



# Automated Valuation Solutions

## VALUATION

### AVM Overview

CoreLogic® has been building property valuation and collateral risk management tools for more than 20 years, and holds a patent on Automated Valuation Model (AVM) methodology. This methodology is licensed to other AVM providers for use in their AVM products. We stay at the forefront of the market by continually refining the solutions we deliver, helping lenders, mortgage servicers, government agencies and investors understand property values and property-related risk.

CoreLogic AVMs consider all available market information when rendering a value, including up to 200 recent sales and many more property listings. In addition to the breadth of data considered, the speed, objectivity and lower cost of AVMs create efficiencies and improve risk management in origination, due diligence and portfolio risk management. AVM valuation accuracy is well established and continuously measured. CoreLogic AVMs consistently test as leading performers and, in the last year, 18 of the nation's 20 largest mortgage lenders relied on CoreLogic AVMs to meet property valuation needs.

When selecting an AVM, it is important to clearly define business goals, including the level and measurement of accuracy, consistency over time, and the coverage required. If looking to use an AVM in lieu of any other valuation tool for a loan funding decision, many lenders blend multiple AVMs using an AVM cascade approach to maximize accuracy and coverage. Lenders can then leverage OnSite, the new property condition report from CoreLogic, to validate the AVM's assumptions regarding property condition. For other valuation purposes, such as portfolio valuation or tracking valuation over time, using a single AVM brand yields superior property-level consistency. Some lenders use CoreLogic specialty AVMs for particular purposes including GeoAVM Distressed™ (tuned to REO disposition values) and Prospector™ (tuned to marketing applications).

### Distribution Channels

- ▶ RealQuest®
- ▶ Connect2Data®
- ▶ Batch

### A Word About Cascades

Because AVMs use data differently, each model will have particular strengths geographically, by type of property and circumstance. Blending AVMs into a cascade permits the lender to surgically manage the accuracy and coverage required. CoreLogic manages several options for cascade services.

### Glossary

- ▶ **Automated Valuation Model (AVM)** – a computerized system that analyzes data to provide an estimate of market value for a property at a given point in time. AVMs can also be used to provide a broader analysis of a real estate market based on the AVM-determined values of homes in a defined area, of a particular type, or in a specific price tier.
- ▶ **AVM Cascade** – A group of AVMs joined together and run in an ordered fashion to increase the number of hits (hit rate) and the accuracy of valuations returned.
- ▶ **Hit rate** – The number of hits successful returned on properties based on the model being able to locate the property in our records and find sufficient data to render an estimate of value. If the property cannot be found or if there is insufficient data to provide an estimate of value, the AVM is considered a “no hit” and will return an error message indicating why it failed to provide a value.
- ▶ **Multiple Transaction Flag** – The multiple transaction flag is an alert designed to tell you whether the property has changed ownership more than once in the past 24 months from the “as of” date.
- ▶ **Value as of Date** – Also known as “retro date” or “retrospective value”, the value as of date provides an estimate of value as of a date in the past. To calculate the value as of date, the AVM only considers data that posted on or before the “as of” date.

## CoreLogic AVM Brands

All of our models are a compilation of multiple valuation engines applied against our market-leading database of property and mortgage data. Each AVM weighs and reconciles various inputs to determine a value. Examples of the types of valuation methods that are used in various combinations in the CoreLogic models include: appraisal emulation, repeat sales indexes, regression analysis and various statistical methods for the value reconciliation. Each of our models are tested daily, and regularly tuned to ensure optimum performance.

We are frequently asked why we maintain multiple AVM models. The answer is that each client has a unique geographic footprint, desired application, and definition of risk. For example, one client may prefer a model with the lowest standard deviation of error, while another may prefer a model with median error close to zero. By maintaining models with different modeling and data approaches, we are able to offer clients more options for creating a solution that meets this unique definition of “optimal” performance aligned with specific business uses.

- ▶ **PASS®** – PASS was developed by the Solimar Company and launched in 1998. Solimar, after several intermediate steps, was acquired by what is now CoreLogic in 2004.
- ▶ **ValuePoint®4 (VP4)** – VP4 was originally constructed by CoreLogic in 2002.
- ▶ **Prospector™** – Prospector was developed by CoreLogic and launched in 2005.

## AVM Data

Our AVMs draw from the most current, complete and relevant data collection available. CoreLogic’s market-specific data covers 98 percent of all U.S. ZIP codes and 3,100 counties in all 50 states and the District of Columbia, representing 99 percent of the U.S. population, 97 percent of all properties (145 million), more than 50 million active mortgages, and 96 percent of loan-level, non-agency mortgage securities. In addition to the public record data, our models also have data detailing which properties are currently for sale, the characteristics of the property, and current asking price for the property. We have many suppliers of the home listing information, the identities of which are proprietary. We refresh our AVM databases daily, based on the most recent data available in public record data and other data sources.

## AVM Testing

### Comprehensive Blind Testing

All models are tested on a daily basis through an exhaustive, blind testing process known as our GeoAVM® testing process. We produce property values on nearly 100% of the domestic residential housing stock in our geographic coverage on a rolling basis. When we identify a purchase transaction, we pull the most recent “blind” valuation we produced on that property (typically within the last 3–5 days) and compute the accuracy of the AVM. In this way, we are able to produce immediate feedback on the accuracy of our models. Any deviations from performance standards are immediately addressed. Please see our white paper on Innovation in AVM Testing for additional information.

### Independent National Testing

AVM quality is frequently and rigorously tested by lenders and independent testing agencies. At CoreLogic, we are eager to demonstrate the power of our models by participating in these tests. Periodically an independent testing firm provides several AVM vendors with a sample of property addresses. Each vendor runs its AVM for each property and returns the results to the testing firm, along with data on the last sale date and price used by the AVM. The testing firm compares accuracy and coverage of each model, and provides rank-ordered, anonymous results back to each firm so they can see how their AVMs ranked against competing models, without knowing the identity of the other vendors.

**FOR MORE INFORMATION PLEASE CALL 866-774-3282**

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