



About Automated Valuation Models (AVMs)

An AVM is a computer-driven mathematical formula that uses basic property characteristics, local market information, and price trends to arrive at an estimated value or value range. Lenders use AVMs because they offer a fast, affordable, statistically derived estimate of a property's value.

Each AVM uses its own mathematical formula and may draw property data from different databases. Accuracy and reliability vary, depending on the quality of the underlying logic, data, and technology. CoreLogic offers a number of AVMs developed for optimal performance aligned with specific business use cases.

While each AVM is distinct, all share certain elements:

- ▶ AVMs are computer-driven models that rely on data drawn from property databases. The better the model and data used, the more accurate the value is likely to be. If the mathematical formula or property information is incorrect, the AVM will produce an inaccurate value.
- ▶ AVMs assume all properties are in similar average condition. They cannot adjust values down for disrepair or damage. Similarly, they cannot adjust values up for good upkeep or cosmetic upgrades, such as new carpet or paint. The AVM has no knowledge of the condition of a particular property.
- ▶ AVMs relate only to the property and have nothing to do with buyers or sellers. They do not indicate whether a person will be a good or bad credit risk—they only process information about the property, local market, and price trends to arrive at a value.

Beyond those common characteristics, AVMs can be quite different and may return widely varied values for the same property. For that reason, each lender has policies on how it will use AVMs and which AVMs it will use. That's why you should talk to your lender if you have questions about how (or if) an AVM was used in processing your loan.

AVMs Versus Appraisals

It's important to note that AVMs are not the same as appraisals. When completing an appraisal a licensed or certified appraiser conducts a property visit. From the site visit, the appraiser writes a report that typically includes exterior and interior inspection details and a more in-depth evaluation of the property, neighborhood, and surrounding market. While a full appraisal returns a value specific to that property and its amenities, appraisals cost several hundred dollars and the borrower generally pays that cost. Where they are appropriate, high-quality AVMs offer a fast, affordable alternative that is, on the whole, accurate for the general market value.



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What's In a CoreLogic AVM?

AVMs are calculated using many different types of property and local market data. No one piece of information or factor alone will determine a property's value. Instead, CoreLogic AVMs use a broad range of data elements, including:

- ▶ Property identifying information including address and/or assessor's parcel number and owner name
- ▶ Prior sales of the property
- ▶ Living area/square footage
- ▶ Year built
- ▶ Number of bedrooms
- ▶ Number of bathrooms
- ▶ Lot size
- ▶ Public record information collected from state and county records, such as deed transfers
- ▶ Recent sales and listings of similar properties in the local market area
- ▶ Area pricing trends

What's Not In a CoreLogic AVM?

CoreLogic AVMs consider a wide range of information about the property and surrounding market. However, they do not consider:

- ▶ Actual property condition, such as whether the property has been well-kept or is in need of repairs
- ▶ Income or rental agreements associated with the property
- ▶ Recent remodeling and improvements made to the property, unless the changes are reflected in the public record or other data sources used by the AVM
- ▶ Personal property within a dwelling, such as furniture and appliances
- ▶ Landscape and hardscape features, unless the features are included in the public record. In-ground swimming pools are part of the property record and are considered in valuations
- ▶ Title defects, such as missing or unclear transfer or ownership records
- ▶ Any information on sellers, borrowers, or other

Information Accuracy

AVMs do not include a physical or visual property inspection by a licensed or certified appraiser. Therefore, major modifications or upgrades made to a property not included in the public record data may not be reflected in the AVM value. Additionally, if the address submitted to the AVM is not correct, the result will not be accurate. Be sure to check the address on the AVM report to verify that it matches the property address and contact your lender if it does not.

At CoreLogic, we take great pride in having the most current, complete, and accurate U.S. property and home ownership data available and we draw on that data to generate our AVM results. In spite of our best efforts, errors do occasionally occur. In most cases it is determined that the error was made at the data source, the county recorder's office. We cannot correct or request correction to a county's public records. The property owner must file a claim with the county to have the public record changed.

AVM Frequently Asked Questions

Q What is an AVM?

A Automated valuation models (AVMs) are statistically based computer programs that use real estate information such as comparable sales, property characteristics, and price trends to provide a current estimate of market value for a specific property. An AVM report provides a written summary of the results.

Q Why do lenders use AVMs?

A AVMs provide fast and easy access to property valuations, benefitting both lenders and consumers by reducing the costs and time delays typically associated with traditional property appraisals. AVMs also provide consistency and objectivity in the property valuation process. While banking institutions cannot substitute AVMs for appraisals in all real estate-related financial transactions, many lenders utilize AVMs in the loan process. How and when lenders use AVMs is specific to each financial institution.

Q How do AVMs estimate the value of a property?

A At CoreLogic, economists, scientists, and statisticians develop the mathematical formulas our AVMs employ to estimate market values. When developing AVMs, our analytical team researches how properties in various geographic areas are similar (in terms of living area, number of bedrooms and baths, and many other details) and examine the relationships between those property details and actual sale prices. These relationships form a pattern our analytical designers use to develop a statistical model to estimate a property's market value. AVM development requires an ongoing process of refinement. When an AVM produces a value estimate, CoreLogic feeds information on many local properties, as well as the subject property, into the AVM's formula, assigning different weights to information based on its influence in a given market over a specific period of time. Because property details and markets are always changing, new data is collected nightly and value estimates are regularly updated to capture new sales in a neighborhood. This ensures that CoreLogic AVMs estimate the value of a property based on the most recent data available in an area. However, data availability depends on the county recorder's office, so delays from days to months can occur between when the county recorder of deeds receives notification of a sales transaction and when that data is made publicly available.

Q Where does the information used in AVMs come from?

A For more than 40 years, CoreLogic has been collecting vast amounts of property data from many sources, which is used in the property value estimates. Most of the information comes from public record data collected from county clerks, assessors, treasurers, registers and recorders of deeds, and other government officials. And, just as an appraiser would, AVMs can sometimes access data about properties currently for sale, including the subject property, collected from a number of home-listing data suppliers. The data available may include property characteristics and current asking price, which may be incorporated into an AVM data source.

Q What information is contained in an AVM report?

A An AVM report provides a great deal of information related to the AVM's value estimate for a property, including:

- ▶ **Address:** Usually referred to as Property Address. The address used to request as the subject property for the AVM report.
- ▶ **Owner:** The property owner returned with the subject property, as stated in the public records or deed.
- ▶ **County:** County in which the property resides, as stated in the public records.
- ▶ **Land Use:** Codified description of the type of property structure
- ▶ **Location of Property on a Street Map View:** Approximate location of subject property based on a satellite map of property address and surrounding location.
- ▶ **Estimated Value:** Estimate of the property's market value at a specific point in time, based on the available data on the property and local market.
- ▶ **Estimated Value Range:** In addition to the estimated value, the AVM also calculates the most likely highest and lowest property value. A narrow range means we have more data to help compute the AVM value estimate and the value range. A broad range indicates we have less data or there is inconsistency in the data
- ▶ **Confidence Score:** An AVM's estimated values can be higher or lower than the actual market value due to limitations of the mathematical formula, data availability, and other factors. To reflect those variables, AVMs produce scores that tell you the AVM provider's confidence in the estimated values. Confidence scores for CoreLogic AVMs indicate the probable accuracy of the AVM result and estimated value range. Higher confidence scores indicate greater probable accuracy, while lower confidence scores indicate less probable accuracy. Different AVMs calculate confidence scores differently, so a score of 67 on one AVM report may mean something different than a 67 on another AVM report
- ▶ **Forecast Standard Deviation (FSD):** FSD represents the probability that a particular AVM estimate falls within a statistical range of actual market value for the specific property. The FSD is based on the consistency of the information available to the AVM at the time of estimation. The lower the FSD, the smaller the error in predicting actual market value and the higher the level of confidence in the value (i.e., a lower FSD means the AVM value can be expected to be closer to the actual market value). FSD calculations are a standard measure of accuracy and their calculation does not vary from AVM to AVM.
- ▶ **Comparable Sales:** AVMs select and use recently sold properties located near the subject property that have similar characteristics (e.g., square footage, number of bedrooms, etc.) to estimate a property's market value. In addition to

these key points, an AVM report may contain other relevant property characteristics and market information.

Q How are AVMs rated for accuracy, reliability and coverage?

A All AVMs rely on the accuracy, comprehensiveness, and timeliness of the data they use. Valuation accuracy will vary, depending on a wide range of factors. The most significant factor is the number of recent home sales in the area and how similar the property is to surrounding area properties. Generally, all AVMs tend to be less accurate in rural areas where sales are fewer. However, even in rural areas, AVMs will often provide accurate value estimates. AVMs are also less accurate when valuing properties that are unusual, much larger than average, or have particular distinctive features.

Q How does the amount of data affect AVM accuracy?

A The number of property sales in the local market area can affect how much the AVM provider knows about current property values in that market. Generally, the more property sales, data, and information available about properties in an area, the more accurate the AVM estimate is likely to be.

Q Why does the AVM value provided seem to be inaccurate?

A There are a number of reasons an AVM might contain an unexpected valuation, including:

- ▶ The AVM may have been run on an erroneous subject property address. Check the address listed on the AVM report to make sure it's correct.
- ▶ AVMs rely on public data, so inaccurate public record data generates incorrect AVM valuations. Additionally, major property renovations, modifications, or upgrades may not be included in the public records and, therefore, will be reflected inaccurately in the AVM value estimate.
- ▶ AVMs cannot determine the physical condition or relative marketability of a property.

AVMs tend to work best where there is an abundance of current data, properties in a given area are similar, and a property's condition and marketability are typical for the area. If the property's AVM value doesn't seem right, it may be that there is not enough current local data, the neighborhood contains dissimilar properties, or the property differs significantly from the neighborhood average.

