CECL —
Vendor Due Diligence

✓ *Overview of Critical Elements and Capabilities*

✓ *Understanding a CECL-Ready Solution*

✓ *Recommendations & Tactical Due Diligence*

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INTRODUCTION

Although many institutions have already discovered the value of a dedicated software platform to accomplish their current ALLL processes, nearly all institutions would agree that modernizing their approach has material benefits. As the leading ALLL provider, Sageworks' solutions have been the subject in a host of due diligence exercises and much has been learned as a result.

In addition, Sageworks' ALLL software is a CECL-ready solution. Through development and the execution of many reserve calculations, Sageworks is positioned to provide actionable guidance on due diligence and CECL-readiness. One thing is certain, Accounting Standards Update 2016-13 (CECL) will require more inputs, assumptions, analysis, and support making the option to modernize significantly more attractive.

The following recommendations are not intended to replace regulatory guidance as it relates to vendor management. Rather, the intent is to provide an understanding of a CECL-ready solution and the critical elements that such a solution should contain for tactical due diligence.

ASU 2016-13 (CECL) OVERVIEW

At a high-level, the new standard requires an entity to estimate expected credit losses over the contractual term of their financial assets. Although there is no specific methodology or process that institutions are required to follow precisely, there are some key principles to keep in mind as you investigate solutions:

- 326-20-30-6: Prepayment behavior must be explicitly or implicitly addressed

- 326-20-30-6: Extension and/or renewal assumptions are not allowed except for Troubled Debt Restructurings

- 326-20-30-2: Analyzing assets on a collective or pooled basis is required unless unique risk characteristics exist

- 326-20-50-6: Institutions (PBEs and SEC filers) must prepare a vintage disclosure by presenting the amortized cost basis within each credit quality indicator by year of origination (that is, vintage year)

- 326-20-30-7: Internal information, external information, or a combination of both may be used for analyzing past events and current conditions, as well as in the creation of reasonable and supportable forecasts

- 326-20-30-9: Adjustments to historical loss information may be quantitative and/or qualitative in nature

- 326-20-30-9: Adjustments may be based on reasonable and supportable forecasts. For periods beyond a reasonable forecast, reverting to historical loss information immediately, on a straight-line basis, or using another rational and systematic basis is acceptable

- 326-20-30-11: A liability for credit losses on off-balance-sheet credit exposures over the contractual life must be recorded

Visit _ALLL.com_ for a more complete summary of the standard and the topics mentioned above.

TACTICAL DUE DILIGENCE TOPICS

While exploring solutions, both in-house and vendor-based, there are minimum capabilities that should be investigated in detail. The following represents fundamental areas of consideration:

- Data – adequacy, retention and process

- Contractual Life – calculation and support

- Segmentation – flexibility, comparability and support

- Methodologies – flexibility, comparability and support

- Forecasting and Adjustments –flexibility, comparability and support

- Documentation – completeness, auditability and efficiency

- Product Evolution and Enhancements – roadmap, costs and installation

- Training, Advisory Services, and Technical Support – availability, expertise and fee structure

DATA

Data serves as the foundation for historical loss experience calculations and represents a significant threat to a successful implementation. In fact, institutions' ability to calculate lifetime loss rates as of the implementation date is predicated on the adequacy of yesterday's data.

Historical loan-level data is required to properly evaluate the performance of various loan types and risk attributes. In many instances, the historical data required is not available or contains too many instances of inconsistent or incorrect information. Institutions should have a clear understanding of the following vendor responsibilities:

Adequacy

- What is the vendor's role in identifying critical loan-level data gaps?

- How will the vendor communicate the impacts of identified loan-level gaps on methodology selection, input calculation, and forecasting?

- What is the vendor's remediation process for loan-level historical data correction and go-forward loan-level collection?

- What are the vendor's fees associated with loan-level data remediation?

Retention

- What is/are the vendor's process and fees for accepting historical loan-level data?

- What is the vendor's process for identifying data inconsistencies?

- What is the vendor's storage capacity and what fees are associated with data storage?

- How will the institution's data be handled in a separation event?

Processes

- What is/are the mechanism(s) by which loan-level data is transferred?

- How much human interaction, if any, is required in the data transfer process?

- What is the process and what are the controls surrounding manual adjustments to loan-level detail?

- What is the timeline for a successful process implementation?

CONTRACTUAL LIFE

The expected life of each segment and/or prepayment behavior will need to be determined prior to performing any calculation. The life-of-loan input/assumption is highly material and will receive elevated levels of audit and regulatory scrutiny. Contractual life and prepayment calculations are equally as robust as lifetime historical loss calculations. Keep in mind, each time the institution revises segmentation it will need to retain symmetry within the expected life/prepayment model. As such, institutions should have a clear understanding of the following vendor responsibilities specific to calculating and supporting material inputs:

Calculation

- Does the vendor calculate or provide contractual life and/or prepayment inputs?

- Is the calculation native to the vendor's solution or is the calculation a peripheral deliverable?

- What are the vendor's controls specific to segmentation symmetry?

- Does the vendor's calculation adhere to the maturity, renewal, modification and balance requirements per the standard?

- What are the vendor's fees associated with contractual life and prepayment calculations?

Support

- Does the calculation and/or deliverable provide time-specific results critical to observing trends in contractual life and/or prepayment behavior?

- What level of auditability specific to contractual life and/or prepayment behavior has the vendor made readily available within the solution?

- Does the vendor provide industry-level data to support and benchmark the results?

SEGMENTATION

Institutions must analyze assets on a collective or pooled basis unless unique risk characteristics exist. Designated pools should be relatively granular while maintaining statistical significance. Term, structure, loan type, and risk based scoring (FICO, Risk Rating, etc.) are material considerations for pooling elections.

Additionally, management will need to evaluate pools on an ongoing basis to ensure that the underlying assets continue to exhibit similar risk behavior. Segmentation is a highly material election and an emphasis should be placed on proper treatment of the following:

Flexibility

- Does the vendor solution offer a variety of segmentation and sub-segmentation elections?

- What, specifically, is the vendor's designed process for changing segmentation AND sub-segmentation elections AND what segmentation options are available?

- Does the vendor solution offer dynamic user-defined fields for custom segmentation options?

- What is the process required to recalculate lifetime loss experience after a new segmentation is elected?

- How does the vendor's solution identify and separate loans for individual analysis?

Comparability

- Does the vendor solution offer independent instances of complete calculations for efficient comparisons?

- What, specifically, is the vendor's designed process for comparing one-to-many, many-to-one, and many-to-many segmentation elections?

- Does the vendor solution offer loan-level comparisons for auditability and symmetrical roll-up comparisons?

Support

- How are segmentation elections tracked and documented within the vendor's solution?

- What visible controls are available to determine over/under segmentation?

METHODOLOGIES

Although the methodologies themselves require significant loan-level analysis, software will create simplicity in execution. "Simple" execution would equate to having the ability to switch methodologies and create loan-level, pool-level, and portfolio-level comparisons. This will provide institutions with defense for method selection, increase output/reserve level transparency, and inspire confidence with external auditors and examiners.

Electing to perform calculations later will likely result in expensive data contingencies and will limit methodology selection. Vendors that do not provide for a host of methodology elections today can inadvertently limit your options for tomorrow as particular data issues will be made apparent via execution.

Flexibility

- Does the vendor offer multiple methodologies: vintage, probability of loss and loss given default (PD & LGD), migration, cumulative loss rate, and discounted cash flow (DCF)?

- Does the vendor offer pool-level methodology elections?

- What, specifically, is the process for calculating, evaluating and changing methodologies?

- What, specifically, are the inputs for each methodology?

- Does the vendor provide the source for all inputs for each methodology?

- What is the process for identifying assets with unique risk characteristics, and what methodologies are available for determining expected losses on individually analyzed assets?

Comparability

- Does the vendor solution offer independent instances of complete calculations for efficient comparisons?

- What, specifically, is the vendor's designed process for comparing one-to-many, many-to-one, and many-to-many methodology elections?

- Does the vendor solution offer loan-level comparisons for auditability and symmetrical roll-up comparisons?

Support

- How are methodology elections tracked and documented within the vendor's solution?

- What visible controls are available to determine proper methodology elections?

- Does the vendor's solution provide time-specific results critical to observing trends in contractual life and/or prepayment behavior?

- What level of auditability specific to each pool's methodology has the vendor made readily available within the solution?

- Does the vendor provide industry-level data to support and benchmark the results?

FORECASTING AND ADJUSTMENTS

Institutions cannot rely solely on past events to estimate losses and must attempt to create a reasonable and supportable forecast. For periods beyond an established forecast, reversion to average historical experience is required.

Qualitative adjustments to historical loss experience will remain under the new standard as a viable approach to accommodating the impact of forecasts. If the transition is executed properly and timely, institutions will have a series of historical lifetime loss rates as of various analysis dates. Over time, institutions will build observed lifetime loss rates eventually covering one or more economic cycles. Such rates can then be used for identifying loss rates applicable to the expected environment

Vendor models should allow for swift inclusion and exclusion of all observable analysis periods and provide forecasting intelligence, support and application. Ideally, management should be able to evaluate all observed loss rates, make any documented exclusion/inclusion decisions, include forecasted conditions, and see those decisions reflected in the estimated reserve level.

Flexibility

- What, specifically, is the process by which reasonable and supportable forecasts are created within the solution?

- What are the solution's available options for applying a reasonable and supportable forecast and quantifying the impact on expected losses?

- Does the vendor's solution provide for various customizable qualitative adjustments?

- What is the process for reverting to historical averages for periods beyond a reasonable forecast?

- Does the solution provide for pool-level economic data selection to accommodate specific loan types and exposure?

Comparability

- Does the vendor solution offer independent instances of complete calculations for efficient comparisons?

- What, specifically, is the vendor's designed process for comparing one-to-many, many-to-one, and many-to-many methodology elections?

- Does the vendor solution offer loan-level comparisons for auditability and symmetrical roll-up comparisons?

Support

- What external economic data sources are readily available within the vendor's solution?

- What is the refresh rate for externally sourced economic data?

- What is the control mechanism to ensure symmetrical forecast application between pools/concentrations?

DOCUMENTATION

A sound data structure will accommodate back-end reporting for support and external disclosures without introducing manual effort. The new standard will require more inputs, assumptions, and analysis at the pool-level; tracking, consolidating and displaying all information necessary to review, support and recalculate is a critical function of any vendor-based solution.

In fact, documentation and support is an area that is often the most time-consuming exercise in today's ALLL processes, yet is often overlooked during due diligence.

Completeness

- Does the vendor's solution track, consolidate and display all inputs, assumptions and analysis support?

- Does the vendor's solution maintain documentation symmetry as changes are made during the analysis phase of any ALLL calculation?

- Does the vendor's solution contain customizable back-end reporting for various sensitivity calculations and management reporting?

- Does the vendor's solution provide for financial statement disclosure preparation to include vintage analysis (required)

- Does the vendor's solution accommodate uploading support not native to the software?

Auditability

- Does the vendor's supporting documentation provide enough transparency to allow for audit testing and recalculation exercises?

- Does the vendor's solution offer multiple users access with various levels of read/write access to include auditors and examiners?

- What fees are associated with user additions and settings?

- Does the vendor's solution offer print-ready capabilities to accommodate audit packages when auditor or examiner access is not granted?

Efficiency

- What interface exists for external support and is such support included in relevant supporting documents?

- What processes and reports can be scheduled and delivered without human interaction?

- What is the process, specifically, for designing custom reports and what output formats are available (pdf, xls, xlsx, csv, etc.)?

- Does the vendor's solution accommodate mass extracts for ad-hoc analysis in a spreadsheet-based environment?

PRODUCT EVOLUTION AND ENHANCEMENTS

It is very important that institutions have the capacity to explore calculations immediately. Having multiple CECL-ready methodologies today will ensure data adequacy for tomorrow. The longer institutions gamble with their data and delay executing calculations, the more the number of historical periods at risk will continue to rise. The result will be fewer data points and fewer historical periods to accurately rely upon, which will increase volatility and decrease defensibility. Therefore, it is important that a minimal-level of functionality exists right now.

That said, product evolution should be expected and encouraged. Institutions should have a clear understanding of the product roadmap and the contractual obligation to remain GAAP compliant. Here are important considerations:

Roadmap

- What, specifically, is the vendor's enhancement process, and what are the roles and responsibilities of each party?

- What enhancements are currently in development, and what is the estimated completion/production date?

- What enhancements are scheduled for development, and what is the estimated start date and completion/production date?

- What are the vendor's contractual obligations to complete communicated enhancements?

Costs

- What are the fees associated in order gain access to product enhancements?

- What training is available for new enhancements and what costs are tied to the training?

Installation

- What, specifically, are the hardware/software installation requirements?

- If the solution is not SaaS-based, what are the version-control risks associated with the installed solution?

- What systems are in place to document loan-level, pool-level, and portfolio-level changes directly tied to product changes?

TRAINING, ADVISORY SERVICES AND TECHNICAL SUPPORT

For many, the methodologies utilized to determine life-of-loan loss experience and forecasting are foreign concepts. Learning a new system and new concepts simultaneously is significantly more costly without adequate training and implementation.

Some institutions prefer to mitigate modeling and conceptual soundness risk through advisory services. A custom implementation strategy that outlines data organization, supports all material inputs and assumptions, documents parallel calculations and transition sensitivity, recommends proper methodology elections, and drafts or reviews policies and procedures certainly has its advantages

No matter the approach to implementing new software and performing new calculations, technical support is a material due diligence consideration. Understanding the availability, expertise, and fee structure for training, advisory services, and technical support is a must. Consider:

Availability

- What is the vendor's support teams' geographical location and its hours of operation?

- What are the vendor's contact options (chat, email, phone, etc.)?

- What is the vendor's response rate specific to chat, email, phone, etc.?

- What training does the vendor provide at implementation and on an on-going basis?

- What is the format for training: on-site, web-based or manual driven?

- Does the vendor provide advisory services in conjunction with or independent of software licensure?

Expertise

- Does the vendor provide for various levels/types of support to accommodate GAAP, regulatory and industry best practices; product support, and relationship and/or vendor management inquiries?

- What, specifically, are the qualifications of the vendor's industry experts?

- Does the vendor provide various levels of advisory engagements?

- What is the vendor's overall experience in executing in-market production-grade ALLL solutions?

- Does the vendor participate in thought leadership?

- Does the vendor have meaningful relationships with industry trade organizations?

Fee Structure

- What costs are associated with customer support inquiries?

- What costs are associated with initial training and implementation?

- What fees are associated with on-going training?

- Is the vendor's advisory service fee structure appropriate for the level of engagement?

SUMMARY

As institutions search for solutions that are both cost-effective and accommodating, understanding critical capabilities will lead to a more successful investment. Building peripheral spreadsheet-based models, purchasing data to derive and support material inputs and assumptions, limiting methodology options, and manually compiling supporting documentation and/or disclosures can lead to dissatisfaction and can prove costly.

A CECL-ready vendor solution should contain the following:

- Data fit/gap analysis and a clear understanding of data-driven limitations

- Data remediation assistance

- Adequate training, support, and advisory services

- Life-of-loan and prepayment calculations

- Rapid segmentation elections

- Multiple methodology options available at the pool-level

- Forecast creation, support, and application capabilities

- Supporting documentation and disclosure preparation

- Clear developmental roadmap commitments and contractual obligations to remain compliant

ABOUT SAGEWORKS

Sageworks (*www.sageworks.com*) is a financial information company working with financial institutions, accountants and private-company executives across North America to collect and interpret financial information. Thousands of bankers rely on Sageworks' credit risk management solutions to streamline credit analysis, risk rating, *portfolio stress testing*, loan administration and *ALLL calculation*. Sageworks is also an industry thought leader, regularly publishing *whitepapers* and hosting webinars on topics important to bankers.

Sageworks ALLL is the premiere automated solution for estimating a financial institution's reserve. It helps bankers automate their ALLL process and increase consistency in their methodology, making it defensible to auditors and examiners. Sageworks' risk management consultants also assist clients with the implementation of their ALLL models and guidance interpretation. To find out more, visit *www.sageworksanalyst.com*.

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Neekis Hammond is the Director of Advisory Services/ Portfolio Risk Management at Sageworks. He provides financial institutions with advisory services, leads thought leadership, develops market strategies and consults with product development on solution requirements and accuracy. He specializes in ALLL; CECL preparation and methodology; acquired loan accounting and valuation (ASC 310-20, ASC 310-30, and ASC 820); stress testing, interest rate risk and various portfolio analysis topics

Neekis has facilitated multiple open-market and FDIC Assisted Acquisitions. Prior to joining Sageworks, he held a key role within Elliott Davis Decosimo's FIG Consulting division where he provided valuation, accounting, and loan analysis services. Earlier, he was with a multi-billion dollar financial institution, where he worked on acquisitions ranging in size from $130MM to $2 billion, and worked as an auditor with a regional CPA firm.