The biggest challenge to the Appraisal profession and the Lending community is adoption of new methods and techniques. No one wants to let go of the Legacy process because they cannot afford to rewrite their systems and retrain their work force, "If it is not broken why fix it".

Question A1.1:

FIRREA addressed this when it allowed the Banking Inter-agencies to obtain an Evaluation. Even after recent clarification it is still not widely adopted because the Appraisal profession, Banking Inter-agencies, Lenders and Enterprises did not provide the guidance or standardization on how to develop or use an evaluation. Due to the lack of a standardized product and process, investors of Mtg backed securities will not purchase loan transactions where an Evaluation is the primary valuation method used. Somewhat contradictory because they do acquire an MBS pool backed by an AVM which has no development standards not meeting the definition of an Appraisal or Evaluation.

Waivers only be offered on purchase transactions with appraisals being required on all refinance transactions and issued using a weighted analysis of 3-5 different provider AVMs in a cascade.

Guidance should be set by the FHFA regarding caps for tolerances in AVM variances. They should correlate with market derived variances using List to Sale price ratios set by the market. A variance greater or less than market means there are factors that influence value the AVM cannot identify. If it less than market the AVM model may be overfit, a type of unconscious bias in the model or in the data used.

There is no shortage of appraisers in urban and suburban areas unless demand peaks like what is currently happening with record low interest rates and the high volume of refinance activity.

In underserved markets, small towns, rural markets, or affordable housing urban renewal areas there is a constant shortage of appraisers as the general economics of those marketplaces generally do not have the volume needed support a larger pool of appraisers.

Appraisal management companies talk about shortages. Those shortage are related to the AMCs business practices and fee schedules. Customary and Reasonable fees did not change the AMC business model, they still take 30-50% of the fee. Lenders can not apply a cost-plus model as that model just passes the cost on to the consumer. Lenders managing an appraiser panel is not economically feasible because of the costs associated with managing a panel due to third party vendor management requirements. Hence, they pass that cost on to the AMC knowing the AMC is going to get reimbursed for the management expense by recovering it from the fee paid to the appraiser subsidized by the borrower. The AMC model is here to stay because of regulatory burdens. **To be cost efficient for the consumer it must be cost inefficient for the appraiser.** This is a zero-sum game unless lenders start to use the cost-plus model to benefit consumers and appraisers.

FIRREA developed an evaluation type of report to address the Small town and/or a Rural environment appraiser shortage. However, Lenders and/or Enterprises will not accept an evaluation as it does not meet the definition of an appraisal. Yet they are willing to accept an AVM using diverse data with a high variance rate that does not meet the definition of an appraisal or an evaluation.

Ineffective Regulation and weekly defined standardized policies for alternative valuation methods in underserved areas combined with the lack of flexibility at the MBS and Enterprise level willing to accept something less than a USPAP compliant appraisal or an AVM is the bottleneck. A hybrid report does not resolve this concern, it is still a USPAP compliant appraisal.

Question A1.2:

The RFI calls it a "Hybrid" report. Appraisers have always used Hybrid reports when they were allowed to use trainees, Lenders removed that option. This is not a new proposal or modernization it is an old process being called new in appearance only. The current process is cradle to grave with the appraiser doing every step. That type of manufacturing process is inefficient. **The "Just in Time" manufacturing process is more efficient.**

Appraisers are Domain Experts in Valuation Analysis and Enterprise Policies. At least 50% of the appraiser's time is spent on completing items not related to any type of analysis primarily data collection, Lender and/or Enterprise guide compliance and/or driving around shooting photos of sales for the report. Another 25% is complying with ineffective regulation, USPAP changes every 2 years regarding report types, State rules and administration policy implemented the by State Appraisal Board/Director in the name of protecting the public trust, and arm-chair quarterbacking with file reworks and/or value reconsideration requests pushed back by Lenders and AMCs as an optic for quality control. Re-works and Value re-considerations are indirect methods of influencing Appraiser

Independence as each rework results in a report card penalty. Eventually appraisers just pre-manage the push back which can lead to a biased report detrimental to underserved markets. This push back can mask Risk in a specific transaction as the Lenders and AMC cleans the report.

AMCs market that they have 1,000 +/- rules that measure appraisal quality. Property value drivers for valuation development regarding credibility and reliability are correlated to Location, Square Footage, Lot Size, and Building Age 70% of the time, the remaining 30% is correlated to property condition, upgrades, special features and terms of sale. AVMs can't evaluate Location, Property Condition, Upgrades, Features and Terms of Sale, all can increase the AVM variance.

The rule-based systems identify if the appraiser completed the form in compliance with Enterprise Guidelines, Lender special instructions or QC quirks implemented by an AMC Chief appraiser. The rules measure manufacturing defects not valuation analysis credibility or reliability.

Appraisers only spend 25% of the time doing any "Analysis", remove the cradle to grave process, ineffective oversight and appraiser efficiency increases as will analytics.

Lenders, AMCs, and the Enterprises all use rule-based systems. The Enterprise tools and rules contain relevant analytical process regarding value reliability but nothing regarding value development credibility. Collateral Underwriter by FNMA applies a Peer review adjustment concept using UCDP data, but that method is flawed in part because there is no standardized method to estimate adjustments other than pair wise regression modeling which has an infinite number of different response because each iteration of a regression model will have a different result depending on the data used and regression model type.

As a review appraiser I have seen those tools render different valuation risk results on the same property using the same appraisal report prepared by the same appraiser. Lenders will place and document the loan based on the tool with the most favorable terms, this was proven in the analysis on the sub-prime loans from the 2008 Housing Crash.

Valuation development credibility and reliability should be the same regardless of the tool used. If the value is truly risky it may not have been developed credibly. It could mean the housing market is so diverse it is the best any valuation process possible and/or the appraisal valuation process was biased by the Lender, AMC, or Enterprise Guides.

The value in an appraisal report is not "Market Value" it is "Lending UW Value" needed to originate and sell the loan with the "Scope of Work" being compliance with Lender, AMC and/or Enterprise Guides.

Under that definition the results from rules should vary between Lender, AMC, and Enterprises to reflect the differences in their Guides. If their Guides align, then so should the rule systems and identified Risk.

Question A1.3: A Waiver is based on Automated Valuation Models.

The enterprise Guides identify property value as being equivalent to the most probable "Sale Price" yet the concept of Probable is not defined and implies some type of statistical analytical probability.

Based on the Definition of Market Value used by Lenders and/or the Enterprises whenever an Appraisal or AVM value is different from the Selling Price that value is theoretically incorrect.

Are appraisals biased to target sale prices, or are they just reflecting the process required by Lender and/or Enterprise Guides in the definition of Market value.

AVM to Appraisal comparisons are not equitable comparisons. The process used to develop an AVM is quite Different than the process an appraiser uses to develop an appraisal that complies with USPAP and Lender or Enterprise Guides. AVM values do not comply with Lender or Enterprise Guides.

Appraisers are required to use a 3 best comp format which over the last 10 years has increased in scope creep to now include two additional sales and / or listings where the comps must bracket the final value using historical data. Enterprise Guides allow appraisers to use pending sales to support market changes, but neither the Lender and/or Enterprises will allow an appraiser to reconcile on the pending sales if there are no closed sales that bracket the reconciled value. Lenders and/or Enterprises do not allow Appraisers to reconcile at the Cost approach when the subject is new construction or a recent renovation; nor do they allow the reconciling to the income approach on 2-4 units income producing buildings.

Lender and/or AMC rules require appraised values to be bracketed by historical sales. Without a target of sale price or borrower value for a refinance transaction how is this rule met, isn't this rule an indirect violation of appraiser independence?

Appraisers do not have a Data Science or Statistical backgrounds like some AVM developers. And AVM developers do not have Real Estate valuation backgrounds. Data Science, Statistical and Real Estate Valuation disciplines need to merge into a modernized Valuation Development process that can produce a credibly developed report that is reliable with variance metrics to measure value and market volatility.

The opportunity for Appraiser developed AVMs would solve efficiency issues and prove to be an effective risk mitigant. Hand selected data by a human expert is far better than a pure machine generated response. But a human cannot evaluate thousands of relationships, classifications for match pairs, or regression relationships. A machine can. Sophisticated software can do all the mathematical and analytical heavy lifting, the appraiser needs to understand how to interpret and apply the result.

The Financial Services industry specifically Lenders and the Enterprises has made the residential valuation process far more complicated than it is or needs to be.

Question A1.4: Expanding workforce capacity with comprehensive training is needed to change the existing cradle to grave process.

The largest risk in an alternative workforce is standardization, training, and control.

The legacy process in the appraisal profession has a workforce familiar with Lender and/or the Enterprises requirements but lacks formal training and/or adopted standards on how to inspect or measure a property. Changing workforces just makes the problem more complicated. Technology only solutions only work if those technologies all the use the same algorithms. **Stick with the existing workforce, make training appraisers economically feasible and focus on training and standardization of the technology so alternative workforces can eventually be phased in, the market will identify the most efficient workforce to use.**

Realtors have a vested interest in all transactions even if they are not part of the sale. Home Inspectors often only cite "nuisance" type of issues that are really optics to allow the buyer to renegotiate price, for legitimate items they defer to a qualified technician to evaluate.

The Casualty Insurance industry already has a just-in-time network of inspectors that inspect property, identify property condition issues, and provide repair estimates for insurable items. They would need Enterprise Guide training.

No alternative workforce has the Lender and/or Enterprises Guide training or experience.

Lenders, AMCs, and some States have made the use of appraiser trainees not economically feasible, some States defined the inspection process as providing significant appraisal assistance requiring an appraiser trainee license and supervision by a State credentialed appraiser. The Appraisal Foundation just released an alternative to experience alternative for experience credentialing called PAREA. There is no incentive for any supervisory appraisers to sponsor any trainees under PAREA. Lenders, AMCs, Enterprises, CRN, Appraisal Organizations, Affordable Housing Agencies, Universities, Junior Colleges or the FHFA could all offer internships, scholarships, degrees and/or sponsor trainees and alternative work forces. Training can be accomplished using MOOCs.

AMCs want an alternative work force because that is vendor network they would manage and take 30%-50% of the fee, just like they do with the Appraisers and Property Preservation contractors in their networks.

In Small town and Rural markets, the alternative workforce may not be large enough. If the transaction volume cannot support multiple appraisers then how will it support an alternative inspection work force, can 1 inspector support 5 appraisers across 5 different counties, how many inspections can they do if they must zig zag across 5 counties?

Currently the company that I work for has been building a model with team collaboration. I believe we are the only company in the United States that is trying to solve this question through our team approach. In the last 12 months, we have trained and employed more than 25 trainee appraisers. We have a comprehensive training program that the site analysts must successfully pass before they are allowed to perform inspections on their own. Once the training has been completed, they are teamed up with supervisory appraisers who will mentor them until they gain the required experience and education requirements to upgrade to either a licensed or certified appraiser. The site analysts will upload their inspection notes, sketch and photographs of both the subject and the comparables into our technology platform. Our processing team then front loads the appraisal report with that data and any other

online data on the subject property, site, improvements and also run a variety of appraisal products (Sparks, Regression Analysis, Dwelling Cost etc.) Basically, providing data for the supporting work file for that assignment.

This process has allowed our company to increase appraisal trainees, turn times and our production volume nationwide with a higher quality appraisal report. In fact, we have been completing a material percentage of our nationwide traditional appraisal assignments in 24 hours or less.

The challenge has been educating lenders, AMC's and Enterprises to allow the use of a trainee to inspect without the supervisor also having to inspect which will have a great impact as a way to help bring in new appraisers to replace the aging retiring appraisers. Outside of my company to develop the training and standards in order to provide a living wage. However, if training, standards, and the living wage concerns are not addressed the problem will still exist in the underserved markets or when lending peaks stressing capacity.

Question A1.5: The appraisal profession is currently over regulated. Regulation in the future needs to be meaningful most of what exists todays is all "Optic" if it were effective, we should have avoided all the housing crisis at a national level and/or at the submarket levels post S&L Bailout including the 2008 Housing Crisis.

FHFA should step back and have an honest assessment of what worked and what did not work. Then retire or rewrite based on the goals associated with Risk management and duty to serve underserved markets, they may not align as desired

Question A1.6: Not quite sure what UAD redesign does for the Appraisal profession, Mortgage Industry or Underserved markets. The UAD format does not exist in the MLS or Assessment records so it cannot be applied to comparable sale data until the appraiser transforms it increasing the timeline for report completion. The GSEs will not share appraisal data with anyone, including appraisers that provided the transformed data. So how does the NEW UAD improve the process at a grass roots level for the Consumer, Lender or Appraiser, it only benefits the Enterprises and increases the time, effort and cost to complete an appraisal report.

Question B2.1: Data is fragmented and controlled by Realtor Board fiefdoms where they restrict data usage.

Appraiser's used to be able to share non-confidential data through a service called "Red Books", Corelogic bought the service, they also acquired FNC the MTG Industries largest data portal that transmits appraisal reports, most reports go through the FNC rule-based checks before they get to the UCDP and go through VEROS rule checks. This entire appraisal life cycle uses more resources and money on rule checkers, checking the checker that checked the checker than it spends on the initial appraisal report. Corelogic is now the single largest data aggregator that resells MLS, Public record data and Valuation Analytics services. They are also a major provider of MLS software systems to Realtor Boards.

Since residential Real Estate Mortgages is the World Largest Investment Asset Class that nearly caused a worldwide financial collapse in 2008, then why worry about disrupting the data aggregator toll both revenue model. They will figure out how monetize any changes to the process.

The highest quality data is from the Enterprises which is provided by appraisers that identifies, verifies, cleans, and transform the data into a usable format that only the Enterprises can use for their AVMs. Appraisal quality would increase if all appraisers including assessment districts had access to this and the CU data. Keeping this data proprietary is a deterrent to developing innovative modernized alternatives that can streamline the process and reduce valuation risk. Data Sharing in underserved markets can add substantial value.

Question B2.2 No experience on this.

Question B2.3: Waivers are based on Automated Valuation models. If you have 10 different AVMs then there will be 10 different waiver programs. Having been a user of cascading AVMs I can guarantee that AVMs do not produce the same value for an individual property. There is no right or wrong AVM value. AVMs are just an additional data point in the overall valuation paradigm. Waivers and AVM/CAMA models need to be regulated, standardized and transparent.

Question B2.4: No experience with this

Question B2.5: Liability for the quality of the data. Did that inspector have the necessary training to measure and be able to identify functional or external issues. The appraiser becomes responsible but do the inspectors be held liable for misinformation? Maybe a set of professional standards need to be developed.

The appraiser has to feel confident that the non-appraiser property data is accurate without having to assume liability if it is not.

Therefore, consistency across all regulatory bodies for education, training, licensing, and enforcement. Enforcement needs to be universal; states often penalize the inspector for the acts of the entity that hired them. Lenders and AMCs are the root cause of most problems. Appraisers and/or Inspectors will do an ethical job until enticed to stray.

Ordering and managing the vendor network are penalized to a greater extent than the individual there will never be effective enforcement or independence.

Question B2.6: Home Equity lenders and Fix-N-Flip lenders use appraisal alternatives on a regular basis as they do not have to follow Enterprise Guides. Banking Inter-agency rules are more alternative valuation friendly.

The Enterprises could fund using evaluations as alternatives in the underserved markets, get an appraisal post funding then just reserve or hold the first loss position on variance from the alternative.

Question B2.7: To maximize efficiency gains associated with cradle to grave they must stay.

Question C1.1: Appraisers will be asked to do more for less money. The only way an appraiser will benefit is when the regulatory burden is lifted, the economics return to sponsor trainees produce efficiently developed alternative streamlined reports. In the current environment the dice are loaded in the opposite direction.

In the current environment appraiser turn times range on average 3 days for a single report and typically inspect multiple properties in a day and work all night to meet the 3-day average. In a just in time delivery system appraisers log into a platform and just pull assignments out of the Que from 8-5, with split shifts efficiency just increases. An appraiser could do inspections part of the day, submit them. Then log into a system and do cloud-based desktops where other appraisers have done the inspection. But that only works if the entire process is standardized so all the steak-holders are confident they have reliable inspection data. It also keeps the appraiser in tune with the market. Also refer to question A1.4 page 3 re "My Company".

Question C1.2 I am a late career appraiser at 60 years old. If I could rely on alternative workforces, aggregator data lakes, data analytics, cloud-based systems it would extend my career by 10-20 years health contingent. I could mentor trainees using a MOOC (Massive Open Online Course) platform sponsored by the FHFA and/or Enterprises. Under the current regulations for appraisal training MOOCs are not approved at the State level. A regulatory blocker that is keeping trainees out of the profession. MOOCs are generally FREE. Software companies often use MOOCs for training when users license their products. Software companies could use MOOCS to teach and train workforces on applicable standards. State Regulators do not give credit for education that is FREE.

Question C1.3: Only if the economics of the profession changed that allowed participants to make a living wage in those underserved markets. The current system is designed to take money away from underserved markets and transfer it to other areas not needing it. The opportunity needs to stay in the underserved area.

Question C1.4: Based on all the racial injustices that have surfaced in the media in the last few years and after 35 years as a third generation real estate and appraisal company in an Italian neighborhood that was bordered by Chinese, Mexican, Irish and African neighborhoods that were clearly defined; and coupled with 10 years also as a Chief Appraiser and Forensic Fraud Reviewer at one Regional Bank and one National Lender, the answer is "YES" unconscious bias clearly exists for a variety of reasons.

- The systemic problem may be more related to bias of a neighborhood or property than a specific targeted protected class. I have never seen an appraisal biased on race or ethnicity, but I am Caucasian, so I really do not know but it is hard to believe that it does not happen based on recent events. With that said and being a third-generation appraiser who has appraised more than a thousand properties in lower income and race specific neighborhoods, never has the thought even crossed my mind about negatively impacting a valuation because of race, class or location. In fact, it actually brought awareness that my appraisal report had to be the best it could possibly be so the homeowner or first-time homebuyer could get their loan. I was also the HUD Review contractor for most of the 1990's and then again in 2005 in the greater Chicagoland area and one thing was always apparent and that was, "different neighborhoods that have different classes or races are not all conforming and each has their own way of life, living, eating, cleanliness, skillset and pride of ownership". So as a professional appraiser, geographic competency also requires local competency to be able to recognize the varying level and degrees of ethnic homeownership disparate of race or class so the appraiser can accurately select the appropriate comparables that would directly compete with that property. Is the appraiser supposed to go into a totally different neighborhood that has higher property values which will result in an inflated valuation just to avoid a racial bias or discrimination suit?
- I also firmly believe that showing pictures of the homeowner's family or other personal belongings that show the race of the homeowner is not the reason why the homeowner was discriminated against. I think someone made up that story that their value came in low and then when the second appraiser came to inspect the property and all of the family pictures were removed with the Caucasian husband now being home that their value increased. Anytime two different appraisers appraise the same property, the value is never the same.
- Appraisers follow Lender and/or the Enterprises Guides. The appraisal UAD Definitions used for the UCDP are not data driven leading to interpretation and or market conformity bias. Many appraisers still apply condition codes based on what is typical for the area.
- HUD used to have a hot zone list that flagged all appraisals in a targeted hot zone. They may still have it but it flagged properties that were potentially fraudulent transactions or that had multiple flips or REO's and in every instance that I saw it was in a lower income distressed neighborhood. HUD also has a defined 223E rating that is specific to a distressed neighborhood that has no positive outlook in the near future that impacted the credit underwriting decisions for that property.
- A large portion of the data collected in an appraisal report in the neighborhood section is not used for any valuation validation regarding credibility or reliability. It serves no purpose other than to be used for setting risk-priced loan terms.
- What do those 1000+/- AMC appraisal rules mitigate? Some imply they are code to deny loans in underserved areas. I doubt it is a code but they may cause Lenders and the Enterprises to apply a different set of requirements on the appraisal process. Requirements that often are not possible to satisfy because the data does not exist that fits in the lender requested comp bracket in the appraisal re-work and/or value reconsideration.
- Lenders Risk mitigate with less favorable loan terms when valuation conditions are not being satisfied. Eventually the appraiser just gets tired of Lender or AMC push back so they may value properties on a more conservative side in those markets to avoid rework, reconsideration of value requests or potential liability if the loan defaults. Remember each Lender or AMC request is penalty point on the vendors report card. Hence the data in those underserved markets may show appraisal valuation bias, the unconscious root cause may be Lender, AMC and/or Enterprise valuation guides and/or applicable rules.

Question C1.5: Appraisers follow Lender, AMC, and the Enterprises guidelines. If the data reported in an appraisal is the result of unconscious bias the root cause is Lending policy and appraisal guidelines.

Question C1.6: I find it interesting that Lenders, FHFA and Enterprise are trying resolve issues they caused by turning appraisers into form fillers a catalyst leading to the Housing Crash in 2008. **Fill the form out correctly and after passing a 1000 +/- rule review, the value must be credible and reliable but what about the credit and underwriting.**

Now we have an AVM Dilemma again caused by the Enterprises in their quest to commoditize the valuation process even further. Lenders, AMCs and/or the Enterprise want to replace the workforce that collects, cleans, verifies, and transform the data that makes the AVMs perform better. A workforce destroyed by converting them to form fillers, making it not economical to bring on trainees, being over-regulated through protectionist practices in USPAP and/or by State Regulations and Administrative Policy.

The FHFA and Enterprises need to set the standards for development of emerging technology, methods, and techniques. AVMs and AMCs need to be regulated just like appraisers are, they need to have skin in the game.

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