AD&CO SERVICES

THE LEADING PROVIDER OF RISK ANALYTICS AND CONSULTING FOR THE MORTGAGE AND ASSET-BACKED SECURITIES INDUSTRY

ANDREW DAVIDSON & CO

Turning mortgage data into investment insight

Andrew Davidson & Co., Inc. has been providing consulting services and analytics since 1992. Our consultants have diverse backgrounds with experience in research, trading, quantitative methods, investment banking and risk management. Their blend of strong quantitative skills and practical experience ensures that our clients receive the most advanced, effective solutions available.

AD&Co Services

AD&Co provides institutional fixed-income investors and risk managers with high quality consulting services, research, and intellectual property aimed at yielding advanced, quantitative solutions to asset management issues.

BREAKPOINT ANALYSIS

The precipitous decline in the issuance and trading of RMBS and the continuing downward trend of home prices, has made it difficult for investors to value their holdings and understand the intrinsic value of future cashflows. To help investors better understand the value of their holdings, AD&Co has developed Breakpoint Analysis which combines the concepts of a dynamic continuous credit rating, stress risk analysis, and a probabilistic view of losses. Banks, GSE's or any market participant required to assess and manage credit-sensitive mortgage holdings on an ongoing basis will benefit from Breakpoint Analysis.

CREDIT LOSS SNAPSHOT

AD&Co's Credit Loss Snapshot provides a cost-effective and concise solution to firms that need to estimate the present value of expected cash flows and credit loss on their MBS holdings. The Snapshot harnesses the power of the LoanDynamics™ Model, AD&Co's market leading credit model, to forecast losses under a base case home price scenario.

OTHER SERVICES

INTRINSIC VALUATION

VALUATION OF COMPLEX MBS / ABS

ASSET / LIABILITY MANAGEMENT

CUSTOM PREPAYMENT AND DEFAULT MODELING

LITIGATION CONSULTING

Stay ahead of the game

Breakpoint Analysis combines the concepts of a dynamic continuous credit rating, stress risk analysis, and a probabilistic view of losses.

WHAT IS BREAKPOINT RATIO?

Utilizing a distance to default measure and a probability of loss, Breakpoint Analysis provides what is in essence a dynamic and timely alternative to a credit rating of the asset.

The "Breakpoint Ratio" is the ratio of the collateral losses required to cause the first dollar of a bond's principal writedown to the projected loss in the base case economic scenario.

HOW IS BREAKPOINT RATIO CALCULATED?

We first define a grid of stress scenarios (MDR scales, and/or Severity scales, and/or HPA assumptions, etc.) sorted in order of increasing losses. Each scale is a simple multiple of a vector (MDR, Severity) computed by AD&Co's LoanDynamics™ Model. For each of the scenarios, we generate prepayments, defaults, losses, and bond write-downs (see Exhibit 1). This process delivers a valuable risk metric and, at the same time, narrows the search interval for the Breakpoint. Once we locate the Breakpoint interval, we iterate until a bond's first dollar of principal writedown is triggered. Using the breakpoint grid, AD&Co compiles portfolio level Breakpoint histograms (Exhibit 2) and comprehensive credit risk reports (Exhibit 3). We also assess the Vasicek probability for each loss level.

Exhibit 1: Loss Forecasts vs. HPI Scenario

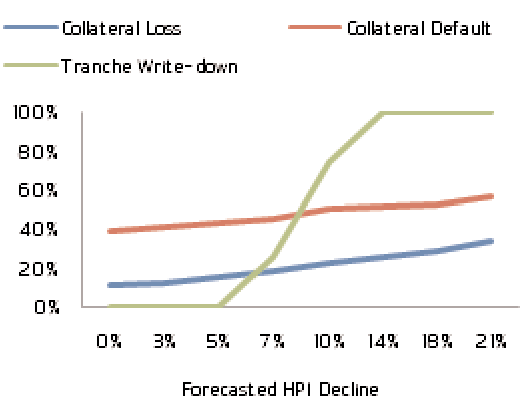

Exhibit 2: Breakpoint Ratio Histogram

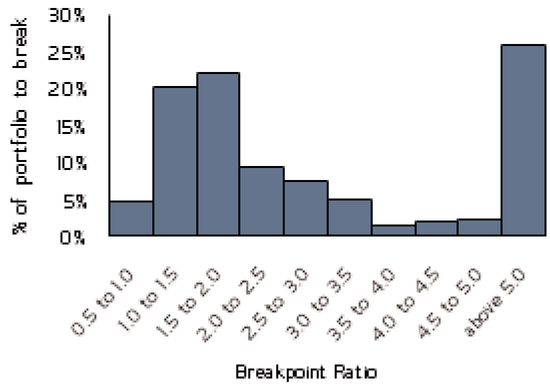

Exhibit 3: Sample Credit Risk Report

CDR Model Scale	75%	100%	125%	150%	200%	250%	300%
Cumulative collateral losses, %							
ALT A FIXED	6.3	8.0	9.5	10.9	13.2	15.1	16.7
JUMBO FIXED	4.5	5.8	7.0	8.1	10.1	11.7	13.2
OPTION ARM	9.0	11.4	13.5	15.4	18.6	21.2	23.3
Cumulative collateral default, %							
ALT A	24.2	30.2	35.5	40.2	47.9	54.1	59.1
JUMBO FIXED	20.1	25.5	30.3	34.7	42.2	48.3	53.3
OPTION ARM	23.0	28.8	33.9	38.4	46.0	52.1	57.1
Cumulative bond write-downs, %							
ALT A FIXED	0.0	0.4	1.0	1.6	3.0	4.5	5.8
JUMBO FIXED	0.0	0.3	0.9	1.6	3.0	4.3	5.5
OPTION ARM	0.1	0.3	0.9	2.1	7.1	12.3	16.6
Portfolio Total %	0.1	0.2	0.4	1.0	3.3	5.7	7.8
Tail of the Vasicek probability (chance to exceed)							
Correlation (Ro)							
5%	66.7%	42.9%	24.7%	13.3%	3.5%	1.0%	0.4%
10%	56.6%	39.9%	27.3%	18.4%	8.1%	3.6%	1.7%
15%	50.7%	37.5%	27.6%	20.3%	11.0%	6.0%	3.3%

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TIMELY, CONSISTENT ANALYSIS

Unlike agency ratings, Breakpoint Ratios change continuously. They reflect the dynamics of interest rates and home prices, as well as monthly updated delinquency rates. A shrinking ratio points to credit deterioration often in advance of an official downgrade. The greater this ratio, the lower the risk of default and the higher the implied credit rating.

Charts 1-3 show 5 bonds backed by subprime collateral that were put on negative watch early this year and were subsequently downgraded by the major rating agencies. By the time it happened, the Breakpoint Ratio already had fallen drastically. We clearly see that Breakpoint signals trouble in advance of an actual downgrade.

Banks, GSE's or any market participant required to assess and manage market holdings on an ongoing basis will benefit from Breakpoint Analysis.

BREAKPOINT AND OTTI

According to the latest FASB rules, OTTI occurs when a security's Fair Value is less than its Amortized Cost and that differential is not expected to be recovered. Therefore, there is an Expected Loss. AD&Co's Breakpoint Analysis provides the following metrics that helps determine the OTTI event:

- Total Expected Losses in the Base Case and its Timing
- The Sensitivity of Losses given shifts in assumptions
- Probability of Losses, their distribution and average

Chart 1: Breakpoint Ratio

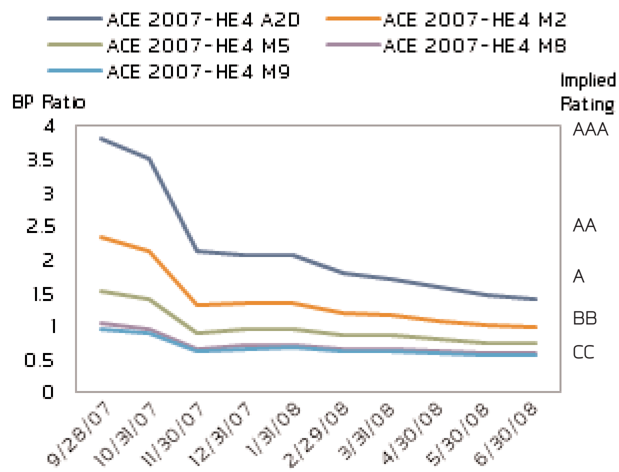


Chart 2: Credit Ratings from Moody's

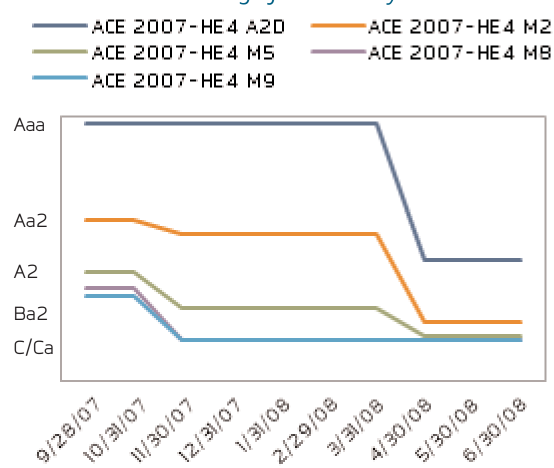
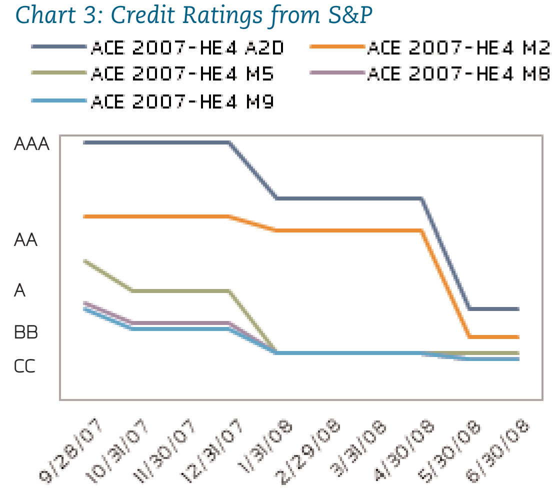


Chart 3: Credit Ratings from S&P



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Reveal the expected credit loss on RMBS holdings

AD&Co's Credit Loss Snapshot provides a cost-effective and concise solution to firms that need to estimate the present value of expected cash flows and credit loss on their MBS holdings.

Revisions in April 2009 to FAS 157 and FAS 124 require financial Institutions holding RMBS to calculate the expected credit loss on RMBS holdings.

AD&Co's Credit Loss Snapshot captures the Credit Loss and percentage writedown at the bond level on a quarterly basis. These metrics provide financial institutions holding non- agency RMBS with the calculations required by their auditors and regulators.

Deliverables

basic bond and deal level data:

WALA (Weighted Average Loan Age) This value is provided by INTEX. WALA is a dollar weighted average measuring the age of the individual loans in a mortgage pass through or pooled security. The WALA is measured as the time in months since the origination of the loans, with the weighting based on each loan's size in proportion to the aggregate total of the pool.

Group Level 60+ Delinquency This value is provided by Bloomberg. It is the percentage of loans that are 60 or more days delinquent for the bond's group in the structure of the deal. The 60+ delinquency from Bloomberg shows the actual performance of the bond at the group level. This value is useful to compare with the Deal Level

Deal Level 60+ Delinquency This value is provided by Intex. It is the percentage of loans that are 60 or more days delinquent forthe entire deal. The 60+ delinquency from INTEX shows the actual performance of the deal as a whole. This value is useful to compare with the Group Level 60+ Delinquency.

Current Support (Percentage) This value is provided by Intex and is defined as the percentage of credit enhancement, or the percentage support for specific tranches. This is used to gauge how close a specific tranche is from taking its first principal writedown.

OUTPUT FROM THE LOANDYNAMICS™ MODEL:

Months until first writedown The number of months before the first dollar of principal is lost at the bond level.

Cumulative Principal Writedown This is the total future losses that are expected to occur at the bond level as a percentage of current balance.

Present Value of Expected Cashflows This value is at the bond level, and represents the par value of cashflows less the credit losses from AD&Co's LoanDynamics™ Model. We can either use the bond's coupon or a user provided discount rate for the PV calculation.

Credit Loss (Percentage) The collateral credit loss percentage is the percentage of dollar loss from deal balance at analysis date. This provides a picture of the losses expected at the collateral level. (Amortized Cost minus Present Value of Future Cashflows)

Cumulative Collateral Default (percentage of current balance) This is the default percentage of the collateral at current balance. This provides an idea as to the expected default of the collateral going forward.

Cumulative Collateral Loss (percentage of current balance) This value is the collateral loss over the lifetime of the deal as a percentage of the current balance. This will be the losses that have yet to occur within the remaining collateral.

Cumulative Collateral Loss (percentage of original balance) This value is the collateral loss over the lifetime of the bond as a percentage of the original balance. This includes not only the losses that have yet to occur but also the losses that have already occurred.

Severity Percentage The severity is the percentage actually lost when a specific mortgage defaults. This value is an indication of the aggregated severities of all defaults in the deal.

Today to Trough HPI AD&Co has different HPI vectors used for different regions and collateral types. All of our HPI forecasts are derived from the Radar Logic RPX trading on housing futures. This number shows the total percentage decline in the housing price forecast from analysis date.

Cashflows The calculated cashflows are available upon request.

EXAMPLE SNAPSHOT

Collateral Type	Ticker	WALA	Group-Level 60+	Deal-Level 60+	Current Support (%)	Months Until First Writedown	Cumulative Principal Writedown (%)	Present Value of Expected Cashflows (%)	Credit Loss (%)	Cumulative Collateral Default (% Current Balance)	Cumulative Collateral Loss (% Current Balance)	Cumulative Collateral Loss (% Original Balance)	Severity (%)	Today-To-Trough HPI (%)
ALT_A ARM	AAAA 2005-QA3 NB2	53	11.6	10	6.0	127	3.06	95.69	4.31	30.21	14.03	2.46	42.86	-16
ALT_A FRM	BBBB 2005-QA3 NB2	53	7.0	2	1.6	87	2.76	99.79	0.21	28.14	11.24	5.98	31.44	-16
PRIME ARM	CCCC 2005-QA3 NB2	56	15.7	1	15.6	127	-	100.07	-	15.26	4.99	2.46	31.71	-12
PRIME FRM	DDDD 2005-QA3 NB2	58	8.7	18	5.0	206	14.29	93.35	6.65	24.80	13.11	11.93	53.43	-13
SUBPRIME ARM	EEEE 2005-QA3 NB2	54	37.1	39	32.0	69	6.88	99.65	0.35	63.46	39.63	26.65	64.64	-19
SUBPRIME FRM	FFFF 2005-QA3 NB2	57	38.1	0	100	274	30.56	85.95	14.05	37.09	22.78	17.18	58.61	-19

The most advanced, effective solutions available

The strong quantitative skills and the extensive practical experience of our team ensures that our clients receive the most advanced and effective solutions to investment management issues.

INTRINSIC VALUATION

Level Three fair value is predicated on a credit based Option Adjusted Spread (CrOAS) approach. This benefit of the CrOAS approach is that it incorporates the risks of prepayment, default and loss into a single analytical framework to yield a spread or price that embodies the full spectrum of economic risks associated with credit-sensitive RMBS. Because the CrOAS adjusts for both prepayment and credit risk, the calculated or assumed spread can really be thought of as a proxy for "technical" factors, e.g. financing and liquidity. The higher the assumed CrOAS, the more the intrinsic value of the bond has been compromised by the lack of financing and liquidity.

VALUATION OF COMPLEX MBS / ABS

Using our sophisticated valuation methods, we help clients identify risks in their portfolio, determine the value of specific holdings or entire portfolios, estimate principal losses and impairment for accounting purposes and optimize risk and return of credit- sensitive assets. We work with clients to minimize losses of distressed assets in their portfolio and maximize value for bondholders in bankruptcy proceedings and for sellers in M&A transactions.

Our advanced practices for valuing credit-sensitive MBS include Default Adjusted Spread (DAS) and Expected Value (EV). We utilize proprietary analytic tools for forecasting risk measures such as price, yield, prepayments, option-adjusted spread, duration and convexity and are considerably skilled in analyzing historical performance data to forecast prepayments, defaults, delinquencies and loss severities. Analyzing deal structures and reverse-engineering deals in order to forecast cash flows are additional capabilities.

Our consultants have the analytic expertise to value complex MBS & ABS for which actively traded markets are non-existent or pricing information is not readily available.

ASSET / LIABILITY MANAGEMENT

We provide asset/liability management advice to banks, money managers, hedge funds, REITs and insurance companies. We advise clients on how to employ our advanced risk managment methods and prepayment models to identify and manage their balance sheet lisks under dynamic interest rate conditions.

By sharing our significant risk management and market analysis experience, we help clients to optimize their returns on equity, better manage their net interest income and duration gap and minimize their interest rate exposure.

CUSTOM PREPAYMENT AND DEFAULT MODELING

We create prepayment and default models to reflect the performance of virtually any portfolio of holdings. We also evaluate internal prepayment and default models to provide recommendations on how to improve forecasting performance.

Our consultants, econometricians and systems staff have a long history of modeling and implementing systems for a broad range of institutional investors, including banks, money managers, CBO issuers, hedge funds, insurance companies and servicers. We rigorously test and study loan performance data provided by our clients and use sophisticated econometric techniques to construct our custom models.

Litigation Consulting

Major law firms have sought our analysis in securities litigation. We have provided expert witness and consulting services to the SEC and other government agencies, primary Wall Street dealer firms and major investment firms.

Using independently developed proprietary models, we perform financial forensics on investment portfolios ranging in size from millions to billions of dollars in assets. Analyses include valuation of complex securities, the review of investment strategies and guidelines and how they were implemented and the examination of sales, trading and risk management/oversight practices.

With our assistance, clients have determined whether the valuations of individual securities and whole portfolios were reasonable, whether the underlying assumptions and analysis of derivative instruments were fair representations or misleading and whether the risk management policies and risk measures reported to investors were adequate.

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Years of practice with a varied clientele have given us practical insight into why certain investment strategies fail and succeed, and when risk management practices are inadequate. As a result, we are well qualified to prescribe appropriate strategies for our clients.

GSE

We developed a methodology for valuing the assets and obligations of various GSEs. We were able to present an approach that valued expected losses with the respective capital charge. The method produced results closely resembling market quotes. On many occasions, we were commissioned by GSEs to validate models, risk management practices, and to help with retrospective income restatement.

HEDGE FUND

Our team reviewed the valuation of a large hedge fund portfolio. In this process, we tested the rationality of prices of individual securities. The portfolio included a broad range of securities including mortgage derivatives, CBOs and credit sensitive bonds.

INSURANCE COMPANY

After evaluating the risk inherent in mortgage derivative holdings throughout the company, we identified the major sources of risk and developed a methodology to quantify risk exposures.

COMMERCIAL BANK

We designed a credit model for a New York commercial bank's whole loan mortgage portfolio. This involved developing accelerated and heterogeneous failure time models, censoring and truncation, proportional hazard models and maximum likelihood techniques to estimate a prepayment function. We proposed ways to maintain and upgrade the model, including the use of mixture distributions.

ANDREW DAVIDSON & CO., INC. TURNS MORTGAGE DATA INTO INVESTMENT INSIGHT. WE ARE THE LEADING PROVIDER OF RISK ANALYTICS AND CONSULTING FOR THE MORTGAGE (MBS) AND ASSET-BACKED SECURITIES (ABS) INDUSTRY. We develop and license prepayment and credit models as well as risk measurement tools that are the benchmark analytics used by top mortgage and commercial banks, insurers, credit unions, broker-dealers and money management firms. With our unique blend of investment expertise and cutting-edge quantitative methods, we produce highly advanced models and the most innovative solutions to mortgage investment challenges.

UNDERSTAND THE RISK BEFORE IT'S TOO LATE. GET REAL INSIGHT FROM ANDREW DAVIDSON & CO., INC.

ANDREW DAVIDSON & CO

65 Bleecker St. Fifth Floor
New York, NY 10012
Tel. 212.274.9075
Fax 212.274.0545
www.ad-co.com

CONTACT US AT: 212.274.9075

