

LOS Opportunity? Loan Origination Systems: An Untapped Source for CECL and Other Valuable Data

By Peter Cherpack – CEO, Ardmore Fintellix

While proactive risk data management best practices for community banks to support stress testing and CECL data requirements are still evolving, it is clear that two areas are very important:

- Credit Risk Characteristic Data
- Life of Loan Loss/Recovery Data

While understandably most banks turn first to review their core accounting system to find the bulk of their portfolio data for reporting and other credit analytic needs, many banks are missing a huge opportunity to exploit important borrower and loan risk characteristic data collected in their loan origination processes and systems.

Credit Risk Characteristic Data

Credit data items generated at the origination of the loan typically include data that indicate the risk characteristics of the borrower and the asset type. These types of data items will likely be used in the future to create CECL asset pools, loss correlation data and for stress testing. For the most common projected methodologies, typical CECL asset pools will continue to be groups of loans organized into cohorts or portfolio segments by common meaningful risk characteristics. Items like loan purpose, collateral type, real estate property types, and industry are examples of risk characteristic categories.

Just as important are risk characteristics that include borrower financial data items like LTV, NOI, Cap Rates and appraisals that serve to assist in the original risk rating of the credits as well as potentially indicate collectability issues. FASB actually lists some examples of these types of data items needed to be considered in the ASU for asset pooling (about a dozen items in section 326-20-55-5) and in loss projections (about 20 items in section 326-20-55-4). Please refer to excerpts from the ASU in appendix one for a list of the items they suggest.

While other accepted CECL calculation methodologies like PD/LGD and vintage do leverage different models and data types, it is likely that in the future community banks will need to use “credit risk characteristic data items” to further disaggregate their current asset type loan loss pools to refine their CECL approach. Some of the sample disclosures in the CECL ASU show five-year

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disaggregation of balances and losses broken out by credit characteristic data points. Many of these data items or categories are also used in concentration management reporting and stress testing, so the integrity, consistency and long-term retention of these items is a priority. And once collected, this data is useful immediately for board, management and other reporting uses.

FASB CECL ASU Excerpts Relating to the Importance of Risk Characteristic Data:

326-20-55-5 *“In evaluating financial assets on a collective (pool) basis, an entity should aggregate financial assets on the basis of similar risk characteristics”*

326-20-30-8 *“An entity shall consider adjustments to historical loss information for differences in current asset specific risk characteristics, such as differences in underwriting standards, portfolio mix, or asset term within a pool at the reporting date ...”*

Audit and accounting firms, like Deloitte, KPMG and others have started to weigh in on the importance of using these risk characteristics in their bank’s CECL calculation practices:

“Although the new standard does not specifically require an entity to consider credit risk when aggregating financial assets, we would generally expect an entity to factor in some credit characteristics”

“Regardless of the rationale used to select the period [for loss estimation], we believe an entity should consider the need for adjustments to the historical loss information to the extent that there are differences in asset-specific risk characteristics or economic conditions between the historical period chosen by the entity and the entity’s forward-looking expectations”

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Source: “Financial instruments, Credit impairment Issues In-Depth”, October 2016, KPMG

Loss & Recovery Data and Risk Characteristics

Loan Loss and recovery data is also key to the future of the bank’s ALLL/CECL calculation, due to the requirement to do a life of loan loss estimate – along with a “reasonably supportable loss projection” by asset type pool. After the supportable projection period, the bank would revert to historical loan loss amounts for the projected life of the loans in the asset pool.

To effectively use loss and recovery rates by pool for projections, the bank may choose to compare the performance of loan loss rates of various pools considering their specific credit risk characteristics. Linking historical loss rates with the bank's pooling strategy will be key as the bank will need to come up with "life of pool" loss rates (i.e. modify annual loss rates to come up with loss rates as per the credit risk characteristics used for pooling.)

For example it may track losses by vintage, risk rating or more detailed LTV bands, industries or purposes. This data can then be correlated with macro economic factors over the life of the asset pool, to determine potential meaningful linkages for future loss projections.

Using interest rates as a macro economic factor, the bank may consider a scenario like the last time interest rates went up 300 bps – what types of their assets - based on risk characteristics - had loss rates that were the most dramatic? Should these assets be given special considerations in loss projections for the next anticipated rate hike? Considering the limited history of loan data at most banks and the fact that the staff at the organization may not have experienced all phases of the credit cycle, without good historical data the bank may be required to acquire or derive some additional credit risk data to support creation of these forecast models.

Linking loss information to risk characteristics is important so that "slicing and dicing" and testing the resulting analysis can be more accurately performed. In many cases the use of testing different scenarios using different risk characteristics will help the bank choose the best practice for their bank. The documentation of this type of analysis will also likely be reviewed by internal and external auditors, looking for justification of the choice of loss projection scenarios and the resulting impact on ALLL levels.

What Risk Characteristic Date is Archived by the Bank...and How Good is it Anyway?

Ardmore Fintellix has performed many "Credit Data Risk Assessment" engagements to assist community banks assess their readiness for future regulatory expectations like CECL and stress testing, and to identify gaps from best practices in their credit portfolio data management.

We typically start our assessment looking at the bank's origination processes, and what data is passed "downstream" to data repositories like the core and reporting databases. In most cases, community banks capture minimal risk characteristic data points at origination for data input, as these items typically don't help get loans booked – which is typically the major priority of the origination process.

Typically only limited risk characteristic data is taken from the credit approval memo and inputted downstream in the core. These usually include: loan type, borrower industry, call code, and collateral types. Some banks go further and include property types, NOI and cap rates for CRE loans, and appraisal values, LTV's and credit scores for other loan types.

A key consideration for the quality and consistency of coding at origination is the “ownership” of these codes, and the criteria used when establishing them. As previously mentioned, as these codes aren't necessarily important for getting new loans booked on the banks systems, (and usually if missing don't stop the loans from getting booked anyway) they may not be given serious consideration at the time of booking – particularly if the staff responsible for loan production (Lenders, AA's) is also responsible for their credit risk characteristic coding.

From an ownership and quality control aspect, often these now much more important codes are not formally evaluated at the time of origination for their applicability and consistency – as other codes more directly critical to the establishment of the loan on the bank's core and doc prep system are. So while they may be checked after input to ensure what is on the form matches what is input into the systems – it's not usually as clear that knowledgeable staff checks to see that a “hotel loan” is properly coded as “non-owner occupied” or that the collateral type always fits properly with the primary collateral type – for a couple of examples.

While currently mistakes and gaps in this type of data coding can create problems later in concentration and board reporting, in the future, needs for accuracy in coding for CECL and stress testing can cause significantly more problems for the bank. Through inconsistent and spotty coding, under CECL it can cost the bank real money – if capital is spent due to assigning an asset into the incorrect ALLL pool or creating an incorrect loss projection.

Loss Origination System Data Practices

Many community banks have adopted, or are adopting automation to help gain efficiency in loan origination for their commercial and small business lines. In the consumer lending world, thanks to the relative standardization of their origination process, most origination data flows directly from ‘front end system’ entered application down through doc prep systems directly to the core using multiple interfaces. With commercial loans, due to their added complexity and more involved underwriting, approval and documentation process, the data flow is usually more tortuous, and rarely fully automated.

That understood, if the bank has a commercial Loan Origination System (“LOS”) then usually the underwriting and approval process is part of the workflow automation – and that is where the loan characteristic data comes from.

Lots of valuable credit risk characteristic data is created and then captured into underwriting and approval templates and forms in the LOS – but unfortunately much of that data doesn’t make it downstream to data archives like the core and other reporting databases. It is held hostage due to incomplete linkages with core relationships or borrower/loan codes, ineffective middleware/interface linkages from the LOS to the doc prep and core systems, and the plain old misperception that this data “doesn’t belong in the core”.

The better news, at least for many banks, is that in some cases this data is held in the LOS in historical underwriting and approval records. It may be accessible to the bank via data extracts or through queries or reports. Unfortunately for some, the actual underwriting document is only scanned and attached to the workflow, interfering with actual data capture.

Some banks have gone to the next step and worked around ineffective middleware links and the lack of coordination with the core and created their own “credit data marts” that put together feeds directly from the LOS and the core to create a working database within their control. This type of data mart can be archived regularly, building a controlled, rich and valuable history of credit risk characteristic data for current use in stress testing, analytics and reporting – and future use for CECL.

Even if the bank doesn’t create a data mart with its LOS data as a source, it is important to understand what data has been stored in the LOS’s database, what is available, and for how long. Some LOS are “in the cloud” and the specific credit risk characteristic data may not be accessible, while others may not make certain data points accessible.

In most cases the underwriting and approval input screens are customizable and may include “user defined fields”. It is now important to consider adding key risk characteristic data fields in to these input screens so there is a way to capture and archive that data in an automated fashion for future needs.

With the new regulatory focus on data for managing risk – and the future CECL calculations, it’s important to look not only at what’s put in your core, but your LOS too. Capture more risk characteristic data at the source – in the origination process -with appropriate criteria justification and review by knowledgeable resources. But, the bottom line is ultimately accessing that data and linking it to ongoing core feeds for tracking, performance and loss data management.

Steps to Take Now

Considering the newfound importance in creating, managing and storing credit risk characteristic data, as outlined in this document, a great place to start is in loan origination. Now that the assignment and maintenance of these codes will directly impact loan loss reserves (as therefore the bank's capital), it's important for all banks to take steps to formalize origination procedures, code assignment criteria, ownership and controls at origination of the loan.

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Considering the potential impact on capital, it's quite likely that both internal and external auditors will want to see a formal documentation of not only the underwriting process – but the process of assigning risk characteristic codes as well. It makes sense to formalize and document the origination coding process now, and at the same time augment what is captured and automate the downstream dataflow where ever possible in the process.

Some steps to work on now, as a road map towards meeting or exceeding regulatory expectations for credit risk data characteristics include:

1. Audit and review your current commercial and small business loan origination process
 - What data is coded and collected, what are the gaps?
 - Who does and should have ownership over risk characteristic codes?
 - Establish and Document coding criteria and QC process
2. If appropriate, review your current LOS
 - What risk characteristic data is input, and should additional fields be added?
 - How long is LOS data stored?
 - How accessible is that data and in what form?
3. Consider archival storage of credit risk characteristic data items
 - Look at your core, see if fields are available, standard or user defined/flex
 - Create or buy a corporate credit data mart, or a dedicated section of your enterprise data warehouse
 - Consider the purchase of a credit portfolio management platform/toolset that incorporates a credit data mart with CECL ready ALLL and stress testing capabilities
 - Review the storage and accessibility of credit risk characteristic data in existing LOS for later access or incorporation into future data marts

Regardless of the path your bank takes, the time to start is now. Most banks will need at least five years of credit risk characteristic data to support CECL asset pooling and loss projection estimates. The more you have at 2020 when CECL goes into effect, the less you will have to go out and buy or “guesstimate” and then justify to the examiners and auditors.

For almost all banks the future of credit risk characteristic data is now, and your loan origination process and systems are the first place to start.

About the Author:



Peter Cherpak, CEO, Ardmore Fintellix Solutions. Peter Cherpak recommends and implements technology solutions to enhance banks’ lending and credit processes. A nationally recognized thought leader in best practices for stress testing for community banks, he has over 30 years of experience in banking, specializing in information technology, operations, business analysis, project management and stress testing, with 20 years previous experience at PNC Bank. He has been featured in publications including the Journal of Risk Management, the RMA Journal, Bank Director, American Banker, the Independent Community Banker, Bank Safety & Soundness Advisor. His recent speaking engagements include the Conference of State Bank Supervisors, the RMA Annual National Conference and the FFIEC Community Financial Institution Lending Forum and American Banker’s Bank Analytics Symposium.

About Ardmore Fintellix

Standardization of banking supervision is driving change across the banking industry globally, especially considering enhanced financial reporting, risk measurement and management. These initiatives have been steadily expanding the regulatory burden on community banks and increasing the cost of regulatory compliance. Ardmore Fintellix Solutions addresses the need for a comprehensive solution that can help community banks more easily manage their regulatory compliance needs, and enable bank management to focus on business growth and profitability.

The Ardmore Fintellix partnership delivers a unique ‘global/local’ alliance that combines global expertise, local experience, and next generation technology solutions to lower the cost of compliance for community banks. Through this alliance, community banks have the advantage of a CECL-ready ALLL solution, portfolio stress testing as well as portfolio reporting & analytics solutions, powered by a comprehensive credit data warehouse. Our seasoned credit professionals ensure that the solution is tailored for each bank’s specific needs and business model. Visit us at www.ardmorefintellix.com

Appendix One – ASU 2016-13 (CECL) Listed Credit Risk Characteristics:

326-20-55-4 (Adjusting historical loss experience)

“Because historical experience may not fully reflect an entity’s expectations about the future, management should adjust historical loss information, as necessary, to reflect the current conditions and reasonable and supportable forecasts not already reflected in the historical loss information. In making this determination, management should consider characteristics of the financial assets that are relevant in the circumstances. To adjust historical credit loss information for current conditions and reasonable and supportable forecasts, an entity should consider significant factors that are relevant to determining the expected collectability. Examples of factors an entity may consider include any of the following, depending on the nature of the asset (not all of these may be relevant to every situation, and other factors not on the list may be relevant):

- a. The borrower’s financial condition, credit rating, credit score, asset quality, or business prospects
- b. The borrower’s ability to make scheduled interest or principal payments
- c. The remaining payment terms of the financial asset(s)
- d. The remaining time to maturity and the timing and extent of prepayments on the financial asset(s)
- e. The nature and volume of the entity’s financial asset(s)
- f. The volume and severity of past due financial asset(s) and the volume and severity of adversely classified or rated financial asset(s)
- g. The value of underlying collateral on financial assets in which the collateral-dependent practical expedient has not been utilized
- h. The entity’s lending policies and procedures, including changes in lending strategies, underwriting standards, collection, writeoff, and recovery practices, as well as knowledge of the borrower’s operations or the borrower’s standing in the community
- i. The quality of the entity’s credit review system
- j. The experience, ability, and depth of the entity’s management, lending staff, and other relevant staff
- k. The environmental factors of a borrower and the areas in which the entity’s credit is concentrated, such as:
 1. Regulatory, legal, or technological environment to which the entity has exposure
 2. Changes and expected changes in the general market condition of either the geographical area or the industry to which the entity has exposure
 3. Changes and expected changes in international, national, regional, and local economic and business conditions and developments in which the entity operates, including the condition and expected condition of various market segments.”

326-20-55-5 (Asset Pooling)

In evaluating financial assets on a collective (pool) basis, an entity should aggregate financial assets on the basis of similar risk characteristics, which may include any one or a combination of the following (the following list is not intended to be all inclusive):

- a. Internal or external (third-party) credit score or credit ratings
- b. Risk ratings or classification
- c. Financial asset type
- d. Collateral type
- e. Size
- f. Effective interest rate
- g. Term
- h. Geographical location
- i. Industry of the borrower
- j. Vintage
- k. Historical or expected credit loss patterns

- I. Reasonable and supportable forecast periods.