The Need for a CECL Quantitative Impact Study

A Discussion Paper of the

AMERICAN BANKERS ASSOCIATION

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Qualification: ABA does not give financial reporting, legal, or accounting advice and our views on these issues are not authoritative. The ideas conveyed in this paper are meant to provoke thoughtful discussion between bankers, auditors, and regulators related to implementation of the Current Expected Credit Loss accounting standard. Unless otherwise noted, the ideas are not meant to reflect minimum requirements or best practices, but implementation processes that will address the practical and ongoing issues that can be expected in estimating and managing expected credit losses.

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Executive Summary

Preliminary testing of the current expected credit loss (CECL) estimation models by larger banks indicate that, while CECL should theoretically reduce procyclicality in the banking industry by providing earlier loss recognition, practical application of CECL will likely increase procyclicality.[1] This is primarily due to the inability to forecast turns in the economy, especially in the long-term. The result also particularly impacts the potential cost and availability of credit to consumers and to loans with longer tenors. Both the increased procyclicality and the uneven impact have public policy concerns. Indeed, due to the fact that a change in loan impairment accounting was initially requested by the Financial Stability Board in order to reduce procyclicality, the American Bankers Association (ABA) believes it is unlikely that neither banking regulators nor bank investors would have supported the change to CECL if they thought CECL would do the opposite.

There have been several papers that have estimated the impacts of CECL, the majority of those focusing on how the implementation of CECL would impact bank capital had CECL been in effect prior to the financial crisis. Each of these studies has strengths and can be instructive, particularly those that test allowable CECL techniques that banks may consider deploying. However, they all have critical weaknesses that can include (among other things) limited scope, inaccurate assumptions of current accounting, the lack of analysis of loan-level credit risk metrics at origination, and the unrealistic application of perfect foresight to forecasting the economy and estimating loss given default. How "procyclicality" is assessed can also be questioned, as a study may conclude that procyclicality is decreased by CECL, even though credit loss allowances are forecast to spike higher than they actually did during the financial crisis time period. Bankers believe such spikes would provide further incremental disincentive to lending during an economic downturn, increasing the procyclicality in the industry.

As a result, the banking industry has requested that a quantitative impact study be performed prior to the 2020 implementation of CECL. The study would include the top ten lenders in each major lending product, plus Fannie Mae and Freddie Mac, as well as a range of midsize and community banks, using actual bank modeling, forecasting results as they would likely have occurred during the financial crisis time period (December 2005 through 2010). Including these lenders would cover the majority of loans held in the regulated lending industry. The results can be summarized, extrapolated to an impact on lending as well as on individual institutions throughout the remainder of the industry.

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[1] The May 2019 "ABA CECL Backgrounder" defines and discusses procyclicality, providing context for this discussion paper.

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In addition to quantitative impact on capital and lending, surveys of midsize and community banks would be performed to assess the expected costs in implementing CECL on an *ongoing* basis.

As part of the study, changes to regulatory capital requirements, regulatory guidance, and to the CECL standard itself will be considered to mitigate any identified unintended consequences.

Section I: The Quantitative Impact Study (QIS)

Overall Background and Purpose

- This Discussion Paper is part of a series of ABA papers that address CECL issues, including implementation. Previous ABA discussion papers are available on ABA.com/CECL.

- ABA has called for a delay to the 2020 effective date of the CECL accounting standard in order to provide for adequate opportunity for the Financial Accounting Standards Board (FASB), the Securities and Exchange Commission, and the Federal banking agencies to perform and evaluate a Quantitative Impact Study (QIS) on the impact of CECL implementation on the general economy, the banking industry, and borrowers across an economic cycle.

- This paper addresses why a QIS is required, provides commentary on widely-cited impact studies performed thus far, and offers a framework as to how such a QIS would be conducted.

The Need for a QIS

- ABA's request for a QIS addresses two main objectives:

  1. To Assess any Unintended Consequences of the CECL Accounting Standard

  An assessment of costs and benefits is part of the due process of FASB prior to the issuance of new accounting standards, and bankers believe, due to their role as financial intermediaries in an economy, that the due process would include a quantitative impact study (QIS) to assess the impact on the larger economy, on banks across the industry, and on borrowers, when such a standard is significant to banking. FASB notes that performing a quantitative impact study is not part of its assessment of costs and benefits.

  Whether FASB or its staff is responsible for such a study, the CECL project was initially based on the objective of implementing an accounting standard that decreases the inherent level of procyclicality in the banking system. This objective was provided by the Financial Stability Board (FSB, formerly the Financial Stability Forum), an organization of worldwide regulating bodies.[2] Early modeling of CECL estimates applied through the financial crisis

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[2] See Financial Stability Forum, "Report of the Financial Stability Forum on Addressing Procyclicality in the Financial System." April 2, 2009.

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period indicates that, while there is evidence of nominally higher allowances prior to the financial crisis, weaknesses in professional forecasting would cause allowances to be higher *during* the recession and for a longer period. In other words, it can worsen procyclicality in the industry. This unintended consequence was, obviously, not foreseen by FASB or any of FASB's constituents.[3]

If banking regulators, a key constituent of FASB and significant users of bank financial statements, were aware that CECL would increase procyclicality in the banking system, ABA believes it is highly doubtful that they would have supported CECL in its current form. In other words, the regulators' support that FASB cites for approving the CECL standard may be based on a faulty assumption. Further, even if there were increases in earlier loss recognition, based on the dramatic operational and capital costs at all banks to implement CECL on an *ongoing* basis, regulators may also believe the benefits of the standard may not exceed those costs.

Some may say that the QIS is needed to ensure FASB that the feedback they received is sound. This could direct FASB to reassess its due process in order to ensure quality stakeholder feedback is received and to require authentic field testing prior to issuance of a standard. This is important, as FASB cites investor support for CECL, though a January 2019 Janney survey of bank investors indicated that 75% disagree that a change is needed to current accounting standards.[4]

In any event, the unintended consequences of CECL can occur at various levels. Therefore, not only should unintended impacts on bank loan-loss allowances be assessed over an economic cycle on an industry-level, but other impacts also should be specifically assessed:

   o The possible migration of lending from the regulated banking industry to non-bank (shadow bank) institutions.
   o The ability of community banks, subject to CECL, to compete in their markets.
   o The impact on consumer lending and lending to small businesses.

2. Assess Practices and Guidance that can Potentially Mitigate the Effects of CECL

If banking regulators continue to support CECL (without exploring evidence of increasing procyclicality in the financial system or other unintended consequences to certain borrowers), various changes in regulatory capital requirements, regulatory guidance, bank practice and assumptions, and to the CECL standard itself could be considered to mitigate these impacts. Of course, certain accounting practices could unintentionally create "earnings management"

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[3] The significant operational changes needed to virtually all bank information systems in order to perform life of loan estimates is a primary reason why such estimates could not be performed prior to the issuance of the CECL standard in 2016. In fact, such bank-based estimates have not been available until 2018.

[4] See https://research.figpartners.com/wp-content/uploads/2019/01/FIG-Partners-1-11-19-Analyzing-Results-From-Our-Credit-CECL-Survey.pdf

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concerns and, thus, would require feedback from auditors and SEC personnel in assessing such practices.

As CECL will generally require an overhaul to many bank operating systems, the QIS can also survey banks on the estimated additional costs of compliance. In this respect, changes to CECL that alleviate the operational burden without abandoning the forward-looking measurement objective of the FSB, would be considered if the operational burden is onerous.

Section II: Commentary on Previous Assessments of Impact

Overall

There are six papers most people refer to that consider CECL's procyclicality.[5] Each of the studies has significant weaknesses and limitations that preclude any legitimate conclusion, except to say that more work is required. ABA believes, as a result, that a separate quantitative impact study should be performed, in which there is agreement as to parameters of the study, including how key assumptions are considered in modeling CECL estimates. Such a study would also examine how the industry, including regulators, should react in response to the findings, regarding capital management, product mix, and accounting and regulatory practices and guidance. Section III has more detail on the framework for the QIS.

The commentary by ABA staff below is not meant to be comprehensive and is not the result of any detailed review of the formulas or calculations made, but attempts to come from the perspective of a financial officer who must manage capital, evaluate CECL methods, and report and explain results to its investors. With that in mind, the commentary attempts to bring out what is constructive and problematic to the CECL discussion.

1. **Federal Reserve Board Staff Paper, "The Impact of the Current Expected Credit Loss Standard (CECL) on the Timing and Comparability of Reserves"**

   The FRB's researchers analyzed and modeled credit loss estimates on first lien 30 year residential mortgages originated in California. Various CECL methods were applied, including a perfect foresight of housing prices, as well as optimistic and trend-continuing methods (and a hybrid of the two) which were compared to a short-cut method estimation of incurred loss allowances. The CECL estimates were based on loan level data, including borrower initial credit scores and loan to value ratios.

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[5] Some people also point to New York University professor Stephen Ryan's 2019 article "The CECL Approach", though the discussion in the article is purely qualitative, without quantitative modeling. See https://www.bankingperspectives.com/the-cecl-approach/.

ABA also notes that The Bank Treasury Newsletter and StoneCastle Partners also conducted a quantitative impact study of CECL in 2017 to assess the need for regulatory capital across the banking industry. Though it was not performed to assess procyclicality, the high-level, top-down study estimates that approximately 650 banks could be at risk of falling below total risk-based capital requirements if conditions such as those in 2007 exist. This would result in up to $45 billion in needed additional capital. See https://stonecastle.com/wp-content/uploads/2018/01/2017-12-18-CECL-and-Tier-2-Final.pdf

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As expected, the "perfect foresight" model did lower procyclicality during the 2006-2010 timeframe. This led the researchers to conclude that "to the extent that risk managers have the capacity, even somewhat limited, to predict near-future macroeconomic trends, CECL should achieve its goals and lead to a less pro-cyclical, more forward-looking provisioning behavior than the incurred loss standard."

Not specifically pointed out in the paper, the other CECL loss methods (optimistic and trend continuing), did not appear to provide estimates significantly different from the incurred loss estimates for periods prior to 2008. In fact, the trend-continuing method also appears to spike allowances higher than the incurred loss estimate during the trough of the recession. This is problematic, because banks contend that the procyclicality of CECL is largely due to professional forecasting not being able to call turns in the economy and then continuing trends when the economy does turn. Due to this, bankers believe that if forecasting consistently works on a "trend continuing" basis, those results will emulate the ones in this study.[6]

The paper also expresses concern that the wide range of modeling decisions will likely be opaque to market participants, "making it difficult for the market to disentangle portfolio risk from forecast uncertainty." Though not related to procyclicality, this concern is significant, because bank investors normally perform estimates based on their own models using their own assumptions. If they are unable to distinguish between credit and forecast risk, their job is significantly more challenging. Banking analysts have told ABA that bank stock prices will need to be discounted under CECL due to the uncertainty of forecasting.

In summary: This paper introduces the unattainable concept of "perfect foresight", which represents CECL "in theory." Its limitation in scope to residential mortgages further reduces its utility. However, it elevates the question as to whether forecasters are truly able to predict macroeconomic trends accurately. If not, then bankers believe CECL will more likely increase rather than decrease procyclicality.

See https://www.federalreserve.gov/econres/feds/files/2018020pap.pdf.

2. **The Bank Policy Institute's "Current Expected Credit Loss: Lessons from 2007-2009"**

Bank Policy Institute (BPI) chief economist William Nelson testified on CECL at the December 11, 2018, hearing of the Financial Institutions and Consumer Credit Subcommittee of the Committee on Financial Services of the U.S. House of Representatives (the Congressional hearing) and co-authored this study, which concludes that had CECL been in effect during the financial crisis, loss provisioning would have been "highly procyclical" and likely would have "exacerbated the impact of the 2007-2009 financial crisis." BPI noted that macroeconomic models and forecasters are "generally unable to predict turning points. Most of the time, the models predict that economic conditions in the future will be similar to the

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[6] The Bank Policy Institute notes the same issue in a blogpost: https://bpi.com/responding-to-criticism-bpi-stands-by-its-finding-that-cecl-is-procyclical/.

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present while gradually reverting to the mean." Therefore, forecasters seem to miss the turns (both down and up) and, as a result, predict recessions too late, too high, and too long. BPI takes the results from the modeled changes in regulatory capital and then extrapolates these results to a judgment of the impact on bank lending. The paper estimates that lending would have decreased nine percent had CECL been in place, compared to what actually occurred.

BPI's conclusions were based on a "top-down" analysis of call report data and not loan-level data. Its estimates are based on a regression analysis that links losses to the economic factors, current charge-off activity, and assumptions related to the lengths of loan portfolio life. The BPI study includes all loan products and not just residential mortgages. Considering that the conventional wisdom is that longer-termed consumer loans (the 30-year mortgage) will be impacted the most under CECL, the dramatic level of increased procyclicality indicated in their study would have contrasted even more dramatically with other studies (noted below) that limited their scope to mortgages. In other words, BPI's results would have shown even greater procyclicality if it had limited its study solely to mortgages.

Many believe that a significant portion of credit losses during the financial crisis could have been recognized earlier, due to higher loss expectations that would naturally accompany a lowering of underwriting standards preceding that time period. However, since the study uses call report data that cannot be disaggregated by detailed credit risk characteristics (for example by FICO score or loan-to-value ratio at origination, as loan level data would), it likely cannot directly address this.

In summary: The study performs estimates covering all products to assess CECL's impact and emphasizes the role of accurate economic forecasting. Additionally, until August 2019 (see below), this was the only study that estimated the aggregate impact of CECL on bank lending (not just on regulatory capital) during a recession. Such an estimate is critical to a QIS. That said, the "top-down" nature of the analysis omits consideration of much of the impact from changes in origination credit quality that might occur. Thus, the study is unable to sufficiently address whether significant earlier credit loss recognition would have occurred. The study also does not address the specific impact on different product lines, though estimates were made in much detail (likely because disaggregated incurred loss information relating to that time period is unavailable). All this said, however, this paper spotlights that a significant increase in procyclicality, particularly in lending, could occur and that more study needs to be performed.

See https://bpi.com/analysis-demonstrates-that-the-current-expected-credit-loss-cecl-accounting-standard-would-be-procyclical-if-used-for-regulatory-capital-purposes/.

3. Moody's Analytics, "Gauging CECL Cyclicality"

Mark Zandi, chief economist of Moody's Analytics, also participated in the December 2018 Congressional hearing on CECL. Moody's Analytics considered Freddie Mac residential mortgage loans. Using loan level information, Moody's segmented its pools based on FICO score, loan-to-value ratio, and age in months. Therefore, the paper argues that it can better identify expected loss earlier, because underwriting quality was assumed to decline during

the test period. While acknowledging forecasters' "inability to completely foresee economic turning points," the paper claims "empirical support for the conclusion that the CECL standard will be less procyclical than the incurred loss standard."

William Nelson of BPI pointed out two significant issues within the Moody's paper during the hearing. First, the Moody's study only looks at residential mortgages and not all loan products. As it relates to residential mortgages, however, the Moody's study assumes an inaccurate picture of incurred loss accounting (to which CECL is compared) that delays loss recognition far beyond levels actually recorded.[7] The Moody's study assumes that incurred loss accounting mirrors 90 day past due levels: no losses until loans are 90 days past due and, as Nelson pointed out, the losses are total (100%). Of course, bankers know that "loss emergence periods," further adjusted by "Qualitative" factors, are used to provide some level of a forward-looking loss reserve. Further, when residential mortgages go past due, the bank does not incur a total loss, which is what the Moody's incurred loss assumption implies. Collateral values mitigate the losses. Delaying the incurred loss recognition to 90 days past due does not reflect reality. However, then assuming a 100% loss exaggerates the impact during the recession. Therefore, the strawman that Moody's compares to is not accurate and would exaggerate the procyclicality of incurred loss accounting.

In addition to the BPI observations, ABA notes that forecasts of home prices will be critical to many bank estimates. While forecasted loan-to-value ratios are used in estimating probabilities of default at different points in time, they are not at all used by Moody's in estimating the loss given default (LGD). The study assumes a flat 35% CECL LGD throughout the study's time period. It is difficult to see that such a blanket assumption can be made by bankers, given the constructs of model validation and in light of current CCAR and DFAST processes: home price forecasts, which are critical to LGD assumptions, are significant factors in estimating LGD. Bankers have told ABA that credit risk supervisors within the agencies expect to see updated LGD forecasts each period, based on current collateral price forecasts.

From a modeling perspective, assuming a 35% LGD from the start equates to an unattainable "perfect foresight" estimate. It is doubtful that bankers would have foreseen a 35% LGD in 2005. For example, Fannie Mae loan data going back to 1999 vintages indicate loss severity far lower than 35%, even down to 12% for some vintages. Assuming LGDs of 35% from the start would have been viewed skeptically by auditors, especially since housing prices were forecasted to be relatively stable until 2009.

This is important for bank CFOs who must explain their results. While defaults (represented in an estimation model as the Probability of Default) might increase, if housing prices are stable (as they were forecasted to be by professional forecasters, such as Moody's), then loss given default (and, thus, expected losses) would be expected to be relatively low until 2009. Once 2009 came, however, professional economic forecasts related to home prices (including

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[7] Credit loss allowance levels were not disaggregated in Call Reports by lending product until 2015. Therefore, assumptions must be made that estimate incurred loss levels related specifically to residential mortgages during this time period.

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those of Moody's) became dire, overshooting the actual drop. One would think that, in real life, this would cause losses to be relatively mild until 2009, and then spike in 2009, as the bank plays "catch up" with all previously underestimated loan losses. While the Moody's paper indicates that "the range of LGD rates is not large across the economic cycle," it seems forecasted LGD rates would have been had they been based on the actual Moody's economic forecasts of home prices.

Having said all that, the above discussion of LGD can be instructive for bankers. While a 35% LGD might not have been defendable prior to the financial crisis, it might be used as a benchmark for the next recession. Other studies on loss given default have indicated that a "downturn" LGD could be significantly different from one assumed during stable economic times.

An interesting aspect of the Moody's study is the use of probability weighting of alternative economic assumptions within its modeling. Such a practice will produce significantly higher loss estimates during benign periods (and lower allowances during recessions), due to what is referred to as the "non-linearity" of credit loss modeling (increases in defaults accelerate as assumed economic conditions incrementally worsen). This had a significant impact on the Moody's results and would have naturally induced higher allowances prior to economic stress in any scenario, dampening any procyclicality. In ABA's opinion, it is the use of the perfect foresight of LGD, as well as use of probability-weighting that primarily allows the Moody's results to indicate decreasing procyclicality from CECL.

Probability-weighting is allowed in CECL, though not required. It is a technique that banks are currently exploring in their implementation testing, though it requires a robust governance process over the specific weightings assigned to the alternative scenarios, as well as a process to evaluate the resulting different outcomes. The governance process over weightings must ensure that weightings reflect actual probabilities and are not overly influenced by management bias for the purpose of earnings management. ABA believes such estimates based on alternative scenarios could be a critical part of the CECL process. However, since the weightings assigned to individual assumptions can be viewed as subject to manipulation, banks may forego formalizing this process in arriving at their estimates.

Probability weighting also invites risk of underweighting pessimistic scenarios (or overweighting optimistic scenarios) during a downturn. During inflection points of the economic cycle, this could lead to a whipsawing of the allowance. Of course, this could occur without probability weighting. However, this goes to show that the same risks in forecasting occur, no matter the use of probability weighting or not. In any case, probability weighting is a technique that may be evaluated in a QIS.

In summary: The limited scope to Freddie Mac mortgages limits the usefulness of this paper. A study that included commercial real estate loans, credit cards, and certain consumer loans (such as student loans) would be more helpful.

Inaccurate assumptions made of current accounting and the use of perfect foresight on loss given default would overstate the level of earlier credit loss recognition Moody's claims is cured by CECL.

Though the paper acknowledges inaccuracies in economic forecasting, the use of probability-weighting likely adds to earlier loss recognition in practice, which would mitigate procyclicality. While not required by the CECL standard, probability-weighting might be a practice to consider to mitigate some of the procyclical nature of CECL.

See https://www.economy.com/mark-zandi/documents/2018-12-03-Gauging-CECL-Cyclicality.pdf

4. Joseph Breeden, "CECL Procyclicality: It Depends on the Model"

Joseph Breeden, of Prescient Models, LLC, has performed different studies of both Freddie Mac and Fannie Mae loans originated since 1999. In response to concerns of how CECL implementation was being communicated by key stakeholders related to whether non-complex models could be used, whether CECL increases procyclicality, and whether those increases would be due to inaccurate economic forecasting, Breeden models CECL allowances on Fannie Mae residential mortgages between 2004 and 2015 using various estimation methods. This contrasts with other studies that merely use one method and compare it to their incurred loss estimate. This study is important, because FASB has referred to this study in order to defend the CECL standard in various settings.

Breeden does not argue that CECL will increase procyclicality. Talking separately about his study, he notes that with sharper increases and higher allowances during the trough of the recession, the lifetime loss model of CECL is naturally more procyclical than incurred loss accounting. However, the amount of increased procyclicality is largely dependent on the estimation model that is used (hence, the title of the paper). Simple models that are promoted by some to make CECL appear easy to implement are also the worst at earlier recognition of credit losses. Sophisticated and detailed models analyzing vintage-based cohorts that are segmented by initial credit quality and loan-to-value ratio are far better at identifying when (and how much) credit loss expectations should increase.

This is an important observation, because banking regulators and FASB have represented to smaller banks that they are free to use non-complex models, including the weighted average remaining maturity method (WARM). The study, however, says plainly, "In short, WARM should not be used for CECL." If the non-complex models are used, unless large "qualitative" adjustments are made to initial modeled results, these banks will not likely catch any adequate deterioration that would be projected in an expected credit loss estimation model. With that in mind, those large "qualitative" adjustments will ultimately be difficult to quantify or explain.

Related specifically to the amount of procyclicality added by CECL, however, Breeden also points out that changes in the credit quality of originations leading up to the recession make up approximately half of the increased allowances, and reflecting rising credit risk should be

the real goal of CECL. This is a point that FASB makes by using Breeden's charts in its presentations. Breeden also refers to phases of a credit cycle that can precede the economic cycle, something helpful for both regulators and banks as they contemplate forecasting the future.

This still leaves the forecasting risk as a significant problem when assessing procyclicality. Furthering the forecasting risk, however, is also how loss given default is forecasted. Where the Moody's study assumes a "perfect foresight" of LGD, Breeden assumes an LGD that is based on an automatic reversion of housing prices to the long-term growth rates. This assumption of reversion, used as a time saver because of the high complexity of forecasting loss given default, will naturally reduce the volatility (procyclicality) in the CECL estimate compared to an estimate that bases it on a currently forecasted home price index. Like professional forecasts of unemployment, forecasts of home prices were also slow to recognize a downturn, and when the downturn hit, overshot the severity of them. Breeden has acknowledged to ABA that updating the forecasts of housing prices with the most recent professional forecasts at the time would have increased the amount of procyclicality in the study.

In Summary: This paper focuses solely on residential mortgages and so will have limited application to other lending products. However, it acknowledges that greater procyclicality will result from CECL, while noting that a portion of the increased procyclicality can be identified earlier through complex modeling that is based on loan level credit risk metrics. The paper's reference to credit cycles (which are different from economic cycles) may be a concept that can assist banks and regulators in anticipating turns in the economic cycle. This issue should be examined further by the banking agencies.

The paper points out that the use of non-complex methods will likely increase the level of procyclicality that CECL adds. This puts into question the wisdom of those who encourage non-complex CECL modeling for many institutions that hold residential mortgages, particularly community banks.

See https://www.prescientmodels.com/articles/CECL-Procyclicality.pdf.

5. The May 2019 ABA CECL Snapshot

The ABA CECL Snapshot reports selected ranges of credit loss rates expected in both benign and stress periods that certain banks anonymously submitted, based on their CECL modeling performed as of May 2019. The loss rates, which were provided by banks that collectively hold approximately ten percent of the loans in the industry, were reported across several product lines. Ranges consisting of median and average responses were presented by ABA. These amounts appear to reaffirm banker contentions that CECL loss rates will be higher during a recession than what occurred during the financial crisis under the current incurred accounting model. In other words, CECL estimates could increase the procyclicality of the industry, because the stressed loss rates would discourage lending when it is needed the most. The indicated spikes in loss rates also are more pronounced when related to consumer lending, which has drawn concern from members of Congress.

The Snapshot is the only document that reflects expected loss rates across various product lines and also is the only document that addresses current portfolios and current modeling expectations. While existing procyclicality papers related to CECL involve residential mortgages, other products at risk of procyclicality include credit card, other consumer (including student loans), and commercial real estate. ABA believes these products must also be studied.

In Summary: The credit loss rates indicate that CECL could increase procyclicality and also be especially problematic for consumer loans. However, due to the general nature of the study (reporting only "benign" and "stress" rates), it does not address the existence or significance of any earlier loss recognition, nor does it address how long the stress rates would exist during a recession. In other words, the Snapshot provides evidence—based on actual bank modeling—that more examination is needed.

See https://www.aba.com/news-research/research-analysis/aba-snapshot-of-banks-cecl-estimates.

6. **Federal Reserve Board Staff Paper, "CECL and the Credit Cycle"**

The Staff Paper authors perform a study that, in certain respects, is similar to the BPI study discussed above: Call Report data (not loan-level data) are used across all loan products, applying charge-off data and portfolio life assumptions with a forecasting mechanism. The results are then used to estimate changes in lending. Though CECL allowances spike 100 to 200 basis points higher than incurred losses, the paper notes, "…CECL appears slightly less procyclical than ILM (Incurred Loss Method)."

There are different assumptions made related to the impact on lending compared to the BPI study, and these differences are worth understanding in a QIS. However, there are three significant differences from the BPI paper in CECL-specific modeling that would have significantly impacted the results:

A. The forecasting mechanism selected as the study's preferred method is the use of stock market performance.

Where BPI used professional forecasts of unemployment as a basis for its forecast, the use by the authors of stock market performance as a leading indicator of credit losses is a creative twist to the study of credit loss forecasting. Stock performance is one of the ten components comprising "The Conference Board Leading Economic Index." However, unless there is a big change in regulatory credit risk supervisory guidance, ABA believes it is highly unlikely that banking agency personnel would permit banks to point primarily to the stock market for their credit loss estimates in the near future. In light of short-term volatility often experienced in the stock market, banks would also struggle in credibly explaining their credit portfolio to investors purely in light of market performance.

B. The paper estimates charge-offs for a "reasonable and supportable forecast period" (R&S period) and then reverts its estimates back to long-term average rates for the remainder of the portfolio's expected life.

The use of reversion to long-term loss rates in a credit loss forecast is something that CECL allows and most large banks are planning to be ready to apply, if needed. Reversion of economic forecasting likely diminishes the inaccuracies of linking the stock market to charge-offs after one to two years' time (or, for that matter, any inaccuracies of any long-term forecasting of economic factors). Therefore, the limitation of the R&S period was a key aspect of the paper. Preliminary bank testing has indicated that minimizing the length of the R&S period (and reverting to long-term rates thereafter) can significantly decrease the volatility of allowance levels. That said, the credit loss estimate must be "reasonable" and banks will need to do a lot of work to document, especially during times of economic stress, why their use of an R&S period creates a faithful representation of credit loss if they veer significantly from professional forecaster estimates. With that in mind, while reversion techniques can get rather complicated, limiting the forecast period is a technique that should be a point of consideration within a QIS.

C. Estimated portfolio lives used in the paper were considerably shorter than those used in the BPI study.

The staff paper considers how stock market performance impacts an expectation of annualized charge-offs and then multiplies the charge-offs by the expected lives of the portfolio to arrive at the allowance amounts and provisions. It is difficult to determine the appropriateness of the estimated lives used in the paper. However, if they represented averages over the time noted (1992 through 2018) or if they included only an analysis resulting from prepayments, this could mute the amount of loss expectations. In fact, with the exception of lives for commercial real estate loans, the expected lives used in the paper are significantly shorter than those used in the BPI study. ABA believes modeling shorter lives will diminish any perceived procyclicality.

It is worth noting that the allowance balances in the paper throughout the modeled economic cycle were *always higher* than the incurred loss balances. Using expected lives similar to the lengths used by BPI (which were gathered individually from various large banks with the specific intent of capturing what was experienced during the economic crisis), it would seem that CECL balances would have exhibited a further spike over incurred loss amounts and, perhaps, changed the authors' conclusions.

Significant comments are made in the "Caveats" section of the paper, and two are worth pointing out. First, as a reason that CECL may reduce procyclicality, the authors cite the Moody's study that "CECL may disproportionately increase the capital costs of lower credit quality originations." Second, as a reason that CECL may increase procyclicality, "since CECL has a relatively large impact on loan loss allowances at origination, it could discourage lending at banks where capital constraints bind tightly in the short run." These issues are not studied in the paper, but happen to be two of the main reasons why bankers believe a detailed QIS is needed.

ABA interprets this as an endorsement of a QIS, as we do not believe regulators prefer to cut off credit from lower income consumers, and they do not wish to constrain lending further during a recession.

In Summary: This paper contains much of the same limitations that the BPI paper does, due to the top-down modeling approach. In other words, the impact of changes to origination credit quality cannot be assessed. However, it provides a creative way to forecast economic conditions that may take time to integrate into supervisory procedures. Its use of the "reasonable and supportable forecast period" is a concept the agencies should consider in regulatory guidance, though consultation with auditing firms is necessary to ensure that practice of it is not overshadowed by the auditing and documentation requirements.

Since the paper notes that credit loss allowance balances spike higher under CECL while still decreasing procyclicality, methods in assessing procyclicality (in this case, the impact on lending during a recession) should be discussed. Transparency between their method and BPI's method will be a key aspect of a QIS.

The conclusion that CECL "slightly" decreases procyclicality also raises the question of cost and benefit. CECL requires significant overhaul of the data gathering, modeling, and governance processes at all banks. CECL will be costly to initially implement and to perform estimates on an ongoing basis. ABA believes that support of CECL from regulators would wane if they believed CECL would result only in a "slight" improvement from current accounting. Their support would be further diminished if the impact to lower credit quality borrowers is significant, especially during periods when credit is constrained.

See https://www.federalreserve.gov/econres/feds/files/2019061pap.pdf

Section III: Framework for the CECL Quantitative Impact Study (QIS)

A. Objective of the QIS

The objective of a QIS should be to estimate the impact of the CECL accounting standard on lending throughout an economic cycle and to evaluate alternatives that may mitigate any unintended consequences.

Impact will be estimated through 1) changes in CET1 both during an economic recession (using the financial crisis as a basis) and through the cycle, 2) extrapolating any changes in CET1 to changes in lending availability, 3) extrapolating the results in CET1 to individual institutions in the banking and credit union industries, and 4) estimating costs of compliance throughout the industry.

B. Key Unintended Consequences to Be Evaluated

Since there are bills in both the U.S. House of Representatives and Senate relating to a study of CECL, those documents can provide a basis for the QIS. Per HR 3182, unintended consequences include—

1. The potential impact that the implementation of CECL may have on the availability of credit, with a particular focus on the impact on that availability—
    a. for consumers and small business concerns; and
    b. with respect to the credit products on which consumers and small business concerns rely during periods of economic expansion and during recessions;
2. Whether implementing CECL could—
    a. accelerate the depletion of regulatory capital that is available to support lending during a recession;
    b. have a greater impact on regulatory capital, or extend the period in which regulatory capital is reduced, during a recession; or
    c. pose any systemic risks to the economy of the United States;
3. The potentially disproportionate impact that the implementation of CECL may have on financial institutions, taking into account—
    a. the various sizes and levels of complexity of those financial institutions; and
    b. the different amounts of resources that are available to those financial institutions;
4. The potential impact that the implementation of CECL may have on the decisions made by investors; and
5. The potential competitive impact that the implementation of CECL may have on institutions in the United States as a result of differing international accounting standards used to measure credit loss.

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C. Major Steps to a Quantitative Impact Study

Such a QIS can and should be undertaken in a methodical way. Major steps could include the following:

1. Institutions will estimate CECL allowances and provisions as of end of year 2005, 2006, 2007, 2008, 2009, and 2010. This is the QIS period. As it represents experience from the most recent turns in the economy, it provides the closest basis for an expectation of credit loss estimates in the future.
2. Institutions will estimate expected credit losses at the product level[8] that they currently intend to apply under GAAP.
3. Institutions will perform their estimates on the portfolios they held during the 2005-2010 time period.
4. Institutions not subject to a 2020 implementation may have yet to test a reliable CECL estimation process. These entities may use short-cut modeling methods, such as applying forecasted charge-offs to average life assumptions.
5. CECL estimates at each point in time will be performed using the key macroeconomic forecasts that were available at the time for the factors the institution intends to deploy when CECL becomes effective. For example, if the institution intends under CECL to use solely a forecast of unemployment, only forecasts of unemployment available during the study period will be used.
   a. Estimates using different macroeconomic assumptions will be used:
      i. Assumptions from the external provider applied through the entire remaining life of the portfolio.
      ii. Assumptions from the external provider applied for one year into the future with a reversion to long-term historical experience in accordance with the company's policy.
   b. In addition to the "baseline" forecast, an optimistic and pessimistic forecast will be calculated. For simplicity purposes, as opposed to assigning probability-weighting, an average of the three will be reported.

Estimate of the impact to lending

6. CECL estimates will be compared to incurred loss actual amounts recorded at the time. The difference between incurred loss and CECL estimates will be the basis for an estimate of impact on lending during a recession period. This will be performed by product line. Methodologies noted in the papers from the Federal Reserve and from the Bank Policy Institute will be used to estimate the impact of changes in regulatory capital to changes to lending.[9]

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[8] Allowances for first lien residential mortgage mortgages, for example, would likely be estimated separate from home equity lines of credit.

[9] Extrapolating the impact of changes in capital to lending has been performed by two organizations. ABA believes that methodologies used by either effort will be adequate for the purposes of the QIS. See Loudis, Bert, and Ben Ranish (2019) "CECL and the Credit Cycle," Finance and Economics Discussion Series 2019-061. Washington: **Qualification**: ABA does not give financial reporting, legal, or accounting advice and our views on these issues are not authoritative. The ideas conveyed in this paper are meant to provoke thoughtful discussion between bankers, auditors, and regulators related to implementation of the CECL accounting standard.

7. A "Through the Cycle" (TTC) loss rate per product (one which is based on both the highs and lows of an economic cycle) will also be calculated. The TTC can be used as a reference point as an assumed cost of credit, but it may provide baseline metrics for long-term CET1 calibration.

Estimate of the impact to costs

8. Banking and credit union trade associations will poll members as to estimated—
   a. Additional costs of implementation.
   b. Additional ongoing costs to perform estimates, disclosures.
        i. Whether the company will consider deploying new third party software for its CECL process.
        ii. Whether the company will consider use of third party (external) data.
        iii. Additional internal personnel that may be required.

D. Key Alternatives to be Evaluated in order to Mitigate Unintended Consequences

1. Temporary changes to CET1 requirements

Based on the results observed in the QIS, temporary or permanent changes to CET1 requirements may be considered. Pragmatically speaking, any permanent change to be considered will take considerable time to execute, perhaps taking years. In the meantime, however, temporary changes can occur. Specifically, to the extent that it is decided to continue with CECL after the results of the QIS are assessed, the difference between CECL estimates and incurred loss estimates can be added back to CET1 until a permanent capital regime is put in place. To minimize time (and avoid the extensive efforts that two different estimates would require), incurred loss estimates can be made using short-cut methods. For example, incurred loss allowances that are proportional to charge-off activity from similar previous points of the economic cycle can be applied.

2. Regulatory guidance (official or informal) as to "preferred" CECL practices

a. Consideration of multiple scenarios and probability-weighting of economic forecasts.

Use of multiple economic forecasted scenarios in a CECL estimate will normally result in higher allowances during benign economic periods and lower allowances during stressed economic periods. In other words, such tactics can partially mitigate the procyclicality in the CECL estimate.

Board of Governors of the Federal Reserve System, https://doi.org/10.17016/FEDS.2019.061 and Covas, Francisco and William Nelson. "Current Expected Credit Loss: Lessons from 2007-2009" (2018) *Banking Policy Institute Working Paper*. Available at: https://bpi.com/wp-content/uploads/2018/07/CECL_WP-2.pdf.

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In practice, a bank might perform three estimates and take the average of the baseline, optimistic, and pessimistic forecasts. Use of multiple scenarios can also be performed by applying specific probability weighting to each scenario. For example, during a stressed period, a company may believe there is little chance of the economy getting worse and more likely that the economy will improve. The pessimistic scenario can be assigned a smaller likelihood than the baseline or optimistic scenario.

Neither the use of multiple scenarios nor probability-weighting is required in the CECL standard. However, ABA believes that use of such tools could be considered for stress testing exercises, whether warranted by CCAR, DFAST, or other regulatory guidance. A CCAR-based expectation related to multiple scenarios might overcome a significant methodological challenge that CCAR faces. For example, if at the beginning of the CCAR testing period a ten percent unemployment rate is forecast for the ninth quarter, losses based on such an assumption must, for CECL purposes, be recognized immediately. Of course, an increase of unemployment from today's benign period of sub-four percent to ten percent in two years is considered highly unrealistic. However, as time progresses and the economy deteriorates, that scenario will look increasingly likely.

While considering multiple scenarios and probability weighting can help mitigate the impact of procyclicality in the CECL process, significant challenges for smaller institutions from auditing procedures may limit the use of such processes, as the governance process to decide on specific alternate scenarios and probability-weightings can be onerous.

b. Limitations on the length of "reasonable and supportable" forecast periods and reversion periods.

For practical purposes, the CECL standard splits the forecast period of "contractual life" into two general pieces:

- A "reasonable and supportable forecast period," also known as "the R&S period", which represents the longest period for which the company can estimate, and
- A transition period, which is the remaining contractual life of the portfolio beyond the R&S period. The CECL standard provides that companies apply unadjusted historical experience to the periods beyond the R&S period.[10]

The economic cycle tends to be characterized by several years of very low charge-offs, followed by a year or two of acute increases of charge-offs. From the early stages of CECL implementation it has been recognized that estimates using shorter R&S periods

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[10] Due to the remote likelihood that economic conditions immediately revert to their long-term averages after a recession, the time period in which conditions assumed during the R&S period will revert to long-term averages will often be recognized as a "transition" period, with a "remainder" period representing time thereafter that applies the long-term unadjusted averages.

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produce less volatile estimates over an economic cycle: higher allowances in benign periods (relative to those applying longer R&S periods) and relatively lower allowances during stressed periods. Therefore, to mitigate some volatility from a portfolio, banks will likely consider minimizing the length of the R&S period.

There are significant auditing issues that may prevent many companies from shortening R&S periods. In particular, auditors must assess whether such a process produces a reasonable presentation of expected loss. For example, when housing prices drop during a period of stress, they often do so quickly. Recovery to historical price levels, however, tends to be very slow. Therefore, assessing the reasonableness of reversion from the R&S period to the long-term rates will often be the focus of the audit support. Further, since changes to auditing standards are focusing on addressing management bias within financial statements, governance processes that support the length of R&S periods over other lengths may be subject to significant scrutiny. This will be challenging to smaller institutions or others that may attempt to build estimation models that do not explicitly address specific timing of losses.

c. **Regulatory guidance on the reasonableness of macroeconomic assumptions and relevance of historical data**

At the center of the CECL standard is the reliance on historical data and on macroeconomic forecasts. The recent financial crisis is considered by many a "one in a hundred year event," and ABA discussions with certain agency supervisory personnel affirm this notion. Therefore, it is generally believed to be highly doubtful that the industry will see credit loss experience as so severe for a long time.

Depending on bank practice, data from the crisis period are likely the basis for the majority of banks for credit loss estimates using forecasted "downturn" scenarios. Reference to such experience as the basis for downturn forecasts, especially as they relate to collateralized loans, may then exaggerate the severity of loss estimates over the next recession, thereby unnecessarily increasing the procyclical impact.

With this in mind, regulatory guidance that can set guardrails of overall expectations of economic factors within a downturn scenario can alleviate procyclical pressure arising from the data used.[11]

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[11] Such regulatory guidance does not need to be formalized. Similar guidance has been provided in the past by regulators during informal discussions and private industry roundtables.
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3. Amendments to CECL Accounting Standard Language

a. Amending strict "contractual life" definitions while retaining an "expected loss" notion.

While not a significant issue since the financial crisis, it is true that bankers had supported more flexibility to provide for credit losses that, because of auditing standards that addressed "earnings management" claims, could not be readily supported via "incurred loss concepts." However, bank systems have historically never been configured to support credit loss analysis over the contractual life of unimpaired loans on a pool level, and doing so involves significant cost, both initially and ongoing.

There are various ways that "expected loss" can be implemented without a "contractual life" definition and, therefore, not necessitating the dramatic operational changes of CECL. During the standard-making process, ABA proposed an impairment model that supplemented the incurred loss estimate with a "Credit Risk Adjustment" (CRA) provision that would effectively act as a countercyclical buffer. The CRA would not necessarily be supported by historical credit risk metrics, but it would be subject to detailed disclosure as to the nature and extent of it. An alternative that received some support within FASB during that time merely required disclosure of how far into the future an entity was forecasting, if not the entire life of the portfolio.

Both alternatives satisfied the intent of developing "forward-looking" provisions, though without requiring dramatic changes to bank operating systems. In practice, they likely would lower procyclicality in the industry, subject to auditing demands to support the CRA. ABA believes that, without the "contractual life" definition in the standard, the nature and extent of documentation required to support the estimates may be significantly reduced to levels that FASB originally intended in CECL. In other words, the reliance on inaccurate professional forecasting (and the governance over changes from them) would be greatly diminished, if not eliminated.

ABA also points out that "incurred loss" accounting practices have been significantly liberalized since the financial crisis. FASB modified in 2011 how troubled debt restructurings are identified, for example, thereby requiring lifetime loss measurement. Additionally, banking regulators in 2012 also expressed preference for certain banks to consider providing credit loss allowances for home equity lines of credit in which draw periods would be ending (and repayment periods beginning), between 2015 and 2018. Such practices indicate that incurred loss accounting is far different now than what is referred to by many and could require relatively small changes to achieve the forward-looking provisioning that banking regulators are seeking to achieve. With this in mind, roundtable discussion among industry, auditors, and their regulators would be valuable to assess the viability of such a path.

b. Allowing use of automatic "through the cycle" loss rates for unimpaired loans.

The heart of the operational difficulty in the CECL standard is the requirement explicitly to perform a forecast of future conditions. Considering the historical failure of forecasters to identify upcoming turns in the economy, the forecast also appears not only to add little value to the estimate but may be the primary cause of increased procyclicality.

With this in mind, ABA believes that a framework that applies "through the cycle" loss rates (credit loss rates that reflect both benign and stressed phases of an economic cycle) to unimpaired loans without an explicit forecast of future conditions can largely achieve the "forward looking" objective of CECL that was foreseen by banking regulators during the development of CECL. Use of TTC rates would greatly reduce the processes needed to forecast future conditions and would be supplemented by troubled debt restructuring guidance already within CECL to ensure that problem loans are appropriately provided for during times of stress. In other words, the allowance would generally equal the TTC rate (for unimpaired loans), plus individually-measured lifetime loss for problem loans.

Use of TTC provides useful information to investors, as changes in the provision from period to period will have little impact from a subjective economic forecast. In other words, changes will be primarily the result of underwriting decisions made by the company. As a result, TTC would largely alleviate the procyclicality of "point in time" estimates required by CECL. ABA also believes that the TTC rates can be used as a starting point for reconfiguration of regulatory capital requirements that properly integrate CECL.

E. Scope of Participants to be Included in the QIS

The objective of the QIS is to estimate impact on a systemic level (lending in total), a product level (e.g. potential impact on residential mortgage, small business, credit card, etc.), and a bank level (e.g. national, regional, community bank and small community bank). With this in mind, ABA believes that a cross section of financial institutions, based on product mix and size, is needed to participate in the QIS.   A range of community banks should participate. With this in mind, ABA believes the participants should include:

- Top 10 regulated banks (by call report balance) in each major lending category as of 2019.
- Fannie Mae and Freddie Mac
- A selection of midsize and community banks and credit unions, based on their products and asset size for quantitative modeling of CECL allowances.
- A survey of banks of all sizes for estimates of incremental costs across the industry.

For example, the top ten banks in each lending category, plus the government sponsored enterprises, have already done a significant amount of modeling and data gathering, and a QIS can draw upon that information, covering a significant portion of consumer loans and a significant portion of commercial loans. Because of their size, most of these institutions have been subject to CCAR and DFAST stress testing regimes and should have CECL systems that are substantially ready for 2020 implementation as of fall 2019. Therefore, they are expected to have CECL estimation systems that can easily comply with the QIS.

Midsize and community institutions, especially those with a CECL effective date currently scheduled after 2020, may not yet have CECL systems that would be "audit-ready." Quantitative estimates for these entities can be performed through proxy methods (results from larger institutions can be applied to their companies), short-cut methods (for example, those used in existing CECL studies that apply forecasted charge-off activity across average lives[12]), and/or a combination of the two.

In addition to quantitative modeling, the QIS will also study estimated incremental operational costs to banks of all sizes. This will be performed through surveys sent to institutions throughout the industry.

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[12] While ABA has criticized the use of "average life" methods to perform CECL allowance estimates, those criticisms center around the ability of smaller institutions to analyze and explain the results and the complexities of credit and prepayment risk to its stakeholders. ABA believes that such methods can, nevertheless, provide meaningful insight for the purposes of understanding systemic risk and the potential impact to individual companies.

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F. <u>Lending Products to be tested in the QIS</u>

(Per Call Report Description)

Commercial Loans

- Commercial and Industrial Loans
    - o Commercial and industrial loans
    - o Small business loans
- Commercial real estate
    - o Domestic owner-occupied CRE loans, non-farm
    - o Domestic non-owner occupied CRE loans , non-farm
    - o Domestic construction loans, non-farm
    - o Domestic multifamily loans, non-farm

Consumer Loans

- Residential Mortgage Loans
    - o Domestic first-lien mortgages
    - o Domestic second-lien mortgages
    - o Domestic HELOCs
- Credit cards
- Other Loans
    - o Domestic auto
    - o Student loans
    - o Domestic other consumer

Section IV: ABA CECL Resources

In addition to PowerPoint presentations, CECL FAQs, and a CECL introductory video, ABA has a variety of discussion papers available to the general public at ABA.com/CECL that address CECL implementation. They are:

- ABA Snapshot of Bank CECL Loss Rate Expectations (May 2019)
- CECL Implementation Concerns on WARM and the Need for Comprehensive CECL Guidance
- CECL Implementation Concepts: Reasonable and Supportable Forecasts
- Disclosures and Discussions of Credit Risk Under CECL
- Analyzing Current Loan Performance Under CECL
- Loss Rate Calculations and the Use of Historical Data Under CECL
- Risk Characteristics, Risk Factors, and Market Data Under CECL

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