

Innovation in AVM Testing:

When what you see is really what you get

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There have been many books and articles written on AVM testing as our industry has evolved. Two of the most vexing problems addressed are data sufficiency (are there enough test values to draw meaningful conclusions) and data lag (have sales prices already been recorded by the AVM.) These are issues common to all AVM users and therefore many workarounds have been attempted – each with their inherent challenges.

TESTING APPROACH	CHALLENGES
Aggregate data over multiple periods to achieve a larger test sample	Depending on the size of the institution, data may need to be aggregated over a long period of time before a robust sample can be created. In times of rapid value changes, the institution may not want to rely on dated performance.
Comparing AVM results against non-sales data (such as appraisals on second mortgages) to create a larger test file	With no market transaction as a benchmark, it is only possible to measure the deviation between the two values, not the accuracy of either value.
Treat as a “no hit” any AVM result where the vendor says they know the sales transaction information	This approach results in smaller sample size. Users must understand each vendor’s unique process for identifying last known sale data. Records are most often eliminated in data-rich areas where AVMs perform well. Although having “fresh” data is a beneficial trait in an AVM, those models with quick refresh cycles may also show more instances of knowing the sales value at the time the AVM is tested.

To be clear, I am not suggesting that the workarounds necessarily lead to a riskier AVM approach, just that the impact of using an imperfect method must be understood. It has been reported publicly that AVMs sourced from well-constructed cascades have been successfully used in lieu of appraisals, even during the recent housing market environment. The challenge for AVM users is how to incorporate AVMs and other components into a cascade where performance meets expectations.

CoreLogic’s Vector™ Testing

CoreLogic has created a new patent-pending AVM testing approach that rectifies the issues identified above. We are able to use our industry-leading property data to fuel a robust, blind, and continuous testing approach for AVMs. Here’s how it works:

1. We value the entire market. Approximately 90 million residential properties in the US are valued, on a rolling basis, by each of our AVMs (ValuePoint 4®, PASS®, PowerBASE®6, HPA®, and PASS® Prospector.) We maintain a database of these values, including the date stamp indicating the valuation date. Importantly, we value properties for testing using the same system that we use in production. In this process we create over 1 billion property valuations per month.
2. We compare valuations every day against that day’s recorded purchase prices. As new transactions are recorded, we are able to evaluate the purchase price against the most recent valuation for that property. In our view, this is the consummate blind AVM test since all properties are valued prior to knowing the most recent public recording of the sales transaction. This capability has the potential to become an industry utility as we are capable of providing the most exhaustive and complete AVM data sets possible.
3. We count only “blind” results. CoreLogic invests in multiple data sources. We ensure that any valuation included in the test was not influenced by knowledge of the transaction from another source.

We can aggregate this data monthly or quarterly. The benefits of this approach are as follows:

- ▶ Comprehensive data allows us to test AVMs in more counties with greater reliability.
 - ◆ The data that is used for Vector™ Testing is sourced from the CoreLogic public record real estate property and ownership information database covering 96% of the U.S. population for sales transactions and 85% of the U.S. population for mortgage transactions. Using virtually all of the transaction data in testing allows
- ▶ “Blind” testing of the entire market using our production system means that the test results are a true indication of how the models will perform in production.
 - ◆ Blind testing gives the model’s opinion of value when no other public record information is available to the market
 - ◆ Testing all known transactions gives a sense of how the models perform across the national landscape.
 - ◆ Using the production system (instead of a staging or batch system) to create test results leads to greater confidence that AVMs ultimately used in production will perform similar to AVMs produced in the test environment.
- ▶ Using only actual purchase transaction results reduces questions as to the reliability of the benchmark.
 - ◆ Even after loan applications have been approved, contract terms (such as sales price) can change, or the transaction can abort (potentially due to value issues.) In these cases, it is difficult to know whether the anticipated sales price is a true indicator of market value.

CoreLogic uses this test data as input into custom and standard cascade offerings for clients. In our experience, the use of such robust test data leads to consistency between testing and production results. With Vector™ Testing, what you see is really what you get.

About CoreLogic

CoreLogic (NYSE: CLGX) is a leading provider of consumer, financial and property information, analytics and services to business and government. The company combines public, contributory and proprietary data to develop predictive decision analytics and provide business services that bring dynamic insight and transparency to the markets it serves. CoreLogic has built the largest U.S. real estate, mortgage application, fraud, and loan performance databases and is a recognized leading provider of mortgage and automotive credit reporting, property tax, valuation, flood determination, and geospatial analytics and services. More than one million users rely on CoreLogic to assess risk, support underwriting, investment and marketing decisions, prevent fraud, and improve business performance in their daily operations. Formerly the information solutions group of The First American Corporation, CoreLogic began trading under the ticker CLGX on the NYSE on June 1, 2010. The company, headquartered in Santa Ana, Calif., has more than 10,000 employees globally with 2009 revenues of \$2.1 billion. For more information visit www.corelogic.com.

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