CoreLogic®

Advisory Services

Authoritative Assistance
and Guidance When
You Need It Most

Contents

Who We Are

The Advisory Services group provides authoritative assistance in applying the wealth of CoreLogic data, analytics, and modeling tools to create efficient, custom-targeted solutions to the challenges you face—concentrated strategies and tactics that may be effectively out of reach using only in-house resources.

Our advisory and analytics expertise is focused on addressing challenges at all stages of the residential mortgage loan process, including:

- ▶ Primary origination and life-of-loan surveillance issues:
  - ♦ Loan repurchase risk
  - ♦ Lender-identified regulatory requirements (e.g., allowance for loan and lease losses)
- ▶ Servicing development, performance, and operational issues:
  - ♦ Government-mandated changes to servicing practices
  - ♦ Advancing and related servicer capital outlay forecasts
- ▶ Capital markets and secondary mortgage market opportunities:
  - ♦ Loan, security, and servicing rights valuations
  - ♦ Bond credit ratings
  - ♦ Investor diligence regarding loans and securities according to standards set forth in ever-evolving regulations, including Dodd-Frank
  - ♦ Basel III and capital implications for bank portfolios

Advisory Services professionals employ market expertise and the comprehensive CoreLogic toolkit to quickly cut through complexity and identify effective targeted solutions.

We utilize cross-functional analyses to develop fresh approaches to especially difficult or elusive challenges—then access and integrate the relevant data and analytics needed to create the optimal solution and its successful execution.

Professionals

Analytics & Advisory professionals focus on specific problems with laser-like intensity. Given our wide range of banking, credit, and operational expertise, these include virtually everything related to residential mortgages. Our team complements your resources with a combination of business-process understanding, industry acumen, technical knowledge, and statistical expertise.

Each Advisory assignment begins with a detailed plan laid out for your approval. Once a strategy is in place, our team marshals multi-dimensional CoreLogic assets and services to design a methodology, perform all necessary modeling, analyze the results, and test them cross-functionally to validate our recommendations and solutions.

This process is transparent every step of the way—ensuring that all facets of the case-specific methodology will stand up to the rigors of market, regulatory, and in-house scrutiny.

Data Resources & Assets

99.9%

CoreLogic offers the most comprehensive U.S. real estate data, covering 99.7% of all properties and 99.9% of all property owners.

Our already-huge, still-growing, industry-leading data repository integrates all of the CoreLogic dynamic, continuously updated databases—including:

- ▸ **Real Estate Properties** The largest in the world, our public record database provides property and lien data on 99%+ of U.S. residential and commercial properties

- ▸ **Property Transactions** Our real estate property transaction database includes historical data on 740 million transactions and is growing by 4.5 million transactions per month

- ▸ **Property Taxes** Our property tax database provides a comprehensive U.S. property tax framework, includes 144 million+ taxed U.S. parcels and 25 million+ tax delinquencies

- ▸ **Mortgage Applications** Our mortgage application database covers 80%+ of U.S. mortgage applications—193 million—with direct contributions from Fannie & Freddie

- ▸ **Home Equity Loans** Our home equity database includes 80% of bank-owned home equity loans and lines of credit, with 7 million+ currently active

- ▸ **Borrower Credit** The result of partnering with leading credit reporting agencies, our U.S. borrower credit database provides up-to-date, anonymized data on 100% of borrowers

- ▸ **Fraud Data** Our U.S. mortgage fraud consortium database includes member-contributed data for 80%+ of U.S. mortgage originations, plus loan applications and fraud outcomes

- **Servicing Data** Our U.S. servicing database covers 78% of all residential mortgages with outstanding balances of more than $6.9 trillion

- **Securities Data** Our U.S. securities database includes 97% of non-agency mortgage- and asset-backed securities, with loan-level data on balances of $1.1 trillion+

- **Rental Data** – Inclusive of asset data, rental cash flow estimates, vacancy rates, capitalization rates, and property valuations

- **Building Permit Data** – Standardized Building Permit Data captured from local municipalities, including Permit Types, Work Types, LandUse Codes with single uniform data structure with geocoding, CoreLogic APNs, and related Property & Foreclosure Data

- **Spatial & Natural Hazard Solutions** – Market-leading technology and mapping to assess mortgage risk with respect to natural hazards such as hurricanes, sink holes, tornadoes, and storm surge

- **Demographic Data** – Various descriptors including income, age, and other key borrower demographics

Integrated data from these databases provides multi-dimensional input for our analytics and modeling tools, ensuring the detection and evaluation of even elusive or unexpected risk factors.

Modeling and Analytics Tools

Our professionals utilize a variety of analytics and modeling tools—either individually or on an integrated basis—to produce optimal results for your assignment, including:

▸ **GeoAVM® Cascade** Using a sophisticated geo-preferencing system, GeoAVM auto-analyzes an area's historic AVM performance to set an optimal AVM cascade

▸ **HomeStandings®** Combines a property's value with key neighborhood market metrics to produce a property valuation consistent with likely current price were it sold today

▸ **LoanSafe Risk Manager™** Combining fraud and collateral risk managers, LRM identifies at-risk loans by predicting their EPD, loss severity risk, and mediation options

▸ **Secondary-Lien Risk Analytics** Reveals potential default and prepayment risk exposures by determining the "all in" extent of a property's cumulative mortgage debt

▸ **Real Estate Analytics** Starting with current home price index components, identifies an area's current valuation and market trends, and forecasts future home price index trends and volatility

▸ **TrueStandings® Servicing** Using multi-dimensional data, evaluates a portfolio's current performance and benchmarks it vs. internal, historical, market, and other lenders' metrics

▸ **RiskModel®** Employs simultaneous data streams in Monte Carlo simulations to predict a portfolio's possible future performance scenarios and their likelihood of occurrence

▸ **Bond Analytics** Integrates data from CoreLogic, CoreLogic Bond Tracker, bond trustees, and the government to uncover valuation and related risks in RMBS bond portfolios

▸ **Vector™ Portfolios** Utilizes securities, current CLTV, open/hidden lien, CoreLogic HPI™ and HPI® Forecasts data to identify past, present, and future RMBS performance

▸ **Reps & Warrants Analytics** Identifies portfolio R&W breaches as revealed by LTV, appraisal, property type, owner occupancy, secured lien, and lien-position values

▸ **MSR Valuation Model** – Comprehensive analysis of MSR's valuation includes Collateral Projections, Home Prices & Interest Rates, Model Transitions & Value Distributions, and Mortgage Servicing Rights Analysis

▸ **Short Sales Disposition Model** – Using the leading valuation and data assets in the housing market, this model specifically targets optimal short sale price setting for lender disposition strategies

Advisory Services

Our services are integrated, cross-functional, and collaborative—seamlessly combining CoreLogic data, analytics, modeling tools, and consultant expertise.

The breadth and depth of these contributions enable us to achieve solutions that reflect multiple and complementary internal functions. Our specialists address assigned challenges collaboratively with your team—isolating critical issues, defining actionable results, and creating processes to reach them quickly and cost-effectively.

Since all of our engagements are focused on addressing unique challenges, our services can be adapted to match your timing, resources, and needs.

Specialty areas include:

Our Advisory Services engagement teams are carefully chosen to complement and extend your own assets, resources, and capabilities.

Origination & Lending Analysis

These services are designed to assist mortgage originators and lenders in promoting sensible, risk-adjusted decisions when selecting and underwriting mortgage loans:

▸ **Borrower Risk Analysis**
Working with anonymized CoreLogic borrower credit data—including detailed credit histories—our risk experts help you develop a methodology to infer and verify key borrower information (name, SSN, income, job history), uncover possible fraud indicators or fraud patterns, and deconstruct and evaluate borrower credit scores and past behaviors in detail (for example, such efforts might focus on ascertaining debts beyond the mortgage, like imposed limits, delinquency fees, specified utilizations).

▸ **Property and Neighborhood Assessments**
A home's age, size, and amenities are part of its value, but its price is determined by much more than the house itself. While comparable sales data, transaction history, and multiple AVMs add detail, the more important if less apparent factors affecting home valuations are property and neighborhood circumstances—schools, crime rates, demographics, prevailing rents, supply and demand, foreclosure activity. Our valuation advisors work closely with you to develop an accurate, cost-effective process.

Our real estate valuation experts utilize our proprietary databases and analytics tools to help you identify and evaluate these make-or-break valuation influencers.

One or two boarded-up foreclosures can significantly alter the prospects of a neighborhood and the value of properties in it.

▶ **REO-to-Rental Investing**
Although multifamily rental income collapsed during the recession, single-family rents actually increased—giving lenders and other "reluctant landlords" of REO properties a recovery option other than REO sales. Our real estate experts help you explore REO-to-Rental investment opportunities by analyzing REO portfolios to determine current and future property values, capitalization rates and market trends in affected markets, potential average rents, and likely future cashflow projections.

▶ **QRM Analysis**
Our experts help you prepare for the Dodd-Frank Qualified Residential Mortgage (QRM) initiative, including the impact of QRM's likely high down-payment and debt-to-income ratios on your credit policies. We can also develop data illustrating how loans would have performed over time under various proposed QRM origination guidelines, QRM market share relative to that of non-QRM loans, common reasons borrowers might not qualify for QRM, and potential QRM and non-QRM default rates relative to the rest of the market.

▶ **Loan Origination Program Assessments**
Our lending experts help you determine appropriate credit-enhancement levels for planned or operational origination programs. We can assist you in identifying borrower capabilities, assessing property and loan characteristics, benchmarking portfolio vs. historical industry performance, projecting probable future portfolio behavior, and recommending credit-enhancement and stop-loss levels for selected ongoing efforts.

Servicing—Purchase & Sale Analytics

These cross-functional engagements help servicers excel in a challenging environment by analyzing their own performance, benchmarking it against themselves and aggregated and anonymized data from the competition, and making fully-informed servicing advance decisions when investing in new loan pools, mortgage servicing rights, or sub-servicing opportunities:

▸ **Portfolio Valuation & Acquisition**
  Our servicing advisors can evaluate your portfolio of assets and/or potential external acquisition targets using a comprehensive analytical toolset tailored to your requirements and employing data and software that include only what you actually need. An automated approach, these portfolio audits can reduce upfront costs and clarify your Buy/No-Buy decisions—usually in less than 24 hours.

  We also help you evaluate portfolios to update the cost of servicing rights or to prepare bids for new primary residential servicing rights. Employing our contributed-data servicing database, we benchmark a prospective portfolio against a synthetic version that features client-specified collateral and performance attributes. To enhance the precision of such evidence-based results, we incorporate characteristics like coupon, occupancy status, FICO scores, and "deeper dive" insights like updated LTVs and performance metrics like CPRs and CDRs.

▸ **Portfolio Lien & Snapshot Reports**
  Lien Reports A comprehensive look at outstanding liens that identifies all voluntary liens and whether or not they are active—and includes such current lien data as the servicer, status, balance, seniority rank of all liens, that lien's position, and an accuracy-confidence score. Other data includes FICO scores, bankruptcy data, and foreclosure information.

SENIOR LIEN STATUS
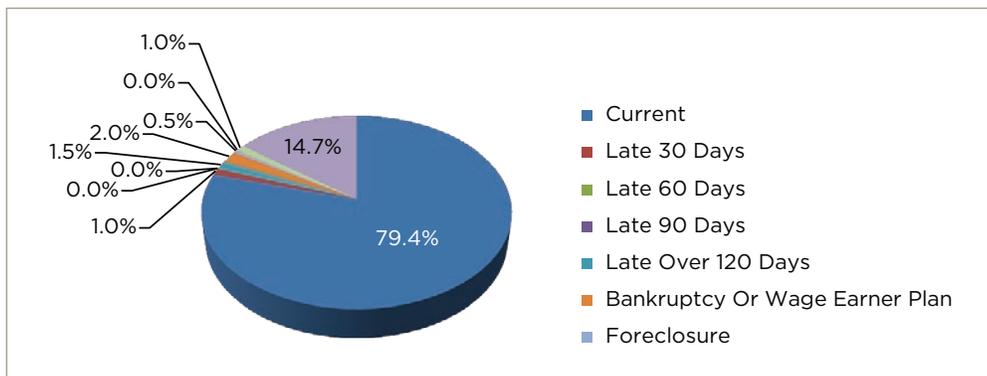
Sample Advisory Services graphic representing key components of an Allowance for Loan and Lease Losses (ALLL) Report.

Snapshot Reports Our Snapshot Reports identify a loan's senior lien holders and—by combining client, credit, and public-record data—provide unpaid balance to date, next due date, senior credit status, last credit-reported date, updated credit reports. bankruptcy data, and foreclosure information.

▸ **Short Sale Analysis**
Our experienced real estate professionals can help you determine when a short sale is an economically viable alternative to foreclosure. Using the same loan-level datasets as those employed to produce Lien and Snapshot Reports, they focus on finding distressed loans that do not have subordinate liens. After calculating equity for such loans, they compare short-sale threshold values against the net present value (NPV) of foreclosure. Short Sale Analysis reports include relevant determining data, like property valuation, LTV, CLTV, lien count, lien positions, bankruptcy, and so forth.

▸ **Tax Lien Analysis**
Our tax lien analyses address an issue that started in Texas but may well become widespread in coming years—the ability of third-party tax lenders to place a first priority lien against a property in return for its paying of outstanding property taxes. These tax liens legally subordinate all other liens on the property, including the mortgage itself such that if a borrower defaults on the underlying "tax loan", the lien holder can foreclose on the property and take the first payoff of sale proceeds. Our tax specialists help you identify loans in your portfolios with such tax liens and formulate strategies to pay them off and regain your lien priority.

Sophisticated internal and external benchmarking gives you a clear advantage in setting and meeting performance goals.

▸ **Benchmarking Servicing Performance**
Our team of servicing professionals collaborates closely with you to design a servicing benchmarking program to fit your needs. For example, internal benchmarking might pit an acquired portfolio against an established pool—or an acquired portfolio's performance could be compared to its modeled performance prior to acquisition. External benchmarking would compare a portfolio's performance to that of our servicing dataset of 41 million+ active loans. We can also compare portfolio performance to modeled cash flows of acquired portfolios or custom-created indices of outside collateral. We could also examine the impact of credit-challenged sub-groups on a portfolio's overall performance.

Loan Portfolio Management

Regulators, auditors, investors, and boards of directors are asking mortgage portfolio managers to have more focus more from a risk management and analytical perspective than ever before. They want to understand both the credit exposures and "investment" characteristics of the underlying loans.

We provide such analytics and their implementation to originators, servicers, and whole loan portfolio owners in the following categories:

CoreLogic portfolio management professionals use a variety of sophisticated data and analytics tools to analyze and predict risk-based performance.

▸ **Portfolio Investments—Rental Alternatives, Acquisition, Sales & Holding**
We utilize your criteria to analyze potential acquisition, sales, or holding targets, whether they be performing, re-performing, sub-performing, or seasoned portfolios—identifying and validating liens and property/loan characteristics; updating borrower credit and collateral values; performing cap-rate analysis for rental properties; benchmarking portfolio performance against historical industry performance; and projecting the portfolio's likely future performance (price/yield analysis).

▸ **Due Diligence**
The goal of due diligence is simple—to expose missed or hidden risk. To do so in practice, however, can be a complex undertaking, requiring careful analysis of overlapping, often contradictory factors. Whether you underwrite mortgages, trade in high-risk loans, or seek to comply with HOEPA predatory lending regulations, your strategy must account for all major risk factors—including risk from credit, compliance, collateral, and fraud—and their possible effects on each other. Our due diligence specialists uncover these factors in helping you understand your overall risk.

▸ **Lien Analysis**
We can analyze your portfolio or acquisition target at the loan level to identify all outstanding liens, whether voluntary or involuntary, active or inactive—including all current lien data (balance, payments, reset dates, servicer, lien status, lien positions) and a loan-by-loan accuracy confidence score. Other reported data can include coupon, occupancy status, FICO scores, updated LTVs, and CPR and CDR performance metrics.

Regulations based on the Dodd-Frank Act will affect mortgage finance at every stage in the life of a loan from origination through securitization.

Regulatory Insight, Planning, and Tactical Response

Given implementation of Dodd-Frank and other requirements to follow, few categories of risk will have a greater impact on your future market success than the changing climate of "regulatory fallout." Our specialists help you analyze and better understand the regulations affecting you—then guide you in developing strategic options to address them or even turn them to your advantage:

We help you prepare to deal effectively with all of its implications.

► **Lender QRM Analysis**
The Dodd-Frank Qualified Residential Mortgage (QRM) initiative will significantly affect lender credit policies, including likely imposition of high down-payment requirements and debt-to-income ratios/credit standards. Our lending advisors will help you project loan performance over time using anticipated QRM origination guidelines—including QRM loan market share relative to non-QRM loans, common reasons borrowers won't qualify for QRM, and potential QRM vs. non-QRM default rates. We will also provide tailored recommendations for effective, long-term, advantageous compliance.

► **CFPB New Servicing Rules Compliance**
Implementation of Dodd-Frank rules affecting mortgage servicing through the Consumer Financial Protection Bureau (CFPB) will impact servicing practices for years to come. These standards will likely require, at a minimum, open communication with borrowers, disclosure of ARM resets, new escrow account administration policies, and faster servicer response and turnaround times. The effect of CFPB and other regulatory regimens on servicer processes and structures will be significant. Our servicing advisors will help you devise and execute policies that both optimize your regulatory compliance programs and retain or extend your profit margins.

- **Allowance for Loan and Lease Losses (ALLL) Estimations**

  Banks, credit unions, and other federally regulated lending institutions face myriad requirements for monitoring their mortgage portfolios, especially those supported by second and other junior lien loans. We specialize in helping determine loss estimates on these portfolios by matching your current regulatory requirements with proprietary CoreLogic datasets. With billions of dollars in loss reserves and capital at stake, we tailor and refine these data by integrating credit, property, and other targeted data streams—assuring you accurate estimations that you can use in meeting your regulatory obligations.

- **Basel III**

  Our Basel III Portfolio Analysis services provide turnkey analytics to assess your portfolio's current LTVs, its overall risk, and its current MSR valuation (our MSR model lets you include your own interest rate, market forecast, and delinquency assumptions).

  Our Advisory Services team delivers results in four categories that together support a comprehensive strategy for successful adherence to the new guidelines:

  1. Portfolio valuation and assessment data

  2. Portfolio Risk Report summarizing bank portfolio risk by geography, origination date, and additional criteria that support comprehensive risk analysis of the portfolio

  3. Mortgage Servicing Rights (MSR) Analysis, and

  4. Custom Compliance Strategy developed by industry-expert Advisory consultants with specific experience valuing mortgages and related assets—including non-standard mortgage vehicles, mortgage servicing rights (MSRs), and portfolio risk assessment.

Securities Valuation, Ratings, and Related Assessments

A root cause of the U.S. financial crisis was the valuation—or lack of it—of mortgage portfolios and mortgage-backed securities. Borrowers, investors, and traders found that their expectations rarely matched the emerging realities, however defined. Our Analytics and Advisory valuation professionals specialize in taming asset-valuation uncertainty and identifying the actual values:

▶ **Asset Valuation**

Securities Our securities valuation specialists employ simulation methodologies to project the future performance—and by extrapolation the current value—of the collateral underlying a security's true value, including its risk of default, prepayment, delinquency, interest rate fluctuation, borrower behaviors, and changing housing prices. Results are categorized by percentages and ranked by likelihood.

▶ **Performance Benchmarking**

Our performance benchmarking teams can design a benchmarking approach that is unique to your requirements, circumstances, and timing. This might be internal benchmarking that compares the performance of a new portfolio or security to the performance of your established assets or to the asset performance you modeled prior to an acquisition. External benchmarking might compare an internal portfolio's performance to that of our securities database covering 97% of non-agency MBS and ABS securities.
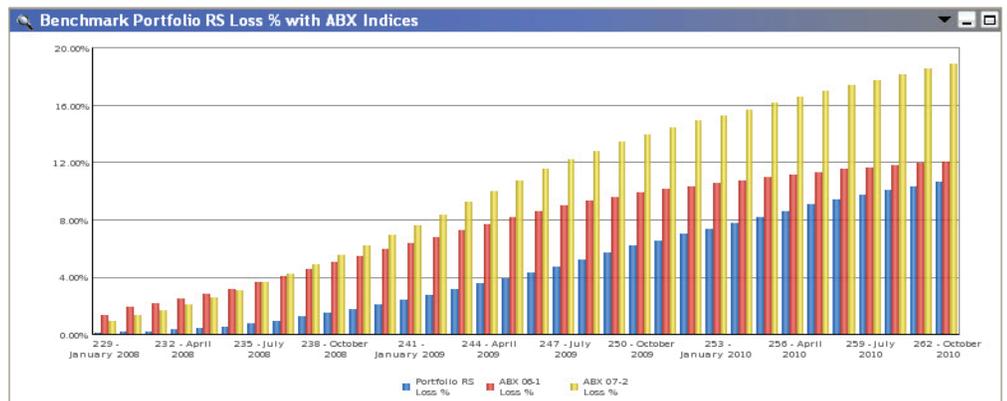

Our securities specialists can help you benchmark the performance of portfolios and securities against a variety of internal and external, actual and synthetic portfolios and securities.

To determine the value of mortgage portfolios and mortgage-backed securities, our advisors assess both properties and their neighborhoods.

▶ **CoreLogic Bond Tracker**

The Advisory group offers integrated loan, bond, and portfolio ratings assessments of seasoned and new-issue non-agency residential mortgage-backed securities (RMBS). These assessments are intended to supplement RMBS ratings of NRSROs and others—by incorporating dynamic risk factors that provide non-traditional insight to RMBS bond and collateral performance. Unique components of the ratings include:

1. **Bond Assessments** loan-level credit worthiness of bonds or securities portfolios that include projected future credit performance

2. **Non-Traditional RMBS** Measurements include market factors like value, price-yield, credit support, and current trading discount to notional value

3. **Dynamic Surveillance** regular RMBS assessment revisions that reflect loan-level updates to borrower credit and individual property valuation data

4. **Bond Sensitivity Scores** measure a bond's expected sensitivity to influence by a variety of stress scenarios (for example, changes to area's home price index)

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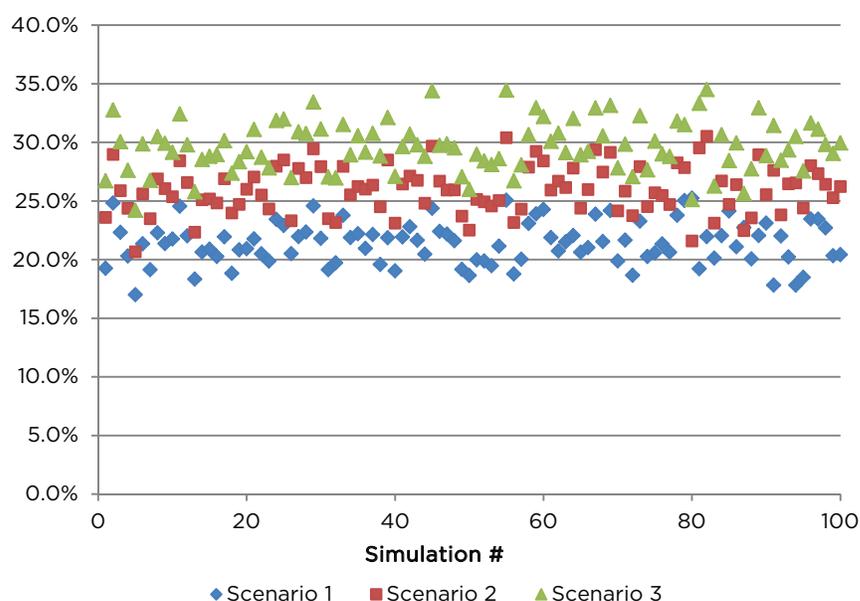
CoreLogic Bond Tracker includes graphic representations of data showing RMBS tranche write downs for various simulated scenarios.

CoreLogic Bond Tracker assessments take several forms:

1. **Universal Evaluations** High-level assessments of the universe of non-agency RMBS for research purposes—offered free to the marketplace, embedded at no additional expense in select CoreLogic products.

2. **Investor Offerings** In-depth assessments, by subscription, of individual bonds and portfolios that include ongoing periodic updates reflecting changes in borrower credit and property valuations.

3. **New Securities Issuers and Underwriters Offerings** Transaction evaluations, also by subscription, that include bond structures, loan-level diligence, and ongoing performance surveillance—enabling issuers to monitor securities' performance and risk, including risk-retention and credit-enhancement exposures.

▶ **Put-Back Risk**

Portfolio Reps & Warrants Analysis our Reps & Warrants specialists help you analyze a loan portfolio's property, mortgage, tax, and demographic data to identify possible reps & warrants breaches. They then consult retro AVMs, retro LTVs, owner occupancy verifications, concurrent ownership property reports, and loan transaction histories to isolate specific values (LTVs, appraisals, property types, owner occupancy, secured liens, and lien-positions) that can confirm R&W breaches.

Non-Agency Securities Secondary Put-Back Risk The key to successful private-label securitization—and avoidance of secondary put-back risk—is high-quality loan origination underwritten by a rules-based system preconfigured with built-in calculations and threshold validations that enforce specific investor or product requirements. Our risk professionals audit the loans behind your non-agency securities to determine origination and underwriting quality—and extrapolate your exposure to put-back risk.

Contact Us

To contact Advisory Services, please call 800.999.0350 or—if you have a timing emergency—contact Brett Benson at 817.699.4156 (brebenson@ corelogic.com) or Scott Sambucci at 916.431.2117 (ssambucci@corelogic.com).

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 one of the largest and most comprehensive 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.

CoreLogic is not registered as a nationally recognized statistical ratings organization (NRSRO) and as such, any rating by CoreLogic Bond Tracker does not constitute a NRSRO credit rating.

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. The company, headquartered in Irvine, Calif., has approximately 5,000 employees globally. For more information visit corelogic.com

FOR MORE INFORMATION PLEASE CALL 800-999-0350

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