiser to visit the property nor drive by the comparables. This can greatly increase the efficiency of the rural appraiser. Similarly, hybrid appraisals and value acceptance + property data allow someone other than the appraiser to visit the property.

Tribal Lands

Overview

Fannie Mae reactivated its Initiative for Native American Homeownership (NACLI) to provide capital to native communities. NACLI provides an additional opportunity for approved lenders to use conventional mortgage loans on Tribal Lands.

NACLI is supported by Participating Tribes who execute a Memorandum of Understanding (MOU) with Fannie Mae and the Tribes' designated Fannie Mae lenders. The volume of NACLI loans is lower than our targets, but the opportunity for expansion is without bounds as more than 574 federally recognized Tribes are eligible. Understanding what bias means in the context of NACLI is directly tied to our outreach efforts to Native communities and industry appraisers, as well as discussions with industry groups to share strategies and successes.

In the spirit of taking a fresh look at our effort through a Native lens, our ADI outreach will include a focus on Tribal Lands. Chase Bank, one of the ADI sponsors, hosted a virtual workshop on October 24, 2023 "Focusing on Rural and High Needs Areas, Including Tribal Lands."

Appraisal Challenges

The form of Tribal Land ownership can vary among the tribes as either Trust Land, Allotted Land, or fee simple lands, but those variations all result in the same set of challenges. Fannie Mae has long since recognized the inherent challenges with completing appraisals on Tribal Trust Lands. In 2020, we published a set of FAQs related to the Tribal Land appraisal process.

The primary challenge for Tribal Land appraisals is a lack of data, simply because there are not enough verifiable home sales. A secondary challenge is that non-market rents predominate on Tribal Lands.

Acceptance of the Cost Approach to Value

When there is adequate market data, a traditional appraisal is completed using the Market Approach to develop the value. However, when the appraiser determines there is not sufficient verifiable market data to support the Market Approach, then we will accept an appraisal using only the Cost Approach. In developing the Cost Approach, the appraiser can choose which recognized cost service to use (from among several). The appraiser must ensure that enough detail is provided so that the lender can replicate the Cost Approach when reviewing the appraiser's analysis, comments, and adjustments on the appraisal report.

Because we expect the Cost Approach to be more common on tribal land, NACLI is designed to accommodate the alternative method as an indicator of value. Fannie Mae facilitates this alternative process by providing a customized *Cost Approach Only Addendum* to the URAR.

Technology

New technologies have the potential to improve valuation accuracy, reduce discretion in the valuation process, prevent human error, and better detect mis-valuation.

One of our first accomplishments under the technology pillar of our plan to combat appraisal bias was the creation of the undervaluation risk flag in CU. It enables appraisal reviewers to identify appraisals with potentially egregious undervaluation more easily. We are continuing to develop CU with new technologies such as machine learning, image recognition, and geographic information system techniques.

Perhaps the most significant appraisal technology development will be the next generation UAD. In March of this year, together with Freddie Mac, we published an updated UAD specification that we have been developing since 2018. It is designed to reduce the potential for appraisal bias by requiring appraisers to use standardized, enumerated data elements in place of much of the narrative commentary common in today's reports. It also refines our condition and quality rating definitions to reduce ambiguity. Other features of the new UAD include a single dynamic report for all residential property types and appraisal types, an easier-to-read format with topic-driven information clusters, and an improved certification section for fair lending compliance. The new appraisal data will enable us to further improve CU and our *Selling Guide* appraisal policies. We anticipate early adopters will begin following the new standard in late 2025.

Another accomplishment is the data standard we developed for property data collection in our valuation modernization pilot. It enables technology service providers to create intuitive mobile apps for objectively collecting a consistent set of property data. After more than five years of testing and development, this technology has matured to the point where we were able to launch value acceptance + property data. The policy innovation would not have been possible without the technology innovations. Subsequently, we worked with Freddie Mac to create the Uniform Property Dataset (UPD) which we published jointly in July 2023. The aligned standard will help service providers to further refine property data collection technologies.

Smart phone apps that use digital cameras and LIDAR to automatically calculate the area of a structure, create machine-generated floor plans, and use image recognition to identify rooms and features are another area of emerging technology with great potential for reducing mis-valuation. What all these have in common is that they generate accurate, consistent, high-quality, objective property data quickly at low cost, benefitting borrowers, lenders and Fannie Mae alike.

We are also using technology to improve our ability to detect subjective or bias language in appraisal reports. Our Data Science team is developing two models, FairSearch (a keyword search model) and a False Positive detection model. These models will enable us to increase the frequency of text scanning and shorten the feedback loop to appraisers, further mitigating the risk of discriminatory appraisals.

Summary

Appraisals are an essential part of Fannie Mae's business model and are necessary to successfully execute our mission. Our interest in fighting against appraisal bias is aligned with borrowers' interests; we both benefit from accurate, transparent, reproducible appraisals. We are deeply troubled by cases of appraisal bias and have acted aggressively through our six-pillar plan to combat it. We are continually improving our appraisal quality controls through research, monitoring, enforcement, education, policy enhancement, and new technologies. We are actively working to recruit a new, diverse generation of appraisers through ADI. We will continue to take meaningful and measurable steps towards more accurate and unbiased appraisals.

Thank you again for the opportunity to testify before you today, and I look forward to working with the Members of this Committee and answering any questions you may have.

Sincerely,

Lyle Radke

Lyle Radke

Senior Director, Collateral Policy

Fannie Mae

Lyle Radke joined Fannie Mae in 2013 and is Senior Director of Collateral Policy. His team establishes and maintains policies for property eligibility and appraisals. He holds a master's degree in geology from Brigham Young University and is a certified residential appraiser in New Mexico. Current workstreams include ADI, the next generation UAD, appraisal bias mitigation, hybrid appraisal requirements, and enhancements to CU. Recent initiatives from his team include updated Appraiser Independence Requirements, value acceptance plus property data, creation of property data collection standards, adoption of the ANSI sq. ft. standard, a desktop appraisal option for certain purchase loans, and the Undervaluation Risk Flag in CU. He frequently speaks to lenders, risk investors, and appraisers about Fannie Mae's collateral risk management policies, programs, tools, and vision for the future.