

The Journal of Structured Finance

Spring 2011

www.ijfs.com

Volume 17, Number 1

Data Commoditization in the Securitization Markets

JACK BROAD AND ANDREW CHASEN

Data Commoditization in the Securitization Markets

JACK BROAD AND ANDREW CHASEN

JACK BROAD
is president of Thetica
Systems, Inc. located
in Cresskill, NJ.
jack@thetica.com

ANDREW CHASEN
is president of Chasen
Enterprises in Peekskill,
NY.
andy@chasen.com

Since the early days of mortgage securitization, the industry has been serviced by a large number of providers of data and analytics. These vendors have served many specialized functions in the valuation and risk management process. Most of these vendors have been start-up companies, while a few have been units of larger companies. Despite several attempts by large companies at building a “one-stop shop” product that served all needs, the smaller specialized vendors have continued to be the leading providers of data and analytics to the structured finance industry.

Several changes are taking place that will alter the current landscape. The business model that features many niche providers will survive and thrive, but the nature of their products will change. In recent years, many of the early providers have been acquired by larger firms where they have continued and expanded their operations, while several new providers (big and small) have also moved into the space. In addition, investor awareness of the importance of data has resulted in increased demand, while technological enhancements have made acquiring data easier. Finally, as a result of the credit crunch, there have been several initiatives both by regulatory as well as industry bodies that, if adopted, will cause further increases in the availability of data.

We believe that the widespread availability of data will be transformative to the

industry by allowing further growth in analytical capabilities. In concert with unprecedented growth in hosted analytical solutions, access to structured finance data will open the door to many new tools and applications that will give the investor new ways of viewing risk and opportunities in the market. The timing is perfect because inadequate analysis and forecasting was certainly one of the factors that plagued the industry in the boom years. Improved data and analytics could keep us from repeating the cycle.

In this article, we will introduce the reader to the components of a mortgage analytical system. We will explain these components and then discuss the various vendors that are currently delivering products into the space. These components include data on loans, borrowers, properties, securitization deal and bond information, as well as the logic of how the asset cash flows are used to pay bonds. Other portions include predictive modeling, scoring, and various integrative analytics that bring all of the previous elements together.

Next we will discuss some of the industry and regulatory initiatives that have come out since the beginning of the credit crisis. This includes ASF Project RESTART from the American Securitization Forum (ASF) as well as U.S. SEC Regulation AB II. Project RESTART deals specifically with loan information on mortgage securitizations, while Reg ABII is much broader in

scope. The SEC proposal includes not just collateral information on all securitizations, but also requires a computer representation of the liability structure (commonly called a “waterfall”) of the transaction. We will also review some of the public responses to the SEC proposal.

The changes that we are predicting should leave the industry with plentiful data available at reasonable prices. This will allow for systems to be built that will give investors transparency into mortgage securities as well as tools to enable them to apply their own opinion to these securities. This should usher in a new era of mortgage investment technology.

COMPONENTS OF AN ABS SYSTEM

There are six primary components to analyzing mortgage securities. These six components are:

1. Deal Information Data
2. Loan Data
3. Enhanced Loan Data
4. Predictive Models
5. Cash-Flow Generator/Waterfall Model
6. Integrated Platform

Component #1: Deal Information Data

Deal information data are information that is specific to a given securitization. That information includes:

- Deal information (deal name, issuer name, lead underwriter, servicer, trustee, total collateral balance, etc).
- Tranche information (ID, type, CUSIP, balance, coupon information, losses, ratings, credit support, etc).
- Collateral data (loan information with as much detail as possible, including historical payments)
- Call details
- Performance triggers that will affect payment priorities or ability to replace servicer or trustee
- Hedge information (interest rate swaps, monoline bond guarantees, etc).

Bloomberg and Intex are two vendors who have all or most of the above for the universe of structured transactions. However, Bloomberg has been restrictive

in how data can be moved from its terminal. ABSNet (Lewtan) also provides much of this information, but the depth of their data is not as rich. However, they have a new version being released in February 2011.

Component #2: Loan Data

These are the assets of a securitization, which for RMBS transactions are mortgage loans. On the surface, this seems to overlap with collateral data from the deal information. However, the leading vendors of deal information have not always provided the details on the individual loans that were necessary for proper analysis. This allowed for others to become niche providers of loan data. Loan data should include the following elements.

- *Loan data at origination.* This element includes many fields of information relating to the actual loan itself including such things as balance, interest rate and type (fixed versus ARM), ZIP code, state, MSA (metropolitan statistical area), loan purpose (purchase, refinance, or cash out), occupancy status (primary residence, investment property), documentation of income or assets, sale price, loan-to-value ratio, lien number, and various ARM fields governing interest rate reset. These data should include information regarding any interest-only period, any prepayment penalties, and loan modification details.
- *Historical monthly payment records.* These records indicate on a monthly basis whether the borrower has paid and how much; if the borrower is delinquent and how many days (30, 60, 90+); whether the loan servicer has begun foreclosure proceedings; if the property has been seized and is now real estate owned (REO); and losses when the property has been liquidated.

There are more than 20 million loans within non-agency securitized deals.

For many years, LoanPerformance (now part of CoreLogic) was the only vendor in this space. Although Intex and Bloomberg have provided some degree of loan-level data, for the most part their datasets were either incomplete or difficult to access outside of a terminal. If you wanted more comprehensive information, available in your own databases, the only vended solution available was LoanPerformance. Despite the fact that

this was largely publicly available data, only LP had put in the effort to seek out, download, and clean this data. This afforded them a big lead when the crunch came and demand spiked.

Increased demand, along with better technology and more accessible data, is the reason that several companies have now entered this space. Some of these new entrants are start-ups, such as BlackBox Logic and MBS-Data; others are units of larger companies—for example, Lewtan Technologies and S&P. These companies have now amassed enough data to start signing up clients and apply some pricing pressure on LoanPerformance.

LoanPerformance has upped the ante. By virtue of their acquisition by First American CoreLogic (now CoreLogic), LoanPerformance has access to large amounts of property data that they are adding to their product mix. This will be covered more in the next section.

Component #3: Enhanced Loan Data

There is a whole “sub-industry” that has sprung up around the idea of providing *enhanced* loan data. The reason for this is the fact that certain *key* pieces of information about the loan are never updated after the origination date. However, these pieces of information make a tremendous difference when it comes to evaluating an individual loan and subsequently the bonds that these loans support.

These two pieces of information are:

- *Borrower information including credit score (FICO, Vantage Score).* The borrower’s credit score is used as an indication of the creditworthiness of the borrower. In the past it had been provided to the security investor only as of the origination date of the loan (if provided at all).
- *Property information including property value.* An appraisal value at the time of origination is sometimes available to the investor. However, this information might be less than reliable due to fraud and abuse of the housing bubble. Checking the reliability of the appraisal has traditionally been difficult if not impossible.

One of the mantras of the post-crash investment world has been that we would like to see investors take more responsibility for their investment decisions. It therefore makes sense that they should have access

to information on the borrowers whose loans they are financing and the properties that are collateralizing these loans. However, this information has been kept away from the investors by, among other things, privacy laws.

Borrower and property information has been deemed “personally identifiable information” (PII), which is defined as “Information that can be traced back to a specific individual user, e.g., name, postal address, e-mail address, telephone number, or Social Security Number.” PII laws have kept borrower and property information from any securitization disclosure information. Therefore, investors couldn’t get access to information that would allow them to research the creditworthiness of the borrower, as well as make an estimate of the value of the property. This is a frustration that investors have long suffered with, but there is relief in sight as increasingly sophisticated data-mining techniques are poised to make this limitation a thing of the past.

Vendors have begun a process of matching publically available loan data to the semi-publically available property information that comes from county records (often via data vendors). Similarly, vendors of borrower information have been matching the loan data to credit bureau information available from the three major credit bureaus. This matching is not an exact process and the better vendors have included a confidence ratio in many of their products to indicate matching accuracy. However, it is a game-changing technology that will potentially allow investors to obtain updated borrower credit and property information. Let’s explore this process along with its potential future ramifications.

Obtaining updated credit scores. The process by which a vendor or investor can obtain updated credit scores involves having access to credit bureau data. How is this possible without violating PII laws?

A credit bureau can take loan data that are in the public domain (component #2) without any borrower information (PII) and perform a *matching* process with their large nationwide set of consumer credit data. This is done by utilizing key fields in the public dataset (such as balance, loan origination date, ZIP code) and looking for a match within their credit bureau dataset. If only one loan in the database fits the criteria of the publically available loan, then there is a match.

When there isn’t a unique match, they can drill into other loan information in order to look for similarities with the borrower’s credit history. This will allow them to better determine the identity of the borrower.

The vendor can then apply a “confidence level” between 0 and 100 that indicates the certainty of their match, with 100 being a guaranteed match.

Once they have found a match, a credit bureau can provide an updated credit score as well as various levels of credit information about the borrower, *without* revealing the name of the borrower. Equifax is the first to offer this service, and they currently offer approximately 300 additional fields of information specifically related to the credit profile of the borrower. Whether or not all of these fields are helpful is something that the market will determine. However, it is a huge step forward from the past situation when the best an investor could expect was an outdated FICO score.

Although Equifax was the first player to step into this area of borrower information available on ABS, the other two credit bureaus, Experian and TransUnion, have also moved into the space. We look forward to more innovations coming from these three players as the market moves forward.

Obtaining updated property valuations. Prior to the matching technology, the best method of obtaining updated property values was to roll forward the original appraisal using one of several home price indices (HPI) which provide historical home pricing information related to either the ZIP code, the county, the MSA (metropolitan statistical area) or even the state or nation. This method is crude because it relies on a potentially inaccurate original estimate and a macro-level variable to extrapolate that value. Several vendors provide HPIS, and they are also available at no cost from the federal government at www.fhfa.gov.

With the onset of matching technology, vendors can match the loans of an ABS to a specific property and provide information on that property. Property valuations can be obtained using BPOs (broker price opinions), AVMs (automated valuation models), or other techniques, all of which vary in accuracy and cost. There are many vendors of collateral valuation, each with various specialties and geographic focus. Including updated property values in a mortgage system is a huge step forward, particularly if the bond being examined is backed by a large amount of severely delinquent mortgages. Examples of property valuation firms include CoreLogic, Lender Processing Services, Inc. (LPS), IntelliReal, LLC, FISERVE, Veros Software, Altos Research, Collateral Analytics, DataQuick, and Interthinx (a division of Verisk Analytics).

Enhanced loan data in the future. Today, each vendor of loan data is in the process of forging alliances with various property and borrower information providers. However, it won't stop there. The evolution of the enhanced loan data will continue to play an important role as the new issuance market for non-agency RMBS reopens. We can envision a scenario where the issuer of a securitization will pre-contract with various credit bureaus and/or property valuation firms to provide updated borrower scores and property values. This will eliminate the need for matching as the issuer will have the PII, but it can be excluded from the deal information. This innovation should be supported by investors who will know that the bonds of issuer XYZ are contractually guaranteed to have ongoing information necessary for proper valuation. The ability to perform surveillance on deals via continuous data updates can become a competitive advantage for issuers. As the data become prevalent, certain vendors of borrower and property information will be preferred by investors and the deals that include these preferred vendors should trade better.

Component #4: Predictive Models

While loan data and enhanced loan data give an analyst the ability to examine loans from a current or historical perspective, the art of predictive modeling involves developing a quantitative methodology of combining historical loan data with forward-looking macro-economic projections in order to forecast mortgage performance. Specifically, these models will use projections on interest rates, home prices, and unemployment as an input to their own mortgage projections. The primary projections (also known as “vectors”) that these predictive models normally produce are the following:

- *Constant Prepayment Rate (CPR)*. This is a monthly figure expressed as an annual rate and signifies how much of the collateral (total loan balance outstanding) will be paid off each month going forward.
- *Constant Default Rate (CDR)*. This is a monthly figure expressed as an annual rate that signifies how much of the collateral will default (go through involuntary liquidation) each month.
- *Loss Severity*. This relates to the CDR and tells you how much of the defaulted amount will actually

end up in a loss each month. This loss amount is net of interest and servicing advances.

- *Delinquency*. This is a monthly figure that indicates what percentage of the collateral is delinquent in a given month.

These predictive models are often created *within* financial firms by internal mortgage research analysts or strategists. However, there has always been a vibrant group of third-party predictive model vendors.

Andrew Davidson & Co. was the pioneer in this space and started licensing “agency prepayment models” in the early 1990s. Applied Financial Technologies (now owned by LPS) followed in the late 1990s with its own agency model. By the peak of the mortgage boom in 2006, both of these firms along with LoanPerformance offered a credit model that provided the four main forecast vectors discussed above. Since the meltdown, several firms have joined this space including Strategic Analytics (now owned by Interthinx), Five Bridges, and Opera Solutions. This field will likely continue to grow as more information becomes available and the various vendors begin to include forecasting various types of loan modifications as well as the effects of these modifications into their systems.

Component #5: Cash-Flow Engine/ Waterfall Model

A critical component of any bond analytics system is a cash-flow engine. A cash-flow engine uses asset data along with predictive models to generate collateral cash flows for one or more scenarios. These asset projections are independent of the paydown rules for the bonds. The cash-flow engine then calls a waterfall model to generate projected cash flows for the bonds.

The waterfall model is a representative model of the liability structure of the deal. It can be thought of as a computerized version of the instructions to the trustees for distributing cash as described in the prevailing documents for the deal (e.g., prospectus supplement, pooling and servicing agreement, etc.). The trustee is instructed to collect funds from the various asset sources and distribute to or from the myriad of bonds, swaps, and reserve fund accounts as decreed by the deal documents.

The waterfall model will take projected collateral cash flows as an input and return cash flows on all of the individual bonds. Once this model is created, it can be called from the cash-flow engine in order to handle

the final process of distributing the collateral cash flow across the various bonds.

There are two other important pieces that help make cash-flow engines available as a viable vended solution: an “application programming interface” (API) and a “deal library.” An API allows the cash-flow engine to be integrated with other software products. This way, various companies (vendors as well as end-users) can use the cash-flow engine as a building block for their own analytics.

A company that specializes in building waterfall models for large number of deals will usually build a deal library. Often firms will specialize in a certain segment (agency CMOs, non-agency RMBS, ABS, CDO) and model every deal in that given segment. An end-user licensing a deal library will be able to project cash flows on any bond within the given segment that they have licensed. This is essential for analyzing bonds.

Historically, Intex Solutions has been the dominant entrenched player in providing cash-flow engine and waterfall models. They have an established API and a comprehensive deal library that allows users to run almost any bond through its internal or vended systems. Intex has also maintained its dominant position by licensing its structuring system (software used for creating waterfall models) to most of the major underwriters of these transactions. This has increased Intex’s advantage because buy-side participants will use its software to examine proposed transactions before making an investment decision.

However, there are other cash-flow engines and deal library providers that are making strong moves in this market place. As we discussed above in the section on Loan Data (component #2), this has been made possible by increased demand as well as a tremendous slowdown in issuance. Three notable vendors making strong moves are Markit, Moody’s WSA, and Bloomberg.

Markit acquired the assets of Chasen Enterprises in 2006. In the last five years, they have built what was primarily a library of agency CMOs to a comprehensive library of RMBS deals. This product features an API and a very fast cash-flow engine. Markit has invested heavily in this product and has utilized it in all of its pricing and index analytics.

Also in 2006, Moody’s acquired Wall Street Analytics (WSA). WSA had been primarily a structuring system but also had a library of CDOs and CLOs. Since the acquisition, WSA has built a library of non-agency

RMBS as well as a large library of U.S. and European ABS. Although the former WSA never had an API, the current Moody's WSA has announced that this is now available.

There are also a few other players with partial offerings in this space. Lewtan and ABSXchange (now owned by Standard & Poor's) each have a library of European ABS, while Reuters, CMS Bondedge, and Citigroup's Yieldbook all have at least an agency CMO library.

The biggest change coming to this market is that Bloomberg has publically announced that it will make its deal library available via an API. In addition, Bloomberg has developed a structuring tool that will allow structurers and investors to create bonds over the standard Bloomberg terminal. Once the bonds are created, all Bloomberg analytics will become available to the potential investor. Bloomberg also has full loan-level collateral that it can make available via this API. This will have an effect on loan data as well as cash-flow models.

Component #6: Integrated Platform

The final component is a centralized system that pulls all of the other pieces together, maintains ongoing updates, and enables a user to fully analyze a bond. Ideally, an integrated platform will seamlessly integrate all of the information from the five previous components whether they are coming from internal sources or from an outside vendor. The information as provided by various vendors is usually not delivered in a manner that easily facilitates doing comparisons or queries across a large number of deals and bonds. In order to use the data most effectively, an investor needs to have software that reads all of the deal, bond, and loan information into a database that can then be queried and analyzed with the purposes of spotting trade ideas, opportunities, or generating various reports. Integration platforms should provide the capability to aggregate data and create views that serve these purposes.

Traders, investors, and risk managers need fast, responsive, and flexible systems that respond to their diverse and changing needs. An integrated platform provides them with the ability to swap data, predictive models, and cash flow models with minimal software development cost. Furthermore, the vendors of such systems have become experts in various data components and can stay on top of new developments from the data

vendors. This frees the end-user to focus on trading, analysis, and research.

There have been firms offering integrated systems since the early 1990s. Some of the notable firms providing these products today are Thetica Systems, Vichara Technologies, PolyPaths, FactSet Research Systems, and RiskSpan.

NEW INITIATIVES FROM INDUSTRY AND GOVERNMENT

Since the credit crunch and the corresponding issuance shutdown of the non-agency mortgage securitization market, several regulatory and industry-led proposals have been released that aim to transform the market for securitization data. We will examine two of them: ASF Project RESTART and SEC Regulation AB, along with a few of the public responses to the SEC proposal.

ASF Project RESTART

ASF Project RESTART was announced by the ASF in July 2008. The overall mission of the project is to help rebuild investor confidence in MBS and ABS, restore capital flows to the securitization markets, and increase the availability of affordable credit. Among its specific goals are to ensure that extensive loan-level data are made available for any new securitization. One of the consequences of the credit crunch was that it became apparent that investors were not analyzing the credit risk of the assets going into securitizations and that they were instead relying on the credit rating agencies to perform this function for them. The ASF realized that if the market was to return, investors would not be comfortable relying on the rating agencies, and they will need to have access to the underlying loan data to properly analyze the credit risk that they may be taking. The ASF proposed an ambitious list of fields that should be included, in a standardized format, in the disclosure of any securitization. In addition, they proposed that this information should be made available not just at origination, but for the life of the transaction.

Project RESTART also included the establishment of ASF LINCTM, a loan identification number code that assigns a unique loan ID to every loan that is securitized. This was designed in part to assist investors and others in obtaining loan data that is PII, such as borrower and property information (see component #3). By using

the unique loan ID, investors or vendors can obtain borrower credit scores or property valuations without having to see the PII. This innovation should open up tremendous opportunities for vendors to develop new products and services.

It is important to note that ASF is not a regulatory body but an industry group. It has the power to suggest but not enforce. However, their power to suggest should extend to investors who have the real power. Investors should refuse to buy bonds that don't meet the standards outlined by Project RESTART. If investors only buy bonds that guarantee proper disclosure, they will make Project RESTART a reality.

Project RESTART, if successful, would have a large effect on vendors in the loan data and the extended loan data segments. Although some may be inclined to fight this as a threat to their business, that isn't the right approach. Most of these companies are already extending their product lines to include new datasets and tools for analyzing data as well as other applications built around these datasets. As this data becomes more readily available, it should foster growth in vendor products to analyze this growing mountain of data.

SEC Regulation AB II

In April 2010, the SEC dropped a "bombshell" on the data and analytic industry with its proposed updated version of Regulation AB. This proposal is an extensive overhaul of the entire reporting requirements relating to RMBS (and other structured products). Many items relating to securitization were covered, but we will focus on two components of the proposed regulation: the loan data and the waterfall model.

The SEC proposal requires that *future* deals have the loan details of any RMBS deal posted on their EDGAR (Electronic Data Gathering and Retrieval) system. The SEC is also requiring that ongoing monthly asset level detailed updates be posted on EDGAR. The SEC uses many of the fields that were included in Project RESTART and expands on them. All told, it requires 137 fields at issuance and another 151 on an ongoing basis. These fields cover all the loan data and much of the enhanced loan data. They will be required to be posted *publicly* in XML format and made available at no cost to potential or actual investors.

Another item that will be required is the cash-flow engine/waterfall model. The SEC has required that the

waterfall model be made available in a freely available, interpreted programming language called Python. The Python representation of the waterfall could be executed in any analytical program built by an end-user or a software provider. Moreover, the publication of the model's software implementation enables reviewing by the community at large.

This is a game-changing event in the world of data and analytics providers. In one swoop, the SEC has demanded that components #1, #2, and #5, as well as most of #3 (as discussed previously), should be included in the public disclosure of every structured transaction. This applies to future deals and not the thousands of existing deals but would still be a huge event if it were to become law. The availability of loan data and waterfall models can open up many avenues of added analytics.

The comment period for the Reg AB proposal ran through August 2, 2010. As expected, there were many comments from many sections of the market. Opinions on the proposal were so divisive that the ASF had to publish four different responses in order to reflect the different views of its constituents. We have our own opinions of the proposal, but before sharing that, we will discuss some of the opinions that have been made public since the comment period started.

BNY Mellon not only came out in favor of the proposal, but they also made available a working version of a Python language waterfall model. In 2009, BNYM acquired Portsmouth Financial Systems (PFS) and used this software to exhibit their Python model of the only non-agency securitization done in the last four years (Sequoia Mortgage Trust 2010-H1). BNYM makes an important contribution towards clearing up some problems in the SEC proposal and also suggests a model for a public library that could be built around PFS. BNYM's idea is to allow the community to build and test waterfall models. As new deals are issued, the underwriter or issuer can build a model that can be accessed and examined by the community. After a period of critique, the models are locked and can be utilized by investors who can analyze collateral and bonds using PFS. The idea is similar to Wikipedia, where many can author and the community watches over the veracity of the product.

Intex Solutions came out against the proposal, particularly the mandating of the Python waterfall code. As the market leader, Intex would have much to lose if the proposal were enacted. However, their opinion is well reasoned. The crux of their argument is that

1) commercial vendors are already providing the major elements that are being mandated and 2) the lack of these features were not the cause of the mortgage meltdown.

Finally, the ASF published a comment specifically by its Waterfall Committee. This is broken into three sections in order to represent the various constituents of the ASF. In a nutshell, the issuers are opposed, the investors are in favor, and the analytics vendors are mildly opposed but seek more information because of the lack of clarity of the proposal.

More than 180 other comments have been formally posted.¹ However, since its proposal, REG ABII has been moved to the background as the regulators determine the effects of the Dodd–Frank Wall Street Reform and Consumer Protection Act. While the final impact of Dodd–Frank is still to be formalized, it clearly stresses greater transparency and availability of data.

We agree with the spirit of Reg ABII, but we do not feel that it is necessary to wait for regulators in order to move forward. We think the community would be well served if deal information including waterfall models were made available in an open and publicly accessible system immediately. We are in agreement with BNYM that this expanded disclosure can happen as part of a commercial (dual license) venture. There have been a host of successful open source/dual license products in other industries, and these have brought on innovation and added to the product mix.

WHAT DOES THE FUTURE HOLD FOR SECURITIZATION DATA AND ANALYTICS

It is easy to find information on equities. Share prices are available on over a hundred different web sites. The same goes for earnings, debt, P/E, debt-to-equity ratios, market capitalization, and many other statistics. Every public company files its financial statements in XML, which allows for parsing and manipulation of this corporate data. As you would expect, many tools have been developed and many companies have been founded to make parsing and using this information easier.

Will information on mortgage securitizations go in the same direction as equity data? One can argue that an RMBS security is a vastly different instrument than an equity or a corporate bond. However, we could easily argue that this instrument has a greater potential to be defined within a “knowable” framework where

information can be disseminated. All of the assets and the liabilities are clearly defined within the closing documents of the deal. The “company” is essentially a dead entity with miniscule amounts of decision making. When compared to corporate equity and debt issuers, this entity is well suited to more complete disclosure.

Today there is no new issuance of RMBS. It is in the interest of the future issuers of mortgage securitizations to push information in the direction of greater accessibility. The mortgage security investor funds the mortgage issuers operations, therefore issuers should facilitate anything that enhances investors’ ability to purchase their bonds.

We can envision numerous future enhancements to securitization data and analytics, including the following:

- loan data, deal data and waterfall models being placed into the public domain voluntarily by the issuers;
- commercial enterprises manipulating this information in order to be easily used by mortgage analysts;
- commercial predictive models linked to this data and made broadly available;
- access to multiple property AVM engines and transparency into which AVM models are strongest for specific regions of the country or types of property;
- tools and scoring systems that track AVM valuations to actual prices when a property is sold, along with forward- and backward-looking AVMs;
- issuers providing BPOs on any property after 90 days delinquency on the loan;
- appraisals being part of standard disclosure for any REO property.

This is only the tip of the iceberg. Greater data availability provides a rich opportunity for predictive modelers. Statistical packages and math libraries are already in the public domains. We look forward to seeing vendors develop tools that help examine relationships between loan variables as well as tools that convert these relationships into predictive models.

Like all technology-based business, the business model of the structured finance data industry will need to evolve. In today’s information-and-technology-driven

economy, companies must continue to innovate. Netflix made Blockbuster outdated, but they will now face a challenge from video-on-demand technologies. Similarly, Google Docs is mounting a challenge to Microsoft's long-time market-leading Office suite. In the information space, companies like Yahoo, Google, and Facebook have made a huge business around sharing information. Wikipedia has shown how knowledge can be shared by specialists with an interest in disseminating information to the general public.

We foresee a new business model in structured finance that integrates the finest attributes of today's innovative information companies. Companies will survive and thrive based on their ability to develop new products, as their existing products become commoditized or outdated. It will be a new day for mortgage technology, where all participants have access to the same robust data sets and can utilize a rich set of tools to express their own opinions on bond values.

ENDNOTE

¹REG ABII and all of the comments are available online at <http://www.sec.gov/news/press/2010/2010-54.htm>.

To order reprints of this article, please contact Dewey Palmieri at dpalmieri@ijournals.com or 212-224-3675.