



VEROSCORESM 

MISSING THE **BIG** PICTURE?

Get Smarter, Reliable Insights with
Intelligent Appraisal Risk Scoring







What Does VeroSCORE Do?

VeroSCORE provides an automated, virtually instantaneous evaluation of the contents of an appraisal report and its associated risk. The report provides supplemental analysis with supporting data to expedite any additional due diligence required.

VeroSCORE allows lenders to determine immediately whether an appraisal may be automatically accepted, rejected outright, or passed along for further diligence. Lenders and investors can easily implement Veros' appraisal scoring tool for better collateral decisions, benchmarking reporting and vendor management. AMCs can utilize the tool to efficiently demonstrate an objective, third-party perspective of all appraisals provided to their clients.

Elements of Collateral Risk

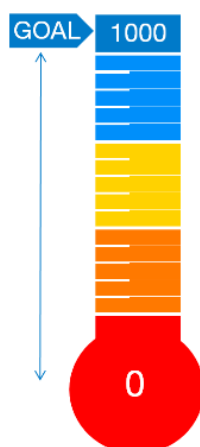


The correct analysis of appraisal data requires more complexity than the simple application of a set of basic or static rules. The scope and variety of residential real estate across the nation as well as the variation in local conditions, property types and/or market movement demands a more rigorous and technologically advanced analysis to yield meaningful results. In short, useful and trustworthy appraisal scores considering a 360-degree view of appraisal risk factors must be applied.

The Overall Risk Score is comprised of Veros' view of the elements of risk within and surrounding the appraisal report.

How is the "score" calculated?

- Assumes a "perfect" appraisal
- Score of 1000
- Deductions are made for detected issues (percentage or specific point value)
- Significant issues will drive points to 0
- Some issues may be detected but not impact points – warnings are presented



VeroSCORE does not just provide one simple score. Appraisal reports are complex, and VeroSCORE provides scores respecting that complexity while also simplifying the review process.

Clients can use Veros' suggested risk tolerances or factor their own thresholds in to reflect their own operational standards.

Provides quick & efficient feedback across the full appraisal report.

Facilitates meaningful discussion between reviewer and vendor – not just "push back".



How Does Appraisal Risk Scoring Work?

VeroSCORE can be accessed seamlessly through three options:

1. A web interface where the appraisal can be uploaded as an XML file to return a VeroSCORE report
2. Through an XML integration to the client's internal system
3. Through a valuation management platform (like Veros' SapphireSM or PATHWAYSM) to automatically return scores, data and report files upon acceptance through the system

The VeroSCORE report analysis assumes a “perfect” appraisal and applies a deduction methodology.

Cascading through numerous views of the appraisal report, VeroSCORE accumulates the results into multiple scoring components, each ranging from 1000 to 0, with 1000 being the assumption of a “perfect” appraisal. At its highest level VeroSCORE provides an **Overall Risk Score** and **Appraisal Risk Score** which are derived from four primary appraisal review components and their respective sub-scores.

These four key components are: **Completeness, Compliance, Credibility and Complexity.**



The “Four Cs” of VeroSCORE

Each component undergoes its own separate, independently weighted analysis. Some components have sub-components with individual scores that factor up into the main component score (e.g. Complexity also encompasses a sub-score for Appraisal Methodology). Individual component scores and analysis can also be used independently to trigger automated business and routing decisions, accentuating the value of VeroSCORE's rich detail.

VeroSCORE reports identify which rules were triggered and what action(s) need to be taken to correct the identified problem(s). A “zero” score in a given category, or a report that fails to reach an established threshold, can be immediately returned to the service provider with a detailed description of the area(s) that require attention.



Completeness Rules

Is it Complete?

Examines each field in the appraisal report to confirm that required fields are populated and the data is presented in the correct format. An appraisal found to be insufficiently completed, or filled out with information in an unacceptable manner, carries inherent risk in its various information gaps and general lack of adherence to standard practices.

Veros' Completeness Rules electronically examine each field in the appraisal report to confirm that required fields are populated and the data is presented in the correct format. The rules instantly identify any field that is either not populated or contains data in an unacceptable format. This can happen with surprising frequency, as inconsistencies in details as small as "feet" versus "ft" can often occur and impact the appraisal's acceptance into standardized appraisal data platforms.

Reduces time by eliminating review of incomplete appraisals and flagging for return to appraiser for completion

Appraisal Report Form Types Accepted	
Fannie Mae 1004	Freddie Mac Form 70
Fannie Mae 1004C	Freddie Mac Form 70B
Fannie Mae 1025	Freddie Mac Form 72
Fannie Mae 1073	Freddie Mac Form 465
Fannie Mae 1075	Freddie Mac Form 466
Fannie Mae 2055	Freddie Mac Form 2055
Fannie Mae 2090	
Fannie Mae 2095	

Veros' Completeness Rules have been specifically designed for each form type. These rule sets have been constructed with the recognition that certain fields are required in every report (e.g. property address, effective date, value opinion), while the presence of data in other fields will be dependent upon the specific nature of the assignment type. For example, purchase transactions are processed differently from refinance transactions; when the transaction type is indicated as a refinance, the rules skip past elements that are only required for purchase transactions.

When the Completeness Rules find that a required field has either an incorrect format or data is missing, the appraisal report will lose a predetermined number of points. For every field that is populated in an incorrect format, the appraisal report will lose a predetermined number of points, and the errors will be identified in the returned report.



Compliance Rules

Is it Compliant?

Examines each appraisal report field-by-field for use of acceptable terminology and looks at the report relationally and conditionally, comparing fields against each other for consistency and accuracy. This section of the report is concerned with risk related to overall adherence to the standards of numerous entities with a stake in appraisal quality including, but not limited to Fannie Mae, Freddie Mac, HUD/FHA, VA, the Appraisal Foundation, the Appraisal Subcommittee (ASC) and mortgage insurers.

Veros' Compliance Rules have been developed from the appraisal guidelines issued in legislation and by regulatory agencies, Fannie Mae, Freddie Mac, HUD/FHA, VA, mortgage insurers, the Appraisal Foundation and others. These rules are continually updated to reflect the most current terms and requirements.

Increases submission acceptance rates by verifying against key compliance regulations

The Compliance Rule Set examines each appraisal report field-by-field for use of unacceptable terminology (e.g. crime-ridden, poor neighborhood) and ensures the correct terminology is present in certain identified fields (e.g. the neighborhood field: trend of property values must contain one of the following: increasing, stable, or declining).

Examining the appraisal report, specific fields are compared with each other for consistency and accuracy. For example, if the subject is a manufactured home, the Compliance Rules check the year it was built to ensure the home was constructed after June 15, 1976. In this case, the rules also examine the report for the presence of required terms relating to the manufacture date of the home.

The appraiser's name and license number are checked against the Appraisal Subcommittee (ASC) database to identify possible licensing problems. This rule set also checks to ensure the appropriate license level for the assignment, and that the state of issue matches the state in which the appraised property is located.

UCDP® & EAD Hard Stops & Warnings Strategic Advantages with VeroSCORE

- VeroSCORE captures and verifies against all known UCDP and EAD hard stops and messages
- Updates are always in sync with the latest 'Hard Stops' and 'Warnings' from the GSEs and FHA
- Ability to "Preview" Hard Stops & Warnings pre-submission
- Veros is the technology provider that built and maintains both the Uniform Collateral Data Portal® (UCDP) and FHA's Electronic Appraisal Delivery (EAD) portal
- Veros has the most comprehensive understanding of both the UCDP and EAD's stringent rules



COMPLIANCE SCORE: SUB-SECTIONS & EXAMPLES

Compliance Score: 0

Form Section	Form Field	Comp #	Rule Description
Appraiser's Certification: Supervisor	Supervisory Appraisers Information		Missing supervisory appraiser information
Sales Comparison	Three Comparable Minimum		Less than three comps were provided
Site	Zoning Description		Invalid zoning description
Neighborhood	One-Unit Housing Age Range		Predominant age is not within range

The Compliance Score incorporates sub-sections evidencing any identified issues with Uniform Appraisal Dataset (UAD) compliance and will display UAD Warning Message and UAD Hard Stop Errors. The UAD is a component of the Uniform Mortgage Data Program® (UMDP®), jointly established by Fannie Mae and Freddie Mac under the direction of the Federal Housing Finance Agency (FHFA), to provide common requirements for appraisal and loan delivery data.

EXAMPLE HARD STOPS & WARNING RESPONSES

HARD STOPS					
Error Code	Error Description			Anticipated Override Decision	
9003	PDF not included in XML submission			Non Overridable	
402	UAD compliance check failure (warnings only)			Auto Overridable	

UAD MESSAGES					
Code	Form Section	Form Field	Data Point	Property Affected	Action Message
5058	Site	Utilities: Gas	Site Utility Non/Public Indicator & Description	Subject	For Gas, at least one of "Public" or "Other" must be selected, or "None" must be present in the description field. If "Other" is selected, a description must be provided.
5200	Sales Comparison	Site	Sale Price Adjustment Description	Sales Comp 1	A numeric value followed by the appropriate label of either "sf" or "ac" must be present. If the property is less than 1.00 acre, the value must be in square feet (sf); if it is 1.00 acres or greater, it must be represented in acres (ac).



Credibility Rules

Is it Credible?

Identifies critical connections within the appraisal report and matches related data fields for consistency against internal and external data sources. This dimension is focused on risks related to how the appraiser completed the report. Any detected abnormalities in the data will be supported with more granular detail in the resulting messages, and the level of credibility risk will be classified as low, moderate, high or severe.

Each appraisal can be examined for potential risk *within*, as well as *outside* of the appraisal. Veros' Credibility Rules examine the appropriateness and quality of the data within each field and throughout the report. Credibility scoring and analysis identifies critical connections within the appraisal report and matches related data fields for consistency. The data in the report is also measured against external data sources to evaluate the report from an objective, data-centric perspective.

Reduces exposure to future issues by advising lender of potential risks within the collateral that may impact loan approval

Examples of external checks or validations include:

- Distance of comparables from the subject property;
- Dates of comparable sales to that reported and to the date of subject valuation;
- Percentage differences and calculations between comparable property characteristics and subject property characteristics.

Risk is measured both in terms of property risk (i.e. is there inherent risk in this specific property) and in terms of market risk (i.e. how does this property relate to its market).

Veros' Credibility Rules also include examination of the appraisal against Veros' database, comparing the appraisal report to other market data for the same neighborhood. Veros' ability to access current and historic data for the same neighborhood enables a comparison of each report across a series of data points for quick identification of properties and appraisals that are clearly outside normal ranges.

Credibility incorporates sub-section scores in the areas of: Appraisal Methodology, Data Integrity, Valuation Risk and Comparables Risk. Each of these sections provide insight on essential components of the valuation process that support or trigger concerns on methods employed, comparables used, etc. The entire Credibility section is supported with a list and map of area sales and will identify where the appraiser utilized any of these VeroSCORE-selected transactions to support his/her value conclusion.



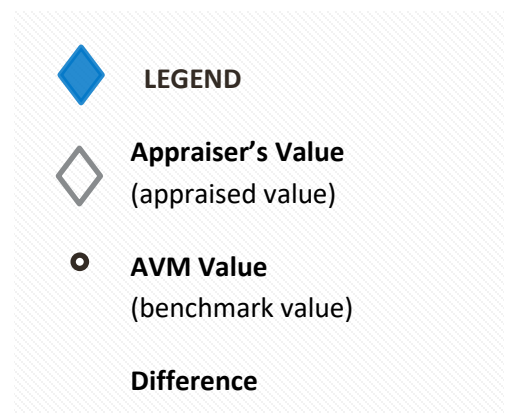
KEY SUB-SCORE: VALUATION RISK

The Valuation Risk Score leverages additional valuation and risk scoring technology proprietary to Veros to assist users in determining whether or not there are potential risks associated with the appraiser's estimate. This score leverages Veros' extensive expertise in automated valuation model (AVM) technology and the company's superior track record for accuracy. Our expertise in creating accurate value estimates is used to help VeroSCORE clients identify possible over-valuation risk.

Additionally, since the VeroVALUE estimate itself is not published, there is less concern for the user to have to furnish this document for Reg B (borrower disclosure) compliance.

The Valuation Risk Score is designed to measure the degree to which the appraised value differs from an objective, modeled value. Where sufficient data is available, these models have been proven to provide reliable indications of the probability that a property is correctly valued, over-valued or under-valued.

- » The Valuation Risk Score is measured on a numerical scale from 1000 to 0.
- » The product assumes a "perfect" Valuation Risk Score of 1000.



Probability of **LOW RISK** associated with small valuation differences



Probability of **HIGH RISK** associated with larger valuation differences



Complexity Score

Is it Complex?

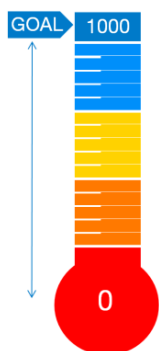
Assesses the degree of difficulty in determining the value of the subject property and the property's overall conformity to the neighborhood. This area of the report carries an important distinction from the other three Cs in that a low score is not necessarily indicative of an unreliable valuation. As this dimension is concerned with how difficult the property was to value, it is important to keep in mind that a challenging property can still have an expertly completed appraisal. With that in mind, some appraisal reviewers may choose to take a deeper look at highly specialized properties, or to adjust their risk tolerance levels as they relate to a complex assignment.

Appraisals can be complex. Degrees of difficulty in determining value from one property to the next can vary tremendously and understanding the factors that create those difficulties requires the data, analysis and comprehension that VeroSCORE delivers with its unique Complexity Score. This feature brings clarity to a nuance that lenders cannot afford to miss when evaluating collateral that secures hundreds of thousands of dollars at risk.

Increases lender confidence level in lending decisions and reduces review times related to external data mining.

A higher number reflects reduced complexity, indicating that the subject property involves fewer inconsistencies with the neighborhood. A lower Complexity Score means there may be unusual property characteristics, market conditions, transaction elements, or a combination of these issues that can make arriving at a supported value more difficult to achieve.

A challenging property can still have an expertly completed appraisal.



As a subset of the Complexity Score, VeroSCORE includes its Conformity Score, which looks at the subject property's conformity to its neighbors against multiple elements, including age, gross living area and room count. Conformity sub-scores range higher if the property is similar to neighborhood norms and lower if it tends to differ substantially from nearby homes, indicating a lack of homogeneity that can subtly, but significantly, affect values.

The Complexity Score is supported by a list of nearby properties regardless of any recent transaction activity. This section is presented in a table and map view for ready reference on property characteristics that affect conformity and the appraisal's degree of difficulty. This is a most revealing feature that sheds light on neighborhood norms routinely lost when relying solely on a limited set of comparable sales in an area to determine value.



COMPLEXITY MESSAGE SCALE

As VeroSCORE Complexity ratings decrease, the following messages will be presented (in order of rank):

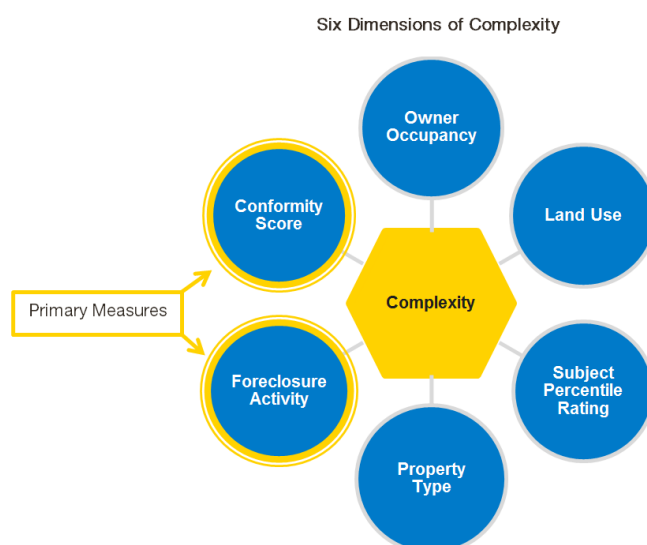
Complexity Rating Message	Complexity Score Range
Non-Complex	1000 – 750
Minimally Complex	749 – 600
Moderately Complex	599 – 500
Multiple Complexity Issues	499 – 300
Highly Complex	299 – 0

COMPLEXITY CONFIDENCE

Confidence in the Complexity Score is measured by how many of the six (6) dimensions of complexity are returned and places greater emphasis upon the primary measures: foreclosure activity and conformity score.

When is a Complexity Score “not available”?

When less than four (4) of the six (6) dimensions of Complexity are able to return a result, VeroSCORE determines its confidence too low to render a measure of complexity. This can occur if there is insufficient supporting data related to the subject and/or immediate market area.





Data & Supporting Analytic Services

In addition to the evaluation of the data contained within the appraisal report's XML file, VeroSCORE leverages Veros' extensive resources related to data, predictive modeling and risk analysis. VeroSCORE users have the benefit of the automatic analysis related to each appraisal report being validated against the public and private data sources Veros acquires and maintains with best-in-class quality control measures. Additionally, this same reliable database is utilized in Veros' proprietary analytics which provide valuable insights on the expected appraisal risk.





Report Summary & Details

- Summary report gives high-level intel (key scores and routing decisions)
- Details supporting data (field specific messages, maps, comparable lists)
- Report length varies with detail detected by VeroSCORE

Overall Risk Score

Considers external data in addition to potential risks within the report

Report Summary

Appraisal Risk Score

Looks at elements within the confines of the report, including the **Four Cs of Appraisal Risk**

Key Findings

Displays more granular details on what deficiencies affected the Score Details (if applicable)

Appraisal Details

Summarizes key elements from the Appraisal for the user, including indications of missing information

Appraiser Verification

Checks the status of the Appraiser's license in both ASC and HUD's systems, as of the date of the Appraised Value. In addition, any Public Notices in ASC's system will be displayed.

Four Cs of Appraisal Risk

Provides detailed analysis: UCDP, EAD and UAD messages, hard stops, data integrity, credibility, methodology, and risk scores. Discrepancies with external sources are identified along with the severity.

Comparables Risk Score & Map

Looks at Valuation Risk Scores, Area Sales and Nearby Property Information, including ranked list of comparable properties with details and a Complexity Score that calculates the degree of assignment difficulty.

REPORT DETAILS

COMPLETENESS SCORE: 1000

The Completeness section examines each field in the appraisal report to confirm that required fields are populated and the data is presented in the correct format.

Form Section	Form Field	Comp #	Rules Description



VeroSCORE Stands Alone

VeroSCORE's Risk Rules are not meant to be a substitution for manual review by a skilled appraiser or underwriter; but they are the most thoughtful and comprehensive set of automated appraisal rules in today's compliance-conscious market.

VeroSCORE is a powerful tool for identifying and mitigating collateral risk and improving overall productivity. Scores can be used to make automated initial accept or reject decisions, as well as more advanced and appropriate routing judgments to ensure loans enter the most appropriate funding stream – and are properly and proactively managed to reduce repurchase risk. Application of Veros' appraisal-scoring technology will result in immediate cost savings, more objective analysis, and faster processing when compared to traditional review procedures alone.

As a market leader in the field of property analytics and predictive technologies, Veros is uniquely able to apply advanced analytic tools to the analysis of each property for the most detailed and comprehensive assessment of property and market risk available anywhere.

For additional information on VeroSCORE criteria and application of scoring methodology.

Contact your sales representative today.



Corporate Headquarters

2333 N. Broadway, Suite. 350
Santa Ana, CA 92706
1.866.458.3767
Communications@veros.com

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2333 N. Broadway, Suite. 350
Santa Ana, CA 92706

866.458.3767 | Communications@veros.com

www.veros.com

