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Bringing Transparency to the Mortgage-backed Securities Market

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XBRL®
eXtensible Business Reporting Language

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Executive Summary

The Mortgage-backed Securities (MBS) market is frozen. There are perfectly good cash flows to be found in these MBS investment vehicles, but the entire re-securitization market lacks the information and reporting standards necessary to untangle the many good loans from the few bad. As a result, investors will not buy what they cannot understand, and the entire market has seemingly turned toxic.

The fix is straightforward and can begin immediately. This position paper is addressed to those industry leaders, regulators, legislators, and investors, who want to define transparency—and restore trust—in the Mortgage-Backed Securities market. The concept is simple enough: provide loan level details for every MBS from cradle to grave in an automated form that is easy to manipulate so that investors can value the actual cash flows of these investments.

In the current decentralized and self-defined reporting model, access to MBS information is out of reach for most investors because it is locked up in incompatible data formats and subject to inconsistent reporting. The price of extraction, standardization and analysis has been too costly and time consuming to be viable for any single participant. As a result, issuers, investors, rating agencies and regulators have built sophisticated systems and financial models to get around the problem, and rely on probabilities of default and on mark-to-market accounting to value these assets, instead of relying on actual cash flow information.

In the recent market crash, there have been some winners. These organizations were consistently looking inside the MBSs at the loan level details. This paper holds that the loans that are in MBSs are publicly traded instruments, and all investors are owed regular public reporting of the health of the assets. What is needed is the political will to bring standards and open access to this information — in the same way that the Securities Act of 1933 and the

Securities and Exchange Act of 1934 brought standards and open access to financial reporting for public companies after the 1929 market crash.

Specifically, our recommendations for the MBS market are:

Define the information disclosures necessary to evaluate a security across the entire MBS supply chain, including mortgage origination, MBS issuance, rating, and loan servicing.

1. Require reporting in a common data format, specifically XBRL (eXtensible Business Reporting Language), to ensure the quality, compatibility, and comparability of the information reported.

2. Require a common, centralized reporting system - similar to the Securities and Exchange Commission (SEC) EDGAR System - and ensure equal access to the information by market participants.

The technology to make these information standards already exists and can be implemented for a relatively low overall cost. Digital transparency is the sunshine necessary to unlock the great cash flows frozen in the MBS market. Standardized information can shine a bright light on what is wrong and on all that is right with the re-securitization market. We invite your comments and your participation in this solution, which is detailed below.

Fear of what we cannot understand has frozen the re-securitization market.

The Mortgage-backed Securities market has seized up. Despite the fact that there are perfectly good cash flows in re-securitized products, and that the vast majority of people who own a home continue to make mortgage payments every single month – no one is willing to buy. Instead of investing, people are pointing fingers at regulators and the rating agencies. Banks are adjusting the worth of these securities by marking-to-market at values that are well below the intrinsic cash flows. Insurance companies are borrowing money from the government to prop up their balance sheets. The government is issuing zero percent debt, and buying up securitized products in an attempt to re-start the market. Yet, no one is willing to buy back into the MBS market.

Why? Because fear of the unknown currently rules the re-securitization market. No one understands which loans are bad and which loans are good among the 10 million loans currently sitting in approximately 100,000 re-securitized products. The most recent estimate is that 10 percent of the re-securitized loans are toxic. While this is clearly a manageable level of risk, the problem is that the market, and regulators, simply cannot identify which loans are good and which loans are bad.

It's like having a peanut allergy in a supermarket where none of the packages list the ingredients. You know that you can eat most of the food – but you just don't know which package to pick.

How can this be? The simple reason is that even though these are publicly traded assets, *there are no public reporting standards mandated by any regulatory body.*

The Mortgage-Backed Securities supply chain needs data standards.
As a loan moves through the many participants in the MBS supply chain, each member of the supply chain – originators, retail banks, wholesale banks, issuers, servicers and ratings agencies – decides what to report publicly and when to report it. Additionally, all players use different report formats, different data labels, different ways of tracking the status of the collateral and even different models for tracking the identity of the individual loans. As a result, a loan can receive as many as five unique IDs between its origination and when it is bundled into an MBS. There is no centralized regulator that validates or collects all of this data. There is no central repository that can be queried to understand the quality or status of these loans. Therefore, it is difficult to track the status of a single loan in an MBS – even if it is in default – because every participant has completely different reporting models. The industry is awash in a sea of disconnected and incomparable data.

Incomparable data makes it impossible to identify and track individual loans from cradle to grave.

When considering the entire MBS market, single participants can be overwhelmed with the complexity or potential costs of solving all of the data problems they face. A single market participant controls little of the information that they depend on upstream, and controls little of what happens to the information that they pass along downstream in the supply chain. Ratings agencies, for example, have no authority to mandate and verify the validity of the data that is provided to them. Servicers cannot control quality of information at loan origination. Investors cannot mandate collateral status reporting across all servicers. Instead, like most market participants, they are spending millions of dollars annually on their own score cards, their own data repositories, and their own statistical systems to manage around probabilities of default and around the problems of other participants' independent information systems. Most hope that industry standards will arrive so that they can target and reduce the number of positions they are currently forced to take in order to manage the risk inherent in the problem of not knowing exactly what they are buying.

A Mortgage-Backed Security (MBS) contains thousands of loans.

Originators *capture information from borrowers including credit score, proof of income, etc.*

Lenders and banks *provide financing for these loans and collect loan data from multiple originators.*

Issuers *accumulate large pools of loans from lenders. They use the data they receive from lenders to build an MBS. (Asset Backed Securities (ABS) may contain mortgages and/or other debt like auto loans, credit cards, etc.)*

Servicers *are the final resting place for loans in MBSs. They use the data they receive from lenders or issuers to collect payments from borrowers and issue payments to MBS investors.*

Ratings *agencies use information from issuers and their own models to divide the credit worthiness of the pool into tranches. "Waterfall" data explains which loans are in which tranches.*

Credit Derivatives *are small slices of MBS tranches that distribute MBS tranches to a broader set of investors. Their value is based on the current market value of a specific Tranche rating.*

Figure 1
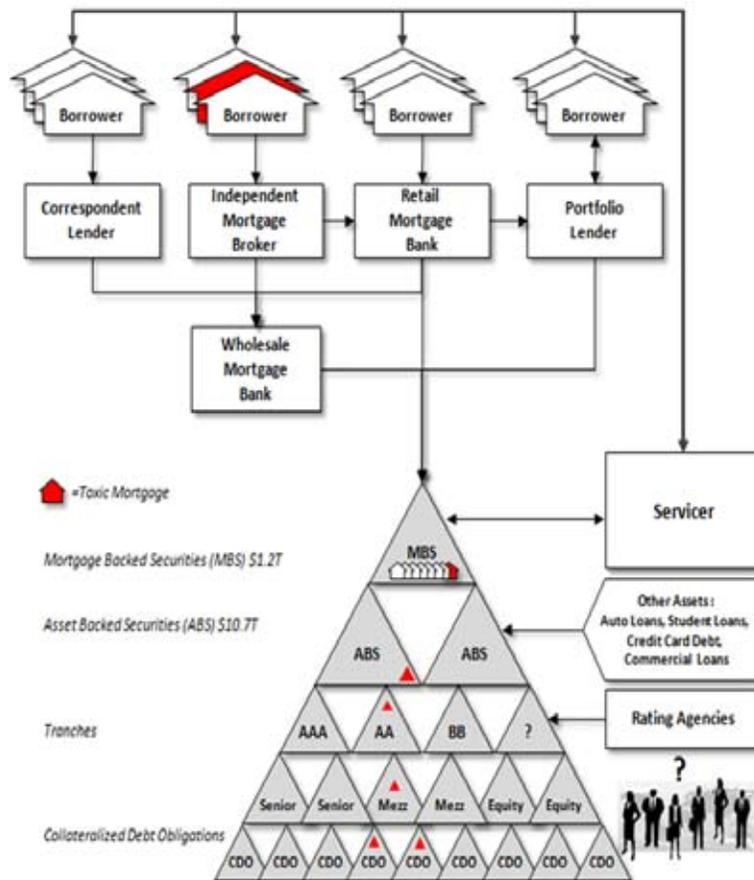
The re-securitization industry has created a multi-faceted data problem.

A. Ratings are based on inadequate data. The market relies on rating agencies and statistical probabilities for default instead of on analysis of cash flow and real time status of assets. These ratings agencies are the first to admit that their analysis is only as good as the data they receive. However, there are few models that include high quality validating or benchmarking data, and rating agencies, by necessity, have built models around assumptions and statistics.

Until a few months ago, these statistical models worked. As long as someone was buying the assets, the statistical models held up and the industry simply assumed that someone else had done their own analysis. However, when the market stopped buying, the statistical models couldn't provide an understanding of the real value of the cash flows inside each loan that makes up an MBS. No one had the information to contradict a market driven by fear, and values headed to zero. What is being discovered now is that some data that was provided to the rating agencies was simply not valid or comparable. In other cases, important elements like the fact that the mortgage was being made to a "First Time Home Buyer" and therefore has the highest probability of default or that it was a "Second Mortgage" was omitted by some originators. There are simply no standards for what is considered a "complete" report.

B. Issuance requires no standardized information. When an MBS is issued, underwriters provide an SEC-filed document called a Free Writing Prospectus (FWP). These FWPs are large documents containing a listing, called a loan tape, of all the loans included in the MBS, with various levels of detail on each loan, depending on the underwriter. The information in these documents describes the individual loans, including the credit worthiness of the borrower, the value of the asset, when the interest rate will reset and more. Most times the information in these documents is sanitized of private information, but sometimes personal information is included. Some loan tapes have over 100 data elements for each loan, while others have as few as 20. There are no industry standards or government regulations concerning these disclosures. These documents can be thousands of pages long – and are literally documents, not data files that could be used by computer applications.

In an effort to better understand the available data, EDGAR Online began a study of the loan tapes from over 500 mortgage-backed securities priced during 2006, 2007 and the first half of 2008. The team at EDGAR Online extracted the detailed loan information from

each of the loan tapes, and attempted to standardize the various fields against a defined set of variables. What made this exercise difficult was that each underwriter provided a different set of information in each loan tape, and the terminology used to describe the various fields and the data values varied greatly. At the end of the study, EDGAR Online had accumulated a list of over 600 unique fields disclosed across the more than 500 loan tapes. Some fields were disclosed nearly 100 percent of the time (current loan balance is an example of a very common field) while others were unique to certain underwriters. In just this small sampling of MBS, it was eminently clear that the great variation in the reported data made it nearly impossible for an investor in these securities to know what they were buying without spending an enormous amount of time and resources processing and interpreting the data. Below is a schedule showing the fields that were most frequently included and the percentage of FWPs that contained those fields from the 500 FWP's that EDGAR Online analyzed.

Analysis of loans by EDGAR Online shows companies use over 600 unique fields, with no consistency.

Figure 2

DATA ELEMENT	% of FWPs	DATA ELEMENT	% of FWPs	DATA ELEMENT	% of FWPs
Original Loan Balance	97.02%	ARM - Periodic Rate Change Frequency	53.77%	Lender Paid Mortgage Insurance Fee	23.81%
Property State	97.02%	Balloon Flag	52.78%	Note Date	23.81%
Property Type	95.24%	Original Interest Rate	52.18%	Self Employed Flag	23.61%
FICO	94.64%	Remaining Term	51.39%	Program	23.21%
First Payment Date	94.64%	Servicing Fee	50.60%	Amortization Type	22.42%
Occupancy Type	93.65%	ARM - First Rate Change Date	47.22%	Pool	21.23%
Loan Purpose	93.45%	Adjustable Rate Flag	47.02%	ARM - First Rate Change Period	21.03%
Current Rate	92.06%	Origination Date	46.83%	Negative Amortization Limit	20.63%
Maturity Date	90.28%	Group	45.63%	Convertible Flag	20.63%
Property Zip	89.88%	Borrower Quality	45.04%	Current Combined LTV	20.24%
Original Term	86.71%	Current LTV	44.64%	ARM - Periodic Payment Change Cap	18.65%
Documentation	85.12%	Loan Type	42.66%	Frontend DTI Ratio	18.65%
ARM - Margin	84.92%	Mortgage Insurance Company	42.06%	Silent Second Flag	18.65%
Lien Position	84.33%	Interest Only Flag	41.67%	Delinquency Status	18.06%
Loan ID	82.74%	Prepayment Penalty Flag	40.87%	Conforming Loan Flag	17.26%
Interest Only Term	81.15%	Servicer	40.48%	Master Servicing Fee	17.06%
ARM - Periodic Rate Change Cap	74.21%	Paid to Date	38.69%	Mortgage Insurance Certificate ID	17.06%
ARM - Lifetime Max Rate	73.21%	Senior Lien Balance	38.69%	Originator Loan ID	16.67%
Current Loan Balance	72.22%	Junior Lien Balance	37.90%	Negative Amortization Flag	16.47%
Current Principal and Interest Payment	71.63%	ARM - Next Payment Change Date	37.70%	As of Date	16.07%
Mortgage Insurance Coverage	70.63%	Loan Subtype	35.52%	ARM - Look Back Period	15.87%
ARM - First Rate Change Cap	69.84%	Seasoning	34.33%	Channel	15.87%
Original Combined LTV	67.86%	ARM - Periodic Payment Change Frequency	33.93%	Property County	15.67%
Original LTV	65.08%	Original Principal and Interest Payment	31.94%	Current Scheduled Loan Balance	14.88%
Prepayment Penalty Term	64.09%	ARM - First Payment Change Date	31.35%	Mortgage Insurance Fee	14.48%
Number of Units	63.29%	Prepayment Penalty Type	30.56%	First Time Buyer Flag	14.29%
Backend DTI Ratio	63.10%	Cut Off Date	30.36%	Remaining Term - Stated	14.09%
Property City	62.70%	Mortgage Insurance Flag	29.76%	Buydown Flag	13.89%
ARM - Next Rate Change Date	62.50%	Next Payment Due Date	29.56%	Delinquency Count	12.30%
Appraisal Value	61.31%	Originator	28.97%	Remaining Interest Only Term	12.10%
ARM - Lifetime Rate Change Cap	61.31%	Current Net Rate	27.98%	Current Combined Loan Balance	11.71%
Property Sales Price	60.52%	Property Value	27.18%	Interest Paid to Date	11.71%
Amortization Term	60.12%	Appraisal Type	25.00%	ARM - Lifetime Min Net Rate	11.51%
ARM - Adjustment Index	60.12%	Current Actual Balance	24.60%	Current Appraisal	11.51%
ARM - Lifetime Min Rate	59.52%	Months to Next Rate Change	24.60%		

C. Servicers use disparate data in their own, unique systems. Once an MBS is being traded and the loans are being managed, the problem becomes more complex. The

servicers are organizations that receive pools of loans from a wide variety of originators and lenders. They hold the individual loans and collect and distribute the actual interest payments to investors. These servicers receive loan data in widely disparate formats and varying levels of completeness. They attempt to standardize the information they get from originators and issuers into their own formats. But in some cases these servicers actually maintain multiple incompatible internal systems all housing information in different formats from different sources.

The servicers file forms 10-D with the SEC. These 10-D filings provide statistical level information on delinquencies, bankruptcies, foreclosures and bank owned assets (REOs), summary information on interest and principal payments, balance information and some loan level details. Information is provided in different format, in varying levels of completeness, and with different identifiers. And, it is completely incomparable to the information provided by any of their peer servicers.

Figure 3

Sample of information contained in Form 10-D from a servicer

The information contained in 10-Ds is some of the most important information for investors but because of the lack of standardization in format and fields it is highly time

consuming and expensive to convert these files into information that can be digested and analyzed by computers. The loan level detail contained in these files is further complicated by unique identifiers that can't be traced back through the waterfall of tranches or to the original FWP. As a result, picking up trends in defaults, shortfalls in interest or positive performance for pools of loans is difficult, if not impossible.

D. Payment processing is inefficient. In 2007 the Depository Trust & Clearing Corporation (DTCC), which holds most of these issues on behalf of investors' financial intermediaries (banks and brokers), issued a whitepaper on the re-securitization market explaining that:

"CMO/MBS issues have the poorest performance of all security types with regard to:

- Delivering rate information (information on the amounts of the periodic payments of interest and principal on these issues) on a timely basis

- Accuracy of that rate information as measured by the proportion of rates that are corrected after payment date and result in adjustments to the funds the bondholders received on payment date."

This DTCC whitepaper explained that payment data problems in the MBS market were alone responsible for an average of $10.6 billion in late payments to over 100,000 investors per year. Each month it was estimated that, as of two days before a payment was due, over 59% of the MBS payments did not yet have the information necessary to pay the appropriate investors. As a result, DTCC was required to collect, verify, and act upon over 75,000 payable items with just 48 hours to complete all the necessary processes. Additionally, over 7,500 principal and interest payments required post-payable adjustments or reversals each year because of incorrect rate information received by DTCC – affecting over 300,000 investors and resulting in the highest error rates among any security type. On average, over $800 million in late payments were occurring each month. These payment problems caused additional interest costs, inadequate cash management (especially to international beneficial owners), ambiguity surrounding payment finality, considerable back-office write-offs, and significant exception processing costs to broker-dealers and custodian banks across the entire MBS industry.

Through 2007 and early 2008, DTCC drove an industry-wide process to standardize a common model for consistent reporting and scorecarding among the largest paying agents of principal and interest. In March of 2008, DTCC implemented the MBS Scorecarding Process, and in May started charging an exception processing fee at the point of underwriting for non-conforming issues. Non-conforming issues are those with features that are unlikely to ever allow paying

agents to report rate information to DTCC prior to a payable date.

As a result, payment processing has dramatically improved. Since May 2008, the late payment rate has decreased by 58% -- although it still falls well short of the performance levels on other securities instruments. Clearly the need for and impact of data standards – and comparable data – is dramatically evidenced by just this one small step in the overall supply chain of the MBS market.

Fixing the broken information ecosystem of the MBS market is technically simple.

If we are going to fix this market, we have to fix the broken information ecosystem in this market. If an asset is publicly traded, investors are owed regular information on the health of the asset. This necessary information to value an asset must be in a common format; it must be of sufficient quality to be comparable and it must be publicly accessible.

Every mortgage-backed security should be required to report a common set of data elements, using a common data format and submitted to a common centralized reporting system on a timely basis. The reporting standard should explain the loans, the cash flow, and the status of the collateral every month. It should help originators communicate with re-securitization issuers, help issuers communicate with rating agencies, and help servicers communicate with investors. The MBS market needs to be updated to at least the reporting standards that exist in other asset classes, such as equities, with its own "EDGAR" system.

Modern computer software makes the creation of this kind of reporting solution easy and relatively low cost for market participants. The data elements needed to make this market effective number in the hundreds, not thousands. As mentioned, most organizations on the sell side of this market are already maintaining their own independent information systems and data repositories of much of this information. Many of these systems are older and incompatible with one another and need to be upgraded to produce a standard set of data elements in a common format. Because centralized reporting standards have not existed, most organizations couldn't justify the return on investment for these upgrades. A centralized reporting standard provides both a target and a justification for organizations to make investments – restarting this market provides a clear ROI.

Harnessing the political will needed to re-start this market is more complex than the technical solution. Countervailing political interests have blocked any real progress on reporting standards. Many members of the supply chain have benefited from obfuscation of

reality. Some claim that they have the right to keep data private while trading these assets publicly. Some question which regulatory body has eminent domain. The reality is that MBSs are publicly traded assets, and the entire market is frozen. So the competitive value of barriers to information is now zero, and the costs of covertly managing essential market data will be exceedingly high.

It was the public outcry and political will for change after the last stock market crash that resulted in the creation of the SEC and the Securities and Exchange Act of 1934. Since that time, every publicly traded company has been required to file reports that detail the financial health of the company and of investors' equity. These regular standardized reports have become essential to the functioning of capital markets. The current crisis calls for the parallel response we have proposed in this paper.

The Creation Of The SEC

"When the stock market crashed in October 1929, public confidence in the markets plummeted. Investors large and small, as well as the banks who had loaned to them, lost great sums of money in the ensuing Great Depression. There was a consensus that for the economy to recover, the public's faith in the capital markets needed to be restored. Congress held hearings to identify the problems and search for solutions. Based on the findings in these hearings, Congress — during the peak year of the Depression — passed the Securities Act of 1933. This law, together with the Securities Exchange Act of 1934, which created the SEC, was designed to restore investor confidence in our capital markets by providing investors and the markets with more reliable information and clear rules of honest dealing. The main purposes of these laws can be reduced to two common-sense notions:

1. Companies publicly offering securities for investment dollars must tell the public the truth about their businesses, the securities they are selling, and the risks involved in investing.

2. People who sell and trade securities – brokers, dealers, and exchanges – must treat investors fairly and honestly, putting investors' interests first."

http://www.sec.gov/about/whatwedo.shtml#create

The data solution for MBS reporting is XBRL (eXtensible Business Reporting Language). Most investors assume that all information in the financial industry is highly automated and digitized. The plain truth is it is not. Most of the information used to value and analyze assets is issued in documents and manually re-keyed by analysts into spreadsheet models. Recently, the SEC announced that it was taking the step of updating 70-year-old financial reporting standards to the 21st century, by requiring companies to supplement annual and quarterly reports with a computer-readable data file in a global data format called eXtensible Business Reporting Language (XBRL).

XBRL tags transform financial information into computer-readable interactive data. XBRL tags a company's financial reports in a language that is natively readable by computers –

like bar coding. This tagging makes it easier for financial analysts to extract the most important elements of a financial report directly out of the document without having to re-key the data. Because the tags are digitized and standardized across the industry, it becomes much easier to use highly sophisticated computer models to screen for anomalies, compare reports, extract buried nuggets of information, and detect patterns.

eXtensible Business Reporting Language (XBRL)
eXtensible Business Reporting Language (XBRL) provides a common computer tagging language for financial reports. It standardizes the data reported in large financial documents into computer readable data elements. It dramatically improves accuracy, comparability, and timeliness of information. In short, it provides digital transparency.

The SEC and the US Equities reporting industry has defined over 15,000 data elements to describe the income statements, cash flows, balance sheets and footnotes of all public companies. Industry bodies representing CFOs, CPAs, CFAs, and financial regulators came together to define common tagging definitions for difficult topics like executive compensation, lease obligations, pension liabilities, tax obligations, oil & gas reserves, land use for REITs, etc.   Starting in 2009, the SEC is requiring reporting companies to supplement their 10-Ks & 10-Qs with an XBRL data file.

Figure 4

In a world where we are trading billions of dollars of assets per second, where financial reporting is becoming increasingly complex, where the number of public companies is growing around the world, and where investors and regulators are having a hard time keeping pace, XBRL does for digital investors of the 21st century what the 1934 Act did for previous generations of investors: it provides investors with digital transparency.

Recommendation: Define what needs to be reported and how it needs to be reported: XBRL.

This same 21st century approach needs to be applied to the MBS market. An industry body that includes the sell side, the buy side, rating agencies, and financial regulators, must come together to define "what" and "how" information needs to be reported to the market. It is not enough to simply state "what" needs to be reported, because information that is not consistent, comparable and accessible remains unusable. Addressing "how" information is to be reported requires the market to agree on important constructs like the identity of a loan (from cradle to grave), who originated the loan (independent originator, retail bank, etc.), documentation of the borrower (first time home buyer, proof of income, etc.), the status of payments (is a payment late, has one been missed, is the loan in default), the waterfall information which discloses the tiered structure of creditors, who has the right to view certain information, payment processing data and other highly de-standardized but important facts.

Regulators should take leadership in working with the industry to:

1. **Define what information needs to be reported to the public.**
   Representatives from regulatory agencies, the buy-side and sell-side firms, credit rating organizations, issuers, servicers, the American Securitization Forum (ASF), the Mortgage Bankers Association (MBA), the accounting profession, and the technology industry should come together quickly to build a common definition of the information supply chain needed in the MBS market. They need to define the steps in the supply chain, define the specific information needed at each step, agree on who is responsible for this reporting, and establish the priorities for implementing reporting standards. Organizations like the ASF and the MBA have done significant work already in defining the information requirements for the industry. We encourage these organizations to take a leadership position with regulators in defining reporting standards.

   The MBS industry should learn from the experience of the equities market. Industry participants, CFOs, CPAs, CFAs, technologists, and regulators voluntarily convened a standards effort. The effort started small, by defining 3,000 elements for the primary financial statements, and evolved to include over 15,000 elements defining footnotes and industry-specific elements. Industry groups became involved (oil & gas industry, insurance industry, etc.) and evolved the standard in specific areas to better represent their audiences.

The MBS market is far less complex than the equities market, and will require only hundreds of data elements, not tens of thousands. The MBS market should take a similar evolutionary approach, starting by standardizing FWPs, and requiring issuers to file consistent data describing the loan level data in FWPs, moving to standardization of waterfall and servicing information. Then, once these first steps are in place, push deeper into the supply chain to include the MBS issuers, and the originators of mortgages.

2. **Implement reporting quality standards using interactive data (XBRL).**
The industry will need to codify its reporting requirements into actual data elements. There must be definitions of what is "valid" versus "invalid" data. Investors and issuers will have different language and currency requirements, and the industry will have a wide variety of versions and types of computer systems that need accommodating. The data will need to be consistent in its format (i.e. text, currency, decimals, percentages, etc.). Investors will need to be able to compare historical information with current information, and since reporting requirements change over time, they need to ensure that everyone is able to go back and read how the information was reported and how it was defined.

XBRL was designed to solve these "technical data" problems for financial reporting. Instead of requiring the industry to spend time dealing with issues like validation, compatibility, currency, language, extensibility, formatting, rendering, etc., the industry can use XBRL for MBS reporting. The model for building XBRL data specifications is internationally agreed upon and can be quickly leveraged to accelerate the MBS's journey towards transparency for 21st century investors.

3. **Build a centralized reporting system that makes the information accessible to investors.** Regulators should ensure that a central repository similar to the EDGAR system is established for the MBS market. Any re-securitized asset that is publicly traded should be required to submit XBRL data reports to this central repository on a monthly basis. Market participants should have visibility to the entire supply chain with the data submitted. Investors should have transparency of the monthly health of assets they have invested in or are considering investing in through this central repository.

XBRL tagging and centralized reporting should be used throughout the entire MBS supply chain.
How would centralized XBRL reporting practically work? When an MBS is issued, the issuer should be required to file a computer-readable XBRL data file with the central repository that

contains loan level data tagged in the XBRL format. Based on the work that has been done to date, we estimate that this will involve approximately 150 data elements, and will include information on each individual loan, the collateral, and the supporting documentation and detail on the borrower such as: proof of income, salary and down payment amount, and detail on the originator – essentially a digital FWP document.

This XBRL data should be submitted to the common repository and made accessible to all investors. As a waterfall of mortgage-back security vehicles is created, the contents and structure of each tranche of an issue should be similarly filed with the repository in this common data file format (XBRL). Throughout the life of the MBS, the servicers should be required to file monthly information that they collect on the status of the loans, the collateral and the borrowers in this common data format (XBRL). Form 10-Ds should be standardized and filed in XBRL format. We estimate that this servicing data set will be approximately 200 data elements and expand over time to approximately 500 elements. (To put this in context, the U.S. Equities market uses over 15,000 elements to tag its 10-Ks, and 10-Qs – the MBS market is far less complex.) The result would be a central public repository of the ongoing status and cash flows of all publicly traded mortgage-backed loans – essentially a digital EDGAR system for the MBS. Investors in these issues would be able to access the data in the repository, and – through the use of XBRL, it would be immediately ready for use in automated data modeling and analytic systems. This would also enable investors to much more easily conduct their own financial analytics on the particular issue

1. **MBS Issuers** *should provide loan level details in XBRL format before an MBS issue is priced. (Approx. 150 data elements)*

2. **MBS Servicers** *should provide Form 10-D, and loan-level detail of ongoing status/servicing information, including entitlement information (used by DTCC) in XBRL format on the MBS loans they service. (Approx. 500 data elements)*

3. **Ratings Agencies** *should provide XBRL data that describes the rating and waterfall structure. This will allow investors and regulators to track the individual loans through the tranche process. (Approx. 100 data elements)*

4. **MBS Ownership information** *should be reported – similar to required reports on stockholder equity in the US equity market. (Approx. 100 data elements)*

5. **Granular management** *of reported information. XBRL is a data language that allows issuers and services to file a single report but provides regulators and investors with their own unique views - maintaining the sanctity of private vs. public information for each issue.*

Figure 5
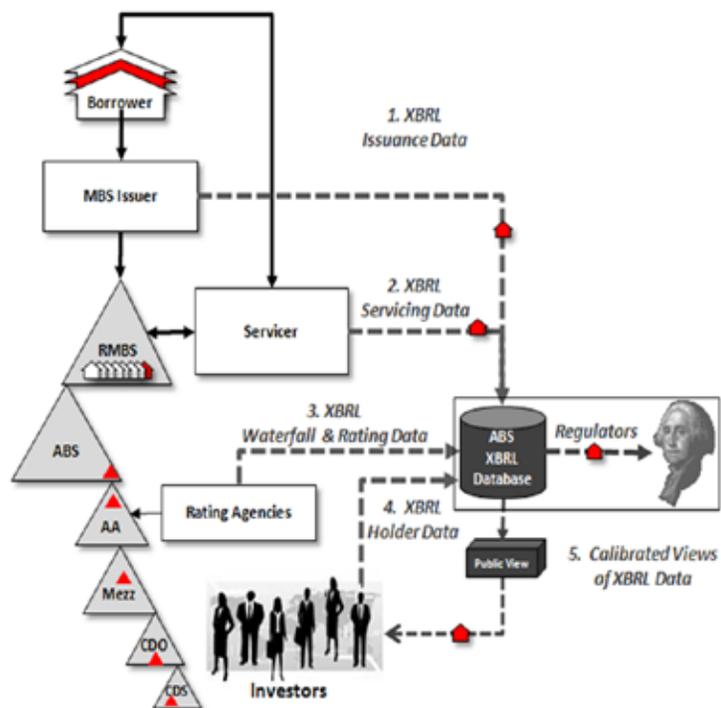
they own – a major improvement in transparency on MBSs, establishing a much sounder basis for an investor's conclusion that he or she knows what the MBS asset is worth and is ready to trade it.

Phase in these transparency initiatives: Start with FWPs and the TARP and expand across the supply chain.

It is important to reinforce that the industry and regulators must realize that all the problems of the entire supply chain of information cannot be resolved within the first phase of implementation. The immediate costs and complexity would be too great. Industry agreement on each phase needs to be achieved. Technology solutions need to be implemented. The entire phase- in period should be 24 to 36 months. Regulators should start with the basic information that is in the FWPs. The set of elements that need to be in an FWP should be agreed upon and standardized. Any new MBS issue that comes to market should be required to report its FWP in XBRL format. The industry should expand requirements to include the rating and waterfall information. The information that is in Form 10-Ds should be standardized and reported in XBRL format. Then the information that is collected and managed by the servicers should be standardized and reported regularly. Industry participants, such as servicers and systems vendors like Fiserv and Fidelity understand this supply chain, its current weaknesses, and the technology upgrades that are necessary to achieve this digital transparency.

To serve as a model to the industry the Treasury could lead by providing XBRL data on all MBSs that have been purchased in the TARP. The Treasury could work with the issuers, rating agencies and servicers to identify all loans in all MBSs it owns. Define unique IDs. Retrieve any historical information from the original FWPS. Determine the current status of these loans from the servicers. Then, re-issue these MBS in re-tranched form – with a package of XBRL data for each tranche (CUSIP) – essentially kick starting the entire information ecosystem for this market with a new type of MBS - -a "translucent MBS"!

Summary

The Mortgage Backed Security industry is in its worst downturn ever. Perfectly good cash flows and an entire industry are being labeled toxic. Many people are raising concerns about transparency. Others are concerned about adding costs and regulation to an already hobbled industry. Lack of transparency, and a broken information ecosystem have proven to be a far greater cost than anyone could have ever contemplated. This crisis has proven that lack of transparency ultimately destroys a market.

At the same time, it is important to understand that market forces do work when there is good information, and in retrospect that good Information in the hands of investors and regulators could have helped the market avoid the current crisis. There are a number of buy-side firms that recognized the risk in this market. They spent considerable sums of money to understand the loan level data we have discussed in this paper. These firms were able to avoid high-risk investments and identify good opportunities, profiting handsomely from loan-level data. Since 1934, it is has been recognized that consistent centralized financial reporting is critical to the functioning of public markets. There are many data issues in the MBS market, from a lack of information to downright fraudulent information. The simple step to require consistent periodic reporting in XBRL will be a giant leap forward for the industry and the investors. The initial set of data elements will not be perfect or complete and the MBS industry will need to refine the information that needs to be reported across the supply chain over time.

However, if the industry is not committed to providing consistency in reporting, then risk will continue to be obscured, analysis by investors made unachievable, and fear will continue to dominate this market. XBRL brings 21st century technology to solve transparency problems that investors have faced for decades. We need high-quality information that is consistently validated and comparably presented, and that is computer-readable to level the playing field for today's savvy investors.

In a market that is frozen by lack of transparency, the MBS industry and the federal regulators overseeing the TARP fund would be well advised to leverage XBRL. It is the digital sunshine that can help to thaw the fears of investors and reveal the great cash flows that exist inside these assets. It can cast a very bright light on what is wrong and, more importantly, what is right with this re-securitization market.

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Why XBRL serves the market better than current spreadsheets and documents.

As mentioned earlier, XBRL is a reporting language that is based on international standard XML (eXtensible Mark-up Language). Today's reporting environment has many people reporting in many formats – Microsoft Excel spreadsheets, Adobe PDF documents, and HTML Web pages are the principal formats that servicers and issuers are using to communicate information. These formats do not address the needs of the market or the investors because they lack security, data consistency, formatting consistency, version history, or computer compatibility.

Specifically, XBRL provides the following benefits over these "document/spreadsheet" oriented formats:

- **Multi Currency and Multi-Lingual** – XBRL is designed to allow investors to view the data labels in their native language and in multiple currencies.

- **Reduced Reporting Costs** – XBRL is being leveraged for regulatory and banking reporting worldwide already. As a result, there is a broad cost competitive ecosystem of tools and service providers that produce XBRL. In the US Equities market the cost is a few thousand dollars per report. Using a standard already in use by many of the MBS market participants will drive down the cost and complexity for filers because they will not be required to learn a new proprietary format created just for the MBS market.

- **Reduced Data Processing Costs** – Because XBRL is extensible, the reporting process for the MBS market can be phased in. Each member of the supply chain will incur some cost, but these costs in reporting will be easily be offset by the cost savings accompanied with receiving better data from their up-stream business partners. Because XBRL is based on XML there are numerous technology organizations already investing in XML for other industries that will drive the costs of producing and consuming this data.

- **International Industry Standard** – XBRL is an open standard managed by an independent worldwide governing body that includes experts from banking, clearing, accounting, financial analysis and technology. It leverages a worldwide community to solve common financial reporting problems. Leveraging this body of knowledge allows the MBS market to focus on its unique problems instead of spending resources re-solving technical and financial reporting problems.

- **Data Quality** – XBRL defines rules for creating data and validating a report. Fields like collateral status, lenders status, credit scores, and payment structure can be complex and require consistency from report to report. XBRL was built to help filers create data with consistent labels and content. It provides a structure to organize and extend these data elements. Most importantly, it provides a model to validate that the structure and the content of a report adheres to the appropriate standards. All of these concepts are critical when trying to manage quality and comparability of data across an industry of independent organizations with a wide variety of information systems.

- **Security and Privacy** – XBRL provides traceability and detailed control of the information reported. The originators identity and timestamp can be traced for XBRL filings. Because XBRL decomposes information into individual data elements, a single XBRL filing can contain private and public information. Today a document like an FWP is released in whole into the EDGAR system with no control of who sees what in the document or spreadsheet. Using XBRL, a filer can file a single report that simultaneously provides both regulatory and public reporting views of the data.

- **Historical Comparability** – Regulators and industries change their reporting requirements all the time. If a regulator decides to eliminate three elements and require seven new elements, an investor and a filer need to be able to compare past reports to the new reports. With a spreadsheet or document, the filing and investment are left with the job of deciphering changes in reporting from report to report. With XBRL there is versioning and an enduring structure that allows comparisons from report to report at total, subtotal, and even the individual element level automatically, regardless of changes in reporting.

- **Compatible** – XBRL is not proprietary to any specific operating system or application vendor. It can be created on any computer system and can be read by any computer that has access to the Internet. Software vendors like Oracle, SAP, Microsoft, IBM and many others are embedding XBRL in their software to provide native financial reporting in XBRL.

information on XBRL can be found at www.XBRL.US and www.XBRL.org

XBRL US is interested in receiving comments on this white paper.
To submit comments, please go to
http://xbrl.us/taxonomies/pages/commentRMBS.aspx