

PLATINUMdata Premier AVM Products

ACA® – The AVM offers lenders a concise one-page summary of a property's current estimated value, complete with five recent comparable sales, neighborhood value data, homeowner verification, property description and sales information and tends to perform well throughout the East Coast. The report also includes a confidence factor, A, B, C & X, A being the best and X= no score, which indicates the degree of confidence that is placed on the value estimate. The above information is derived from a comprehensive database of assessor property data and county deed records.

CASA® - This AVM calculates property value estimates in seconds using the most up-to-date data available. This approach enhances the accuracy, hit rate and safety of CASA® values estimates for lenders. CASA® measures home-specific price dynamics by combining several valuation methods, whenever possible, including characteristics analysis, indexing, non-linear regression techniques, home price forecasting and unpublished innovations by the Case-Shiller-Weiss research team. CASA® Collateral Scores are measures of the expected accuracy of each CASA® value. CASA® Collateral Score choices include Safety Scores and Confidence Grades. CASA® offers nationwide coverage and tends to perform well throughout the East coast.

Safety Score: This score is a statistically accurate measure of the probability that CASA's® estimated value for a subject property does not exceed +10% of the "true" value of the home. For example, a Safety Score of 85 means that there is an 85% probability that the CASA® value estimate delivered does not exceed the actual value by more than 10%.

CASA® Confidence Grades: CASA® Confidence Grades are indicators of the inherent degree of difficulty in estimating the value of the subject property. Standard delivery configurations consist of properties graded "A", "B", "C", "D" and "E", with each CASA® Confidence Grade corresponding to a predicted value range:

Grade	Predicted Value Range*
A	Within 6%
B	6% to 8%
C	8% to 10%
D	10% to 14%
E	14% to 20%

*Predicted median absolute deviation of a CASA® value estimate from the sale price

CMV – Formerly known as ValueWizard, this automated valuation model provides fast, reliable residential property valuations nationwide including 500 counties and tends to perform well in the Southeast region. The model uses geo-statistical formulas, analytics and advanced algorithms combined with multiple data sources to arrive at an estimated market value for the property. The CMV report includes an estimated market value of the subject property, high and low values, a color map that graphically identifies and visually confirms the location of the subject property, comparables, key factors that impact home value, census information and a confidence score.

Range: 0-100%; Higher = more confident. The Collateral Market Value (CMV) confidence measures how closely the model's valuation process reflects the process utilized by an independent appraiser. The confidence score has been predictive of the suitability for use of the valuations.

Factors such as the proximity of sales comparables to the subject property, the similarity of the attributes of sales comparables to those of the subject, the currency of the sales dates of sales comparables, the number of sales comparables within a defined geographic area, etc. are weighted and utilized to determine the confidence factor.

HPA - Home Price Analyzer is a system that provides a comprehensive statistical home valuation tool nationwide. Home Price Analyzer provides instant access to current values, recent sales trends, distress values, confidence scores, zip code and county index charts, property sale information, lien information, and geographic area rankings by appreciation.

Range: 0-100; Higher = more confident. For each HPA valuation a confidence score is provided that indicates the probability that the estimate of value is within +/- 10% of the actual value. The higher the score, the more reliable the estimate. A score of 90 means that 90 out of 100 observations from the same price tier and geographic area would be expected to have an error rate of less than 10%.

HVE® - HVE® utilizes results from both repeat sales and hedonic model logic to arrive at a current estimate of market value and then deliver the "best" estimate. HVE® was built from a combination of data sources including Freddie Mac's national repository of real property information and property data obtained from public record. It provides coverage for 2,400 counties in all 50 states, including Washington D.C and is strong throughout mid-west and provides recent sales information.

Range: L, M, H; H = more confident. Forecast Standard Deviation (FSD) represents the probability that the AVM value falls within a statistical range of the actual market value, measured against a sales price. Example: If the FSD for an HVE® estimate is 10%, there is a 68% (one standard deviation) probability that the actual market value will fall between $\pm 10\%$ of the HVE® value estimate. Therefore, the lower the FSD the smaller the error in predicting actual market value.

HVE's® confidence scores are derived from the FSD and are summarized within High, Medium and Low value ranges. The FSD breakdown of HVE's® current confidence scores are:

- **High = $\leq .13$ FSD** (approximately 70% of HVE estimates)
 - **Medium = $> .13$ and $\leq .20$ FSD** (approximately 25% of HVE estimates)
 - **Low = $> .20$ FSD** (approximately 5% of HVE estimates)
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i-Val™- The i-Val™ Report (a.k.a. Instant Value) is a blended (index and hedonic) automated valuation model. It takes advantage of the large database through a rules-based, expert systems model to instantly arrive at a predicted market value for a particular residential property. i-Val™, utilize up to four different valuation methods and provides subject property information and details on five comparable sales.

iVal's™ confidence score associated with each property's value predicted by our AVMs is a numeric measure on a scale from 1 to 100. This number represents the probability that the predicted value is within a ten percent error range. For example, if the predicted property value is \$225,000 and associated confidence score is 93, this means that there is a 93% probability that the property value is from \$204,546 to \$247,500. iVal's™ confidence scores have been tested for correlation with accuracy and it can be summarize that scores within 90-100 range have median error of 5%, scores within 70-89 – median error of 10%, and scores <70 – median error of 15%.

PASS - The Property Analytical and Statistical Summation (PASS) is an automated valuation model (AVM) for originating and servicing loans, controlling quality, managing risk and reviewing portfolios faster and more effectively. As a leading hedonic model, PASS estimates current market values for single-family homes and condominiums nationwide using industry-recognized calculations, followed by a proprietary formula for reconciliation. PASS is featured as an expanded valuation model with richer underlying collateral data, and next generation technology. The PASS report contains 5-8 comparables and has nationwide coverage and is strong in the west coast.

Range: 40-100; Higher = more confident. The PASS Confidence Score is a measure, unique to each valuation result, of the extent to which sales data supports the property valuation analysis process. The confidence score has a range of zero to 100. When the Confidence Score is high, the quantity of recent sales data is good, the quality of the property data in the subject's neighborhood is good, and the subject property is well represented by the comparable sales.

Lower Confidence Scores in PASS valuation reports indicate that a more diverse range of sales prices and/or property characteristics exist near the subject property. With lower confidence scores, there is some increase in uncertainty of the value estimate provided because of low sales density and limited similarity of the subject property and the comparable sales.

A valuation may have a confidence score of 50 and still be correct in its estimate of value. Low confidence usually means the subject was in a non-conforming area or exhibited physical characteristics that were not found in many of the neighborhood sales. Low confidence scores may be found in areas where property sales data is sparse and the sales exhibit a somewhat larger range of values.

The confidence factor actually serves as an indicator or ranking to tell the user how well the property data set supported the valuation analysis.

What PASS Confidence Scores Mean:

- **90 – 100:** Reports with a score in this range conform close to neighborhood norms and a good deal of subject property characteristic data was available to the analysis.
 - **70 – 89:** Reports in this range are “above average” in terms of data content and property conformity to relative norms
 - **60 – 69:** Reports with this score are “average” in terms of data content and property conformity to relative norms
 - **59 – or less:** Reference to additional supporting information on the collateral may be in order.
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PowerBASE 6.0 – PB 6 is an intelligent automated valuation model (AVM). It combines the power of two proprietary engines (a hedonic engine and an index engine) to simultaneously calculate a more accurate and reliable property valuation than any single-source process. With coverage nationwide and with data from more than 2,400 jurisdictions, PowerBASE 6.0 encompasses 97 percent of the U.S. population and 96 percent of U.S. single family residential properties and has detailed property information and up to 7 comparables. In addition, PB 6 fuses the statistical information from multiple data sources to offer users a more accurate and reliable property value.

Range: 0-100; Higher = more confident. PowerBase 6.0 is a leveraged AVM using the databases of 2 technologies, PASS and Home Price Analyzer, also known as HPA. As such, the confidence score for PowerBASE 6.0 is derived through regression analysis of the relationships of several variables to the observed error. These variables include:

- The recentness of the comparable properties.
- The degree of consistency of the assessed values of comparables and subject.
- The degree of consistency of the indexed current values of the comparables and subject.
- The degree of consistency of the indexed current values to the median price as well as, price per square foot.
- Average distance of the comparables from the subject.

These relationships are quantified with polynomials indicating the probability that a given valuation is within 10% +/- of the actual value. This methodology is then extended to include the independent score computations of both technologies and the expanded comparables generated from the 2 technologies. The combined result provides more valuations with higher scores.

PSARez - PSARez, processes up-to-the-minute information from national and regional data banks to obtain the most recent sales prices of comparable homes in the neighborhood. PSARez, offer coverage nationwide and performs well in California, Tennessee and Florida and has property information, up to details on up to 30 comparables, Complete Property Data (bedrooms, bath, square footage, etc.), Property Tax Information, Comparison of Property with Neighborhood Statistics. Reliable predictors of value such as square footage, age, number of bedrooms, number of baths and various other features are of primary consideration in the above model. This data is then analyzed using two sophisticated independent valuation techniques, a Market Comparable and a Multiple Regression analysis, to provide a predicted market value for the subject property. PSARez then averages the Market Comparables Estimated Market Value and the Regression Estimated Market Value, thus determining the Final Estimated Market Value for the subject property.

****(+/- %) Lower = More Confident.**

SiteXValue - Created by FNIS Data Services, SiteXValue Reports are based on information from the FNIS/LexisNexis database and offers nationwide coverage and reports show 3 comparables and market activity. The database is compiled from tax assessor, deed and mortgage data from over 1,200 counties, representing more than 80 percent of the nation's property ownership records. FNIS continues to expand, maintain, refine and market the FNIS/LexisNexis real estate database, adding more than 575,000 new property records each month. SiteXValue incorporates a dynamic multi-discipline hybrid that uses five different models in its calculations. It also features built-in review algorithms to help assure accurate estimates.

Range: Low, Medium, High; High = More confident. Since any analysis of the data and systematic variation can only give a rough estimate of confidence, SiteXValue uses a three tier rating system: **High, Medium, and Low**. This simplifies the process by not giving an arbitrary numerical score.

The calculation of the Confidence Rating is achieved by analyzing the results from as many as 7 different models. If the multiple models are in close accord as to the “true value”, there is a “High” confidence in the estimate generated; however, as the indication of a single value weakens the confidence rating drops to “Medium”. Lastly, where there is no strong indication of a consensus value, the confidence rating is “Low”. This is not to say that a “Medium” or “Low” rated value is further from the “True” value, but that as a group there is more variation in the estimates around the “True” value than for a “High” rated estimates. The lower Confidence Ratings indicate a more diverse range of sale prices, a larger variation in property characteristics, or a lower quality of data for the subject property’s neighborhood. SiteXValue seeks to identify and categorize the quality of the valuation estimate given the data available.

ValuePoint4 - ValuePoint4 uses multiple valuation methodologies simultaneously. ValuePoint4 weighs each valuation and selects the best valuation approach and conclusion based upon the nature of the subject property and immediate data environment. The types of valuation methods contained in ValuePoint4 include: hedonic, repeat sales indexes, and a patented neural net technology. The proprietary database used in ValuePoint4 is updated daily with site verified information from appraisals, data obtained from MLS systems, and historical appraised values compiled from internal and external sources. ValuePoint4’s report contains 10 considered and used comparables with property and vicinity information and has data from 39 state and 644 counties.

Range “Suitability”: 0-100; Higher = More confident. Simply stated, the ValuePoint4 valuation score represents the probability that the estimated value is no more than 10% greater than the true value of the property. If a particular subject property valuation has a score of 80, this represents, that there is an 80% probability that the estimated value is no more than 10% greater than the value of the subject property.

ValuePoint4 does not provide a valuation with a confidence score less than 66. The upper limit of valuation scores is 93.

ValueFinderSM - ValueFinderSM is an advanced valuation engine designed to estimate market values of single unit residences within moments -- with the ability to automatically detect fraudulent and high-risk loan applications. Developed according to lender-based business rules and through extensive product research, ValueFinderSM combines artificial intelligence, robust data files and powerful user control to serve as one of the premier AVM products available in today’s marketplace.

****Range “Uncertainty” Range 0-29; Lower = More confident:** ValueFinderSM generally returns two data points that support the Estimated Value: **Uncertainty** and a **Confidence Score**.

Uncertainty is ValueFindersSM base accuracy measurement. It is an approximation of the expected difference between the Estimated Value and the market value. For example, the Estimated Value of \$341,000 with an Uncertainty of 8% infers that the market value is likely to be \$341,000, +/-8%, or within the range of \$314,000 to \$368,000. In statistical terms, the Uncertainty

is an estimate of the *standard deviation* of the Estimated Value. Uncertainty is two-sided around the Estimated Value and useful for bracketing the range of value for a subject property, and/or general risk analysis.

Confidence Score is the probability that the market value is at least 90% of the ValueFinderSM value. For example, the Estimated Value of \$341,000 with a Score of 87 infers there is an 87% probability that the market value of the property is at least \$307,000. The Confidence Score is useful for determining the risk that the Estimated Value overvalues the subject property.

ValueSure™ – This AVM is the definition of state-of-the-art automated valuations, giving you the power to make fully informed decisions every time. Powered by Fidelity's own industry-leading property database, ValueSure™ utilizes multiple, statistically proven, analytical models to provide exceptionally accurate valuations for over 85% of residential properties nationwide, safely and securely. ValueSure™ generates a value estimate, comparable sales listing, and location map, along with a confidence factor that reflects the extent of available data and accuracy of the value estimate. The report contains up to 15 comparable neighborhood sales and property characteristics, comparable location map indicating significant landmarks, High and low property value range and currently has data on properties in 1,100 counties nationwide.

Range: Alpha (H, M, L) and Numeric (50-100); H = higher and 100 is confident. The Confidence Scores presented in ValueSure™ are based upon a number of factors which include: (1) the quantity and quality of the available sales comparable data which is used in determining the predicted value of the subject property, (2) how typical or atypical the subject property is relative to the surrounding neighborhood and available sales comparables; and (3) the similarity of the predicted values of the various (three) component AVM models. In cases where the predicted values are close to one another, there are more accurate estimates of a property's market value (and lower deviations from benchmark values) than when they are more widely dispersed. These factors allow for the statistical calculation of a so-called "Confidence Band" for the predicted value of the subject property which is used to determine the range of the "High" and "Low" values which are reported along with the predicted value itself.

The deviations of the "High" and "Low" values from the predicted value form the basis for the ValueSure™ Confidence Score and are depicted in two (2) formats, alpha (H, M, or L) and numeric (50 – 100). For example, when the sales comparables used in the valuation are numerous and similar to the subject property, there is generally a tight range of "High" and "Low" values (e.g. 10%) around the predicted price which will translate to a High (or 90) Confidence Score. Conversely, when there are not a good number of available comparable sales or the properties which comprise the comparables are quite different from the subject property, there is generally a wide range of "High" and "Low" values (e.g. 20%) around the predicted price which will translate to a Medium (80). In summary, the score is a direct measure of the expected variance of the ValueSure™ estimate to the actual or benchmark value.

This confidence score concept is analogous to the traditional appraisal methodology of looking at the market, replacement, and income approach values of a property. There is typically more confidence in the resulting value estimate when all three approaches point to a similar value.

VeroVALUE - VeroVALUE is truly a state-of-the-art automated valuation model (AVM). VeroVALUE combines and leverages the strengths of multiple predictive technologies with proven real estate fundamentals to provide the most accurate residential property valuations available. This approach produces extremely accurate values with a confidence score that is actually correlated to the accuracy of the value. The same advanced techniques have been

tested and proven on mission-critical prediction problems such as orbital spacecraft re-entry and aircraft engine manufacturing. The VeroVALUE report contains up to 10 comparables with property information and carries nationwide coverage.

Range VC Average Variance (see below). VeroValue delivers numeric-based confidence scores. Its confidence scoring system is broken down into major groups of ten that generally correspond to a 5% variance per group, and thus, can be translated as follows:

VCS Average Variance

90-100: +/- 5% variance

89-89: +/- 10% variance

70-79: +/- 15% variance

60-69: +/- 20% variance

This is not to say that each individual property is guaranteed to fall within the specified variance corresponding to the stated confidence score. For example, any given subject property valuation with a confidence score of 95 may turn out to have a 2% variance or 10% variance. Alternatively, a property with a confidence score of 75 may be right on the mark. As with any automated decision applications that is reliant, in part, on third-party data, there will always be individual outliers. However, across normal usage, we would customarily see the variance for all properties returned with a confidence score of 90-100 to fall within 5% of the sales price and so on as set forth above (calculated using median absolute error).

In actual usage and testing, the median absolute error for our values with a confidence score of 90-100 has ranged from 3-7.5% across different samples of values within that confidence group (e.g. for 2000 properties returned with a confidence score between 90-100, our median absolute error was 5%). From 80-89, we have seen median absolute errors of 7-12% across different samples of values within that range. This tight correlation allows a lender to accurately define levels of service, either independently or in combination with other criteria such as credit score, LTV, or loan amount to name a few.

VeroVALUE will generally return over 80% of all returned values with a confidence score of 80 and above (i.e. 80-100) and over 65% of all returned values with a confidence score of 90 and above (i.e. 90-100).

