

Structured finance perspectives

Trends in ABS, MBS & CDOs
Loan Level & Collateral Performance Data



PRINCIPIA

Executive summary

In Principia's Q4 2012 Survey, 115 structured finance investors answered our questions about their use of loan level and collateral performance data in the management of ABS, MBS and Structured Credit securities.

The results highlight the varying approaches and the granularity investors go to when analyzing their securitization exposures, who they turn to for loan level and performance data and how effective the market is at managing that information in an increasingly data rich world.

Key findings

- 58% of EU investors and 45% of US investors said that their operational systems were not effective at managing this data
- 60% of investors used four or more different performance data sources
- 80% said that it was a challenge to normalize performance data across multiple different data sources
- Ease of data integration ranked first in the most important aspects to consider when selecting performance data suppliers
- 90% said it was not easy using or managing loan level data due to the lack of standards in its disclosure
- The difference in the maturity, consistency and disclosure of loan level data is pronounced between the US and EU.

This report details which sources of data investors use, what they believe to be most important when selecting and using this data, and current market sentiment regarding the data landscape that exists for structured finance.

As regulatory clarity increases around securitization, those providing the data to investors have a vital role to play. However, with an expanding ocean of data from issuers and vendors of performance and loan level data, the due diligence challenge for investors is now an operational one.

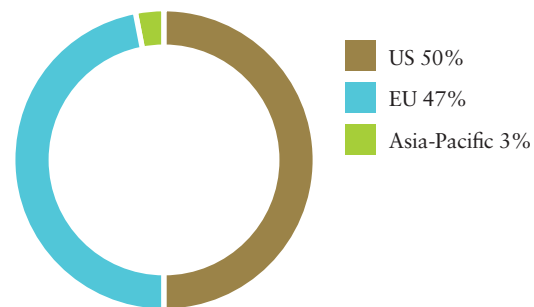
Gaining an efficient way to access and make use of all this information across their portfolio management and risk oversight functions is a key priority for investors.

“The sheer diversity of structures and cashflow waterfalls means that each deal demands very different look through analysis and different levels of collateral analysis. Identifying the level to go to for each asset is key.”

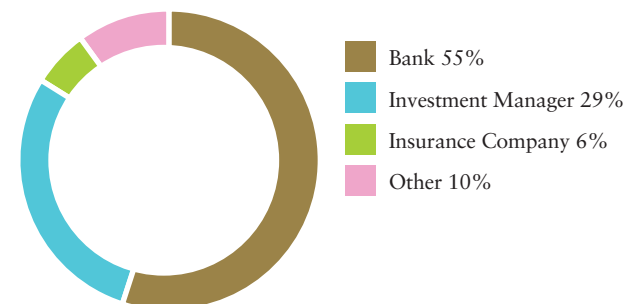
Head of Risk, Major EU Bank

Investor Focus

Investor breakdown by geography



Investor breakdown by type



Across asset classes, it is clear that investors in the ABS markets now prioritize the need to understand and access the appropriate level of detail for the asset classes they invest in.

100% of respondents stated that accessing timely securitization and tranche detail information was absolutely fundamental to their operations.

95% said that they referred to aggregate pool statistics and stratification tables highlighting collateral performance data.

In addition, 85% of investors stated that they now also drill down and analyze loan level data for at least one asset class. A breakdown of these results by asset class is detailed herein.

This report covers the key findings from the survey and follows Principia's earlier study, "Trends in ABS, MBS & CDO Market Pricing".¹

¹ The 2012 study of structured finance investors explores their use of secondary market pricing. The full report can be found on http://www.ppllc.com/ABS_Investor_Research.htm

Defining the level of drill down

How low do you go?

The level of data investors access for deal and collateral analysis is largely dependent on the types of structured finance assets invested in.

This study demonstrates that the nuances of different asset types and the makeup of their asset pools drive investor decisions about the granularity of information they go to.

It is also evident that the differing availability, delivery and maturity of loan level transparency in different regions affects investor's ability to perform collateral analysis, even if it may be deemed appropriate for comprehensive credit analysis of the investment.

Four levels of detail

- **Level 1: Deal and tranche information**, e.g. underwriter, coupon payments, factors, credit enhancement, structural features, performance triggers, hedge counterparty
- **Level 2: Aggregate pool statistics and performance data**, e.g. collateral stratifications, KPI's for prepayment, delinquency, foreclosure and loss severity rates
- **Level 3: Loan level data**, e.g. property/asset type, loan type, loan purpose, occupancy status
- **Level 3+: Enhanced loan level data**, e.g. updated property values, borrower credit scores, additional loan information

Accessing dynamic deal information and ongoing collateral performance data is now a given for investors.

95% said that they analyzed aggregate pool statistics and performance data in their analysis and surveillance of securitization exposures. Loan level data was mainly used by investors in private label EU and US RMBS, CMBS and CDOs, and to a lesser extent, US agency backed MBS.

This data is vague until broken down by asset class where it becomes clear that the level of detail investors go to is dependent on the assets they invest in.

For example, only 50% of investors access loan level information for ABS transactions. Dynamic deal and tranche information, and collateral pool statistics presented in stratification tables, were deemed sufficient for the analysis of US and EU ABS.

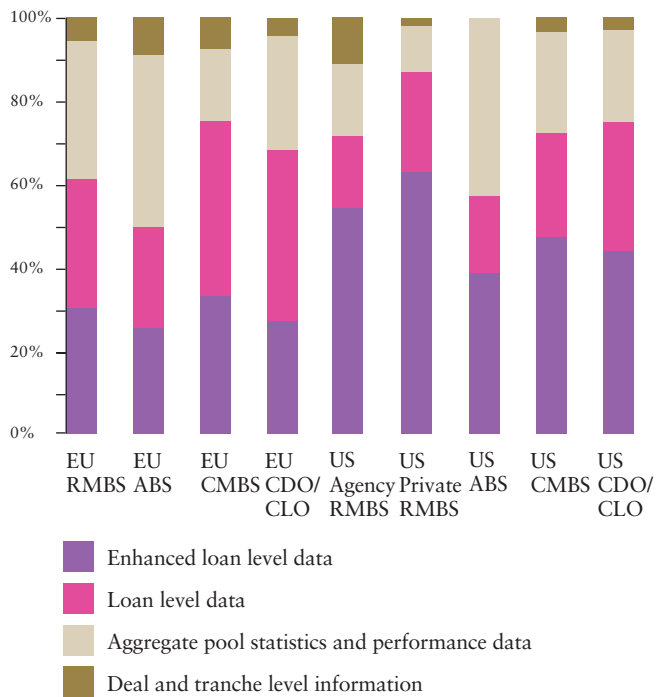
95%

of investors said they analyzed aggregate pool statistics in their assessments

Defining the level of drill down continued

Our results are consistent with the view that drilling down to analyze loan by loan information is not necessary on a regular basis for assets backed by large homogenous asset pools, inherent within ABS, or by securities with government guarantees, such as US Agency RMBS.

Depth of analysis investors go to for each asset class



Regional differences were observed with only 61% of EU investors accessing loan level data for EU RMBS, compared with 87% for US non-agency RMBS.

Enhanced loan level data (regularly updated property values, borrower credit scores and additional loan information), was primarily used in the analysis of US non-agency MBS too, where 63% of investors said they looked to layer in this level of detail into their analysis. This was significantly higher than for EU RMBS, highlighting that the availability and maturity of this level of data and associated services in the US, greatly outstrips the EU.

Loan level data was key to approximately 75% of investors in both EU and US for CMBS and CDOs, highlighting the importance of understanding the underlying in these deals, where the individual loans in a pool bear more weight on the overall performance of the deal.

Investors use of loan level data in RMBS Analysis



The above graph illustrates the depth of analysis investors go to for each asset class. For EU ABS for example, 24% of investors drill all the way down to enhanced loan level data, 50% drill down to loan level data, 91% leverage pool performance statistics and 100% make use of deal and tranche level information.

This can be observed when isolating US investors in the study, that invest in RMBS. 13% do not use pool statistics in their analysis of Agency RMBS, compared with 2% of Non-Agency RMBS investors.

Also, compared with private label deals, a far lower percentage (70%) stated that they use loan level data in the analysis of Agency MBS. This compares with 93% for US non-agency MBS.

Increased loan level disclosure following initiatives from Fannie Mae and Freddie Mac may see this figure increase as they provide loan level data for new securities that they issue.

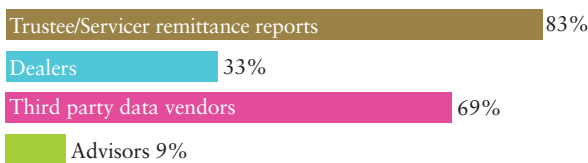
Level 1: deal and tranche information

Sourcing deal and tranche information

The dynamic information associated with deal and tranche information, like factors and coupon payments, are clearly crucial to all investors.

When asked which sources investors accessed to review and update these basic components of securitization information, investors primarily choose to go directly to the issuer, although a large percentage also obtained this information from their data vendors.

Methods used to obtain deal and tranche information



About 70% of investors stated that they use two or more different types of information source to obtain this information across a portfolio of assets.

How soon after a payment date should the data be made available by trustees?

Both EU and US investors had almost identical expectations with regards to what constitutes timely delivery of this information following a payment date.

Overall, 86% of investors believe this remittance information should be delivered in one week or less from the payment date of the security.

Straight from the rulebook

“A bank must demonstrate to the satisfaction of the Federal Reserve a comprehensive understanding of the features of a securitization position that would materially affect the performance of the position.

The bank’s analysis must be commensurate with the complexity of the securitization position and the materiality of the position in relation to capital. To support the demonstration of its comprehensive understanding, for each securitization position a bank must:

(1) conduct and document an analysis of the risk characteristics of a securitization position prior to acquiring the position, considering:

(a) structural features of the securitization that would materially impact the performance of the position,

(b) relevant information regarding the performance of the underlying credit exposure(s),

(c) relevant market data of the securitization, and

(d) for resecuritization positions, performance information on the underlying securitization exposures; and

(2) on an on-going basis (no less frequently than quarterly), evaluate, review, and update as appropriate the analysis required above for each securitization position.”

Section 10(f), Risk-Based Capital Guidelines: Market Risk, January 2013

70%

of respondents used two or more different types of information source for deal and tranche information

“Standardising definitions and data reporting continue to be an inefficient process due to the lack of minimum standards or consistency amongst all participants, whether issuers or data providers.”

Head of ABS Investment, EU Bank

Level 2: performance data

Beyond the deal structure: obtaining collateral performance data

Collateral performance data comes in many forms and refers to aggregated performance information relating to the collateral backing a deal, for example prepayment speeds, loss rates, or the 30, 60 and 90 day delinquency rates of a pool.

These key indications of performance can also include information based on different stratifications of the underlying collateral within the deal, for example the percentage in various LTV buckets. This information is an integral component in performing initial and ongoing deal and portfolio credit analysis.

Global capital requirements, as implemented via the EU CRD IV and the US Market Risk Final Rule, have made this level of analysis a pre-requisite to demonstrating an understanding of ABS transactions and conducting due diligence.

We asked investors how they obtained these key performance statistics for their structured finance positions, whether from internal or third party sources.

The following results do not compare the relative quality of the performance data provided by each vendor, but highlight what services are available and what investors are using across the gamut of ABS, RMBS and structured credit deals.

The following sources of performance data were identified:

- In-house calculated statistics
- Trustee/servicer remittance reports
- Third party data vendors

The vendors identified were:

- ABSNet Lewtan
- ABSPerpetual.com
- ABSXchange S&P Cap. IQ
- BlackBox Logic
- Bloomberg
- CoreLogic
- Interactive Data (IDC)
- Intex
- MBS Data
- Moody's Analytics
- Morgij Analytics
- Trepp
- Veros

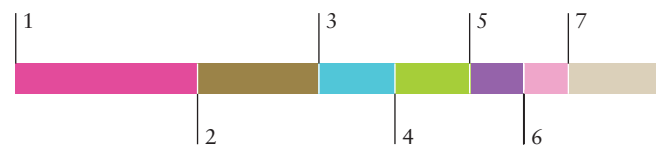
These providers all provide different services around their data, with different delivery methods and levels of deal coverage. Here we will analyze each source in terms of its uptake by the market for varying assets and in different geographies, and the extent to which investors use third party calculations or trustee information instead of, or in conjunction with, independent data providers.

Methods used to obtain collateral performance data



Sources of collateral performance data

Relative market share of third party data vendors



1. Bloomberg
2. Intex
3. Moody's Analytics
4. Trepp
5. ABSNet Lewtan
6. CoreLogic
7. Other (see vendor listing)

78% of US investors calculate performance statistics in-house.

This drive in the US to independently analyze pool performance is influenced by the greater availability and commoditization of historical loan level data. In comparison, only 64% of EU investors said they calculated these statistics in-house.

Straight from the rulebook

“Credit institutions...shall establish formal procedures appropriate to their trading book and non-trading book and commensurate with the risk profile of their investments in securitised positions to monitor on an ongoing basis and in a timely manner performance information on the exposures underlying their securitisation positions.

Where relevant, this shall include the exposure type, the percentage of loans more than 30, 60 and 90 days past due, default rates, prepayment rates, loans in foreclosure, collateral type and occupancy, and frequency distribution of credit scores or other measures of credit worthiness across underlying exposures, industry and geographical diversification, frequency distribution of loan to value ratios with bandwidths that facilitate adequate sensitivity analysis.”

Paragraph 5, Article 122a of the Capital Requirements Directive

Level 2: performance data continued

On average, investors made use of four different performance data sources across the assets they invested in, combining vendor provided data, in-house calculated statistics and trustee-provided performance data.

% that use five or more sources for performance data
EU Vs. US



Over 50% of US investors used five or more sources, compared with just 26% of EU investors.

Here the complexity of the workflows associated with managing and monitoring the key performance indicators necessary across a portfolio begins to unfold. An investor must identify and then obtain all the appropriate performance data relating to the assets they invest in, in a timely manner appropriate for each asset.

This data comes in a variety of formats on a variety of platforms and, while standardization is increasing there is still a lot of manual work to do to compare apples, with apples. Additionally investors often supplement this with their own internal credit assessment information.

In Europe there has only recently been a level of consensus on the taxonomy for even the most fundamental performance measures for RMBS.

83% of US investors obtained performance data updates directly from remittance reports, compared with just 60% of EU investors.

This is a further sign of the relative maturity and standardization of performance data provided through US remittance reports.

Outside CDOs, Bloomberg was the main source of performance data accessed by investors across asset classes in both the US and EU. This is largely driven by the prevalence of the Bloomberg terminal on the trading floor.

The fact that investors do not usually rely on any single source though, demonstrates that the provision of performance data is far from commoditized or covered by any one provider.

Indeed, while Intex comes next there is still a lot of competition and jostling for market share amongst the data providers, with each significantly ramping up their coverage, delivery and value added services since the crisis.

For CDOs there was no one provider that outperformed the others. Instead there was a broader mixture used, with a roughly even combination of in-house analysis, remittance reports, Bloomberg and Intex.

For US investors, Bloomberg and Intex are the dominant providers, with Trepp leading the way for CMBS performance data. After that there is a very even split between Corelogic, Moody's Analytics and Lewtan with IDC, S&P ABSXchange and MBS Data sharing the rest.

For EU investors again, Bloomberg and Intex lead the way. However, Moody's Analytics, S&P ABSXchange and Lewtan, along with Trepp for CMBS are all vying for a share of the EU business.

In the previous study on trends in market pricing, there were far fewer pricing providers, each with a larger share of the market.

This highlighted the commoditization of market data - a more level playing field. In this survey, we can see more vendors competing and the vendor landscape is still evolving, with some vendors moving in and others withdrawing from this level of data provision.

78%

of US investors calculate performance statistics in-house

The data provided today is far from standardized, but it is clear the market is moving in that direction.

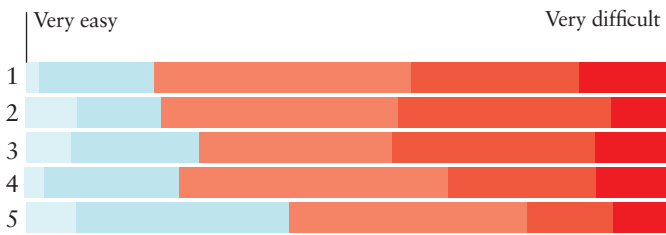
Level 2: performance data continued

The challenges associated with performance data

Investors were asked to rank the following operational issues that arise when managing and using performance data, in order of the degree of the challenge posed.

Challenges in using performance data

Ranked by order of difficulty



1. Normalizing performance data from multiple sources for consistency
2. Getting a complete dataset for key performance indicators you monitor
3. Integration to systems for consistent quantitative analysis across assets
4. Ensuring accuracy of the data you receive
5. Monitoring triggers/flags for key performance indicators across portfolios

Industry wide, normalizing data across multiple data sources proved to be the biggest challenge. This was followed by being able to get a complete dataset of performance metrics across assets and the operational integration of performance statistics into the overall portfolio and risk management environment.

80%

of investors said that it was a challenge to normalize performance data across different data sources

79% also said it wasn't easy to get a complete dataset for the Key Performance Indicators they have identified as important to their analysis and surveillance of structured finance deals.

EU investors ranked integration, normalizing data across sources and getting a complete dataset in order as the most difficult tasks.

US investors ranked normalizing data and getting a complete dataset as the most challenging, followed by ensuring the accuracy of the data they received.

Even though the provision of data in the US is comprehensive we can see evidence that the fragmentation of data sources and lack of common standards has meant that performance data is by no means easy to consolidate.

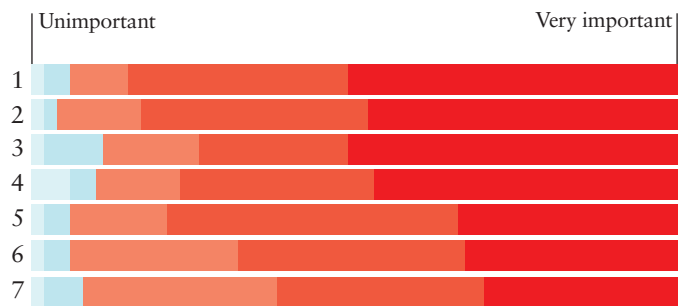
In addition, greater scrutiny of remittance reporting and servicing in the US revealed flaws in reporting back in 2011 which have caused investors to question the accuracy of the information disclosed in trustee reports.

Key factors in choosing performance data providers

EU investors and US investors prioritized different things when asked what they felt was most important when selecting how they obtained performance data.

US investors: Key factors in choosing a performance data source

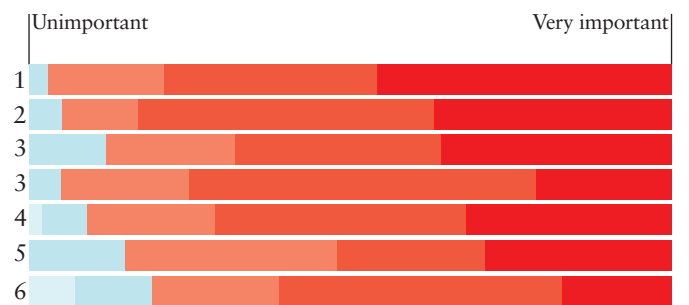
Ranked by order of importance



1. Ability to drill down to the loan level detail
2. Ease of data integration and manipulation for analysis
3. Cost
4. Frequency of updates
5. Breadth of provider coverage across assets
6. Transparency/auditable verification of data sources
7. Delivery using market standard templates

EU investors: Key factors in choosing a performance data source

Ranked by order of importance



1. Frequency of updates
2. Ease of data integration and manipulation for analysis
- 3= Cost
- 3= Transparency/auditable verification of data sources
4. Ability to drill down to the loan level detail
5. Breadth of provider coverage across assets
6. Delivery using market standard templates

The US value being able to drill down to loan level information; it is a bigger driver in their selection of a performance data source.

This tallies with the notion that they are more familiar with working with loan by loan data and expect this information to be readily available.

Level 2: performance data continued

Until recently this has not been the expectation in the EU. However, the ECB Loan Level Templates and the demand for loan level data for repo transactions, as well as the advent of the European DataWarehouse is changing this perception.

At present, while the US ranks 'drill down' first, EU investors rank it fifth.

Another example of the difference between the regions was the prioritization of transparency and the auditable verification of data by EU investors. In the EU these ranked third, but placed sixth for US participants. Again, this is related to the historical availability and completeness of performance data in each region, and confidence in the information provided.

For both EU and US investors, the ease of performance data integration ranked as a top priority when choosing a data source. This correlates with the finding that this is also seen as a key challenge for investors in both regions, where it ranked in the top three challenges.

“In the overall management of our portfolio access to complete datasets for deals that are private is a challenge. It takes forever to set up and get access to all the necessary reports from the trustees.”

Portfolio Manager, Major US Bank

Level 3: loan level data

Drilling down into the detail: accessing the loan level

The line by line data regarding underlying loans or collateral in a securitization are the fundamental building blocks for calculating stratified pool performance statistics and in turn, feeding the assumptions that flow into cashflow analysis for any given tranche. However, analysis of the performance of individual loans may not always be appropriate depending on the asset class and the operational capacity of an investor to analyze large volumes of loan data.

It is evident that there is a much greater appetite to access loan level data from third party providers, or by integrating more standardized loan level data now available in both the US and EU.

Equally, the leading data vendors in the market are increasingly working with aggregators and providers of enhanced loan level data to offer the extra level of drill down analysis into the deals they cover.

83% of investors also manually access loan level data directly from issuers and servicers.

Of the EU investors that do seek direct access to loan level data, 86% take the raw data directly from the issuer.

In the US, where there are more diversified sources, many that have been established for a long time, 79% rely on issuer provided loan level data, combining this with cleansed and more user friendly data provided by specialist data vendors.

% that use more than two sources for loan level data
EU investors Vs. US investors

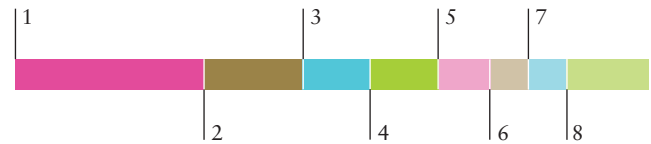


The vendors identified were:

- ABSNet Lewtan
- ABSXchange S&P Cap. IQ
- BlackBox Logic
- Bloomberg
- CoreLogic
- EuroABS
- Intex
- LPS McDash Loan Level
- MBS Data
- Moody's Analytics
- Morgij Analytics
- Trepp

Sources of loan level data

Relative market share of third party data vendors



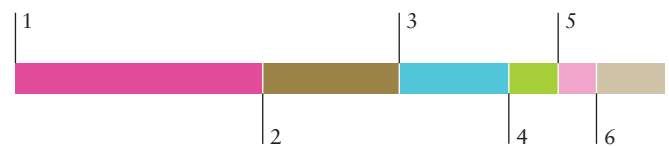
1. Intex
2. Trepp
3. CoreLogic
4. ABSNet Lewtan
5. ABSXchange S&P
6. MBS Data
7. LPS McDash Loan Level Data
8. Other (see vendor listing)

Intex, which is primarily known for its provision of cashflow models and historical performance data came out as the most used third party source of loan level data in both the EU and US, with Trepp and Bloomberg used for CMBS loan level data.

When we look at individual asset classes, there is evidence that in the US there is much more competition amongst data providers though, with certain vendors preferred for their coverage and analysis of loan level data on certain assets.

Sources of loan level data for US Non-Agency RMBS

Relative market share of third party data vendors



1. Intex
2. CoreLogic
3. ABSNet Lewtan
4. LPS McDash Loan Level Data
5. Bloomberg
6. Other (see vendor list)

US private issue RMBS has been the most affected asset class throughout the crisis and this is primarily where investors are seeking drill down information for historical deals and where they expect transparency in the future.

Level 3: loan level data continued

There are a number of well established data providers, specializing in the US home loan market. CoreLogic is one of the longest established, while Lewtan has ramped up its coverage of US RMBS loan level data significantly in recent years. This is reflected by their relative market share in the US.

Intex aside, EU and US investors tend to focus on additional data vendors that traditionally service their local market, even if they invest in assets issued in other regions.

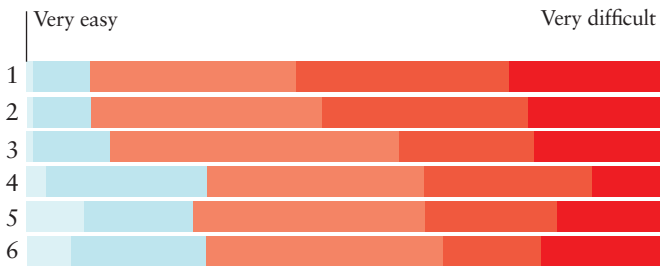
This could be related to the integration and normalization challenges highlighted earlier, with investors instead looking to select fewer vendors with the broadest asset coverage, rather than necessarily the most detailed or comprehensive data sets for individual asset classes.

The challenges associated with loan level data

Investors were asked to rank the following operational issues around loan level data by the extent of the challenge posed:

Challenges in using loan level data

Ranked by order of difficulty



1. Manually cleansing the data for consistent analysis
2. Different standards in the disclosure of loan level information
3. Reconciling pool level reports with data from loan level files
4. Integrating loan level data into overall portfolio & risk management
5. Obtaining loan level data for pre-crisis transactions
6. Processing large volumes of data in bond analysis

Across the industry, manually cleansing the data for consistent analysis proved to be the biggest challenge to investors. This was followed by interpreting the different standards in disclosure of loan level information across assets and reconciling pool level reports with data from loan level files.

90% of all the investors that responded said it was not easy using and managing the different standards in the disclosure of loan level information.

90%

of investors said that it was difficult to standardize and normalize loan level data for efficient and consistent analysis

Access to pre-crisis, loan level data ranked as the fourth most important issue for EU investors but was described as not easy by over 80% of them.

This compared with just 65% of US investors who stated that accessing pre-crisis loan level data was not easy.

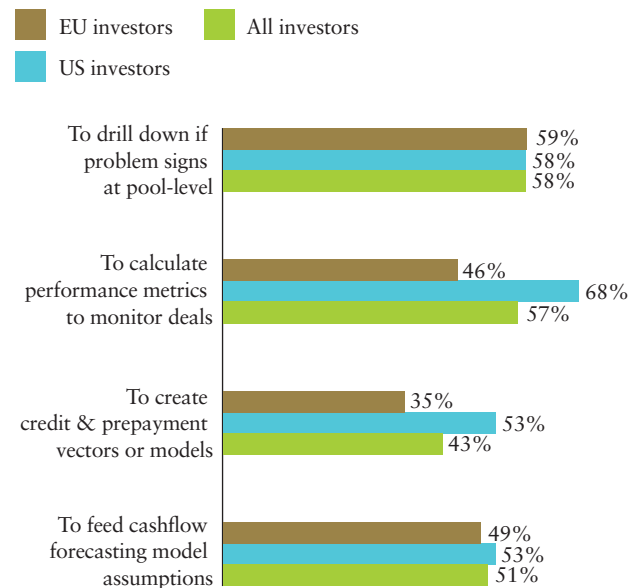
In addition, US investors, who have historically had greater access to loan level data, ranked the issue of processing large volumes of loan level data higher than EU investors.

54% of EU investors stated that integrating loan level data into overall portfolio and risk management was operationally difficult or very difficult compared with just 26% of US investors.

% that found loan level data integration into portfolio a challenge
EU investors Vs. US investors



How do investors currently use loan level data?



Level 3: loan level data continued

For all investors, the results showed that the primary drivers for using loan level data, ranked in order were:

1. To drill down if there are problem signs at the pool-level
2. To calculate performance metrics by which to monitor transactions
3. To feed cashflow forecasting model assumptions

In the US, where loan data is more developed, it is more commonly used for performance metrics and forecasting assumption calculations.

The use of loan data is mature enough in the region that it is integrated more effectively into overall portfolio and risk management, used to proactively calculate pool performance statistics.

For EU investors however, usage is driven more by the demands from the regulators, central banks, clients and internal management to demonstrate a real understanding of underlying loan performance. However, so far loan level data is less integrated into investor's ongoing calculations and valuations.

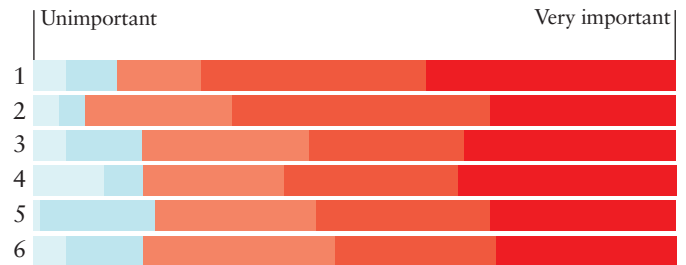
This is partly explained by the relatively recent availability of standardized and comprehensive loan level data for new deals in the EU.

US investors have a broader use for loan level data, using it to feed cashflow and prepayment models, and to deliver more accurate performance data calculations.

EU investor's usage is, to date, less advanced with data providers and investors alike having had less time to develop the level of analytics and usage observed in the US.

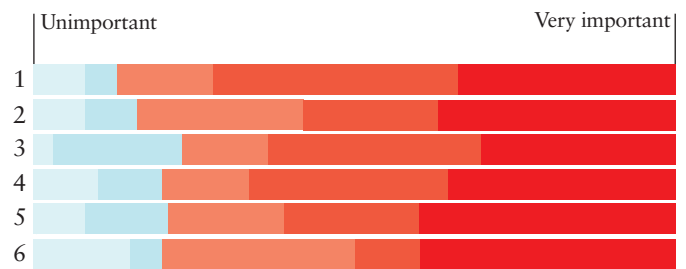
In the next column, you can see how investors ranked the key activities they use loan level data for, by order of importance.

The importance of loan level data to key activities
Ranked by order of importance



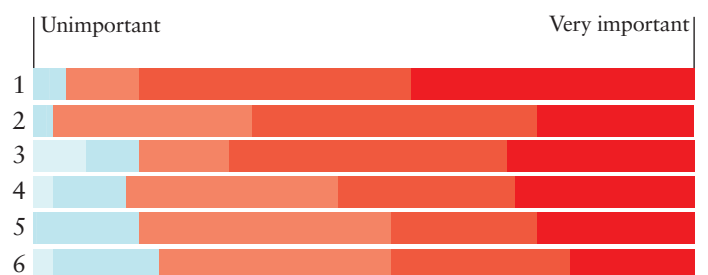
1. To drill down after performance triggers identify potential problem areas
2. To establish key performance indicators you should be monitoring
3. To accurately update collateral balances and cashflows
4. To prove due diligence to clients, internal management and regulators
5. To internally calculate aggregate pool performance statistics
6. To independently verify remittance data

US investors: Importance of loan level data to key activities
Ranked by order of importance



1. To establish key performance indicators you should be monitoring
2. To independently verify remittance data
3. To internally calculate aggregate pool performance statistics
4. To drill down after performance triggers identify potential problem areas
5. To accurately update collateral balances and cashflows
6. To prove due diligence to clients, internal management and regulators

EU investors: Importance of loan level data to key activities
Ranked by order of importance



1. To drill down after performance triggers identify potential problem area
2. To establish key performance indicators you should be monitoring
3. To prove due diligence to clients, internal management and regulators
4. To accurately update collateral balances and cashflows
5. To internally calculate aggregate pool performance statistics
6. To independently verify remittance data

35%

the % of EU investors that integrate loan level data into credit and prepayment models, compared with 54% of US investors

Level 3: loan level data continued

Again the results highlight the fact that US investors perform more internal calculations based on loan level information and look to independently verify remittance data. These statistics reaffirm that a lack of confidence in the accuracy of remittance information continues to exist in the US market.

In addition, it is interesting to see how regulation and due diligence is more of a driver for EU investors in their use of loan level data.

This coincides with the implementation of investor specific rules in the EU Capital Requirements Directive which force banks and by proxy, institutional investors and those funds investing on the behalf of banks to demonstrate a true understanding of the ongoing performance and exposure to structured finance transactions.

The advent of similar rules in the US through the revised Market Risk Rule and Securitization Due Diligence guidelines will likely see this rise on the agenda of US investors in coming months too.¹

Introduction of loan level data databases

There has been an influx of new technology services delivering specialized database solutions to manage the ever growing volumes of loan level data and help investors to process this information and feed their analytical systems.

67% of investors relied on in-house databases to process and perform calculations using loan level data. Processing large volumes of data was not yet seen to be a major problem in this respect. 28% had no database solution to manage this data. This partly reflects the fact that not all investors drill down to the loan level.

The providers that were identified and used by investors in this regard are highlighted below, with 7% of investors using these services to streamline and more efficiently manage loan level data.

This could be a growing area and challenge for structured finance as the market grows again.

1010Data, CoreLogic TrueStandings, MAIC DataRaptor, Vichara, RiskSpan, Clayton InCyt, Lewtan DataViewer, BlackBox Crystal Logic, Rockstead, Hypoport and Morgij Analytics all received mentions and although still only used by a relatively small number of investors for this purpose, the propensity to use a database service like these is expected to grow.

67%

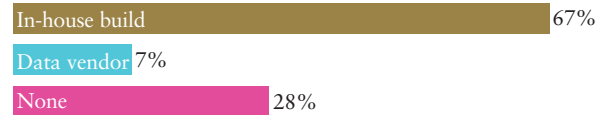
rely on in-house databases to process and perform calculations using loan level data

“The difficulty to get access to loan level data via standard API’s into our systems is something we are hoping will be overcome by the market in time.”

COO, US Investment Manager

¹ See Principia’s due diligence implementation overview, referencing American Securitization Forum and European Banking Authority best practice guidelines: http://www.pplc.com/ABS_Investor_Research.htm

Type of database used for loan level data processing



“Integrating the data sources into our in-house systems is always a challenge, but this is especially the case for loan level data when you consider the number of discrepancies in taxonomy, the number of available data sources and the sheer volume of data. Streamlining all this information for use will be a concern in years to come”

Head of ABS Portfolio Management, Global Bank

Rebuilding the market

Sufficient disclosure

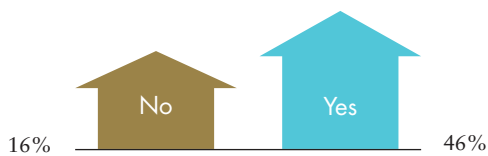
We asked investors whether the current standards for disclosure of loan level data, for example via the European Data Warehouse, Project RESTART, EDGAR or the BoE and ECB templates, will provide sufficient data to adequately perform due diligence on ABS/MBS/CDO investments.

They are still not sure whether these new disclosure standards will be sufficient for their future needs.

59% remain unsure as to whether the new market standards will be sufficient. This is a general finding across all asset classes though, so further analysis is required.

On a more positive note, 26% said it was sufficient and only 15% thought otherwise.

EU investors in EU RMBS: Is data disclosure sufficient?



When dissecting by asset class the results are much clearer. For EU investors in EU RMBS, 45% said that Yes, data provision is or will be sufficient with only 16% saying No.

There is continued uncertainty around the disclosure of loan level data in the EU and how that will pan out, but overall market sentiment is positive.

RMBS appears to be the asset class that investors are actually most satisfied that deal and loan level disclosure and data provision standards are now sufficient.

This correlates with the initiatives that have been launched, which have focused largely on RMBS and SME transactions. This is a positive sign as these initiatives continue to be implemented for other asset classes.

The US however, is experiencing greater uncertainty, which points to a continued lack of clarity regarding impending regulations such as Basel III, issuer due diligence requirements and specific pieces of the SEC's RegAB II.

Over 50% of US investors were still unsure as to whether there was sufficient disclosure to perform due diligence, even though they have more standards in place and a more mature infrastructure and precedent of quality data provision.

This is not a comment on the data itself but rather the uncertainty that still exists regarding what regulators and the market will expect in terms of due diligence.

US investors were even more unclear about whether EU asset disclosure will be adequate, with 77% indicating that they are unsure.

One other point worthy of note is that investors on the whole indicated that for CDOs, especially in EU, the level of disclosure standards were not adequate.

52%

of US investors unsure whether there will be sufficient disclosure

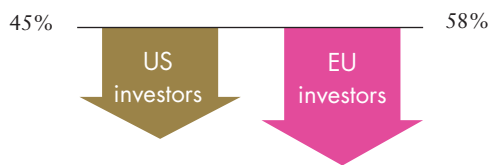
Dealing with the data

Operational effectiveness

While the data is available to investors to analyze and perform the necessary analysis on a deal by deal level for structured finance assets, the findings of this report highlight that operationally managing this data to ensure an efficiently run business or portfolio management strategy that includes structured finance is the real challenge.

58% of EU investors said that their operational systems were not effective at enabling them to access, update, analyze and monitor deal, performance and loan level data across their ABS/MBS portfolios.

% of investors that deemed their operational systems ineffective



Even in the US, 45% of investors also classed their systems as not effective in this regard.

Over half of all the investors (51%) that took part thought they were less than effective from an operational point of view.

In 2010, Principia conducted a survey with a similar sample size, asking the same question and the good news is that investor sentiment is improving. 65% of investors at the time, believed that their systems were operationally ineffective at managing these key aspects of structured finance.

Will publicly available, standardized loan level disclosure mean that investors will conduct due diligence using loan level data?

“Yes, but only with standardised collateral risk analysis systems.”
CIO, UK Investment Manager

“No, the systems to process and analyse the data are still required.”
Head of ALM, EU Insurance Company

“No. For sure it will not. It will only serve as a source of information to third parties wanting to do business with the public information such as the data providers.”
Treasury Manager, Spanish Bank

“Unlikely unless you are a highly sophisticated investor with the people and systems to support it.”
ABS Portfolio Manager, Major Global Bank

“The current mindset is to conduct due diligence so that is less the issue now – rather it is the ability for someone to actively take part in the market given the operational barriers to entry.”
Head of Operations, EU Investment Bank

“Some will, some won’t. Many investors won’t get past stratification tables”
Analyst, EU Investment Manager

“You also need the asset class expertise... smart interpretation of data...and ability to set red flags and triggers...”
Portfolio Manager, EU Insurance Company

Tying it all together

In summary

The overriding message is not so much that structured finance investors need to simply understand what they hold – that has been a given since the onset of the crisis. It is that anyone with an investment strategy that includes structured finance must have the operational sophistication to do so effectively, with confidence and with a consolidated and efficient way to view, analyze and comprehensively manage the universe of data and data sources surrounding these positions.

Increasing industry standardization is slowly bringing clarity and uniformity to the provision of issuance data as a whole and in particular collateral performance and loan level data, but this is an ongoing process.

The reality is that an investor with a portfolio consisting of structured finance and fixed income positions will need to incorporate multiple levels of deal, performance and loan level data. This will vary on an asset by asset basis, the position of a deal in a securitization's capital structure and the available data from an investor's chosen data sources.

The market infrastructure being built in the US and EU around the disclosure of dynamic deal performance and loan level data is a welcome building block in securitization's recovery and in enabling investors to access the markets. But investors need more than just the data.

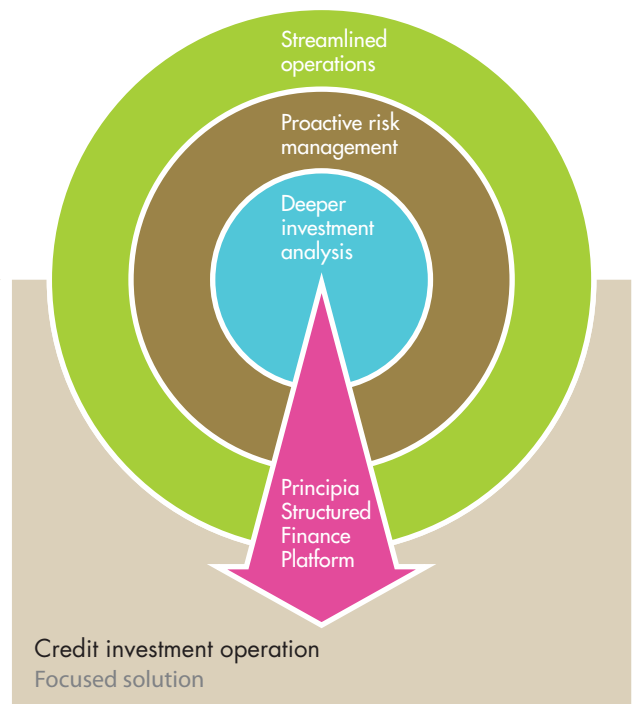
In an earlier survey, Principia noted that for market pricing data alone an investor may use anywhere between two and five pricing sources across a structured finance portfolio. In this study we see investors will also often access a similar multitude of sources for performance and loan level data, in a plethora of formats. In addition, this data requires human expertise, mathematical models and powerful systems to effectively interpret deal performance, deliver a picture of risk and flow valuations through to accounting at the deal or portfolio level.

Gaining a handle on all this information is the first step towards independent valuation and ensuring diligent management of structured finance investments and portfolios.

More than the data, investors need the operational maturity, with systems developed specifically for structured finance, to ensure seamless interfacing with all the data points required, to be selective about which pieces of that data are important to them, to be able to make confident assumptions about the performance of any deal at any given time and to automate that data into structured finance specific models and portfolio analysis.

In Q2 2013, the final part of Principia's Structured Finance Perspective survey series will explore how investors use this data to analyze current and future cashflows, incorporate this data into models for prepayment and delinquency and to define the key aspects of developing or using deal cashflow models in the analysis of structured finance positions.

Know your investments: Visibility, analysis and control



● Deeper investment analysis

- **Knowledge:** unify pricing, performance and deal data for on demand analysis
- **Confidence:** more accurately assess future performance
- **Breadth:** manage all assets, hedges and liabilities in one place
- **Visibility:** slice and dice by collateral, deal or portfolio characteristics for better informed decisions

● Proactive risk management

- **Compliance:** accurately define, manage and report on risk parameters across deals and portfolios
- **Surveillance:** track and analyze any deal, tranche or collateral performance measure to identify and signal risks
- **Foresight:** stress test default, delinquency or prepayment rates
- **Disclosure:** report risk information for any stratification of the business on request

● Streamlined operations

- **Consolidate:** centrally manage multiple portfolios for increased transparency and efficiency
- **Streamline:** integrate portfolio management, risk control and accounting
- **Integrate:** eliminate redundant systems and processes
- **Control:** avoid inconsistencies from front to back office with audit and workflow control

About Principia

Principia Partners LLC (Principia) provides a comprehensive single platform solution for the end-to-end management of structured finance investments. Global financial institutions and independent asset managers have used the award winning Principia Structured Finance Platform since 1995 to unify investment analysis, portfolio management, risk surveillance, accounting and operational control across the breadth of structured credit assets, fixed income investments and complex derivatives.

For over 15 years Principia's mission has been to help investors independently address the deal specific investment and cashflow analysis, valuation, risk management, reporting and due diligence requirements of structured credit investments and portfolios.

Its dedicated support and continued development of functionality for structured finance instruments is accompanied by a proven and fully integrated derivative valuation framework. This consolidated credit investment and market risk solution delivers the backbone necessary to unify and perform deeper investment analysis, proactive risk surveillance and ensure operational control across the credit investment business.

Principia is based in New York, with an office in London and a technology center in Conshohocken, Pennsylvania. Principia SFP was awarded the Credit Technology Innovation award by Credit magazine in 2008, 2009 and 2010.

For more information please visit: www.ppllc.com

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