OMB No. 7100-0341
Expiration Date: October 31, 2017

Instructions for the Capital Assessments and Stress Testing information collection

(Reporting Form FR Y-14A)

This Report is required by law: section 165 of the Dodd-Frank Act (12 U.S.C. § 5365) and section 5 of the Bank Holding Company Act (12 U.S.C. § 1844). Public reporting burden for this information collection is estimated to vary from 20 to 1,028 hours per response, with an average of 304 hours per response, including time to gather and maintain data in the required form and to review instructions and complete the information collection. Comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing the burden, may be sent to Secretary, Board of Governors of the Federal Reserve System, 20th and C Streets, NW, Washington, DC 20551, and to the Office of Management and Budget, Paperwork Reduction Project (7100-0341), Washington, DC 20503.

Appendix A: Supporting Documentation

Schedule A – Summary

For each part of the Summary Schedule, BHCs must submit supporting documentation that clearly describes the methodology used to produce the BHC's projections. The supporting ~~In the~~ documentation should include the following:

Policies~~, include a description of how the BHC translated the macroeconomic factors (or market shock for the Trading~~ **and Procedures**
BHCs should submit all policies and procedures related to the capital adequacy process~~Counterparty Risk sections) associated with the scenario into the BHC's projections and technical details of any underlying statistical methods used~~, including the BHC's ~~information on~~ model risk-management policies. The~~validation and independent review. Where judgment is an essential part of the forecast, include documentation that demonstrates rationale and magnitude, as well as the process involved to ensure consistency of projections with scenario conditions. Furthermore, include thorough discussion of any material deviations from the instructions and how the materiality of such deviations was decided upon. Additional information to be included in the documentation is described below and in more detail in each section of the schedule instructions.~~

~~**Model Risk Management Policy**~~
~~BHCs should include in their submission their~~ model risk management policies~~, which~~ should provide the BHC's general framework for model development, calibration, validation, escalation, and oversight by specifying criteria and controls across various stages of the model lifecycle (Identification; Inventory/ Tracking; Development and Documentation; Independent Validation; Approval for Implementation; Ongoing monitoring; Model Retirement).

Documentation of Risk Measurement Practices
Capital plan submissions should include documentation of key risk identification and measurement practices supporting the BHC-wide stress testing required in the capital plans. BHC submissions should also include internal documentation describing the BHC's framework for development, calibration, estimation, validation, oversight, and escalation of key risk identification and measurement practices. As noted above, an assessment of the robustness of these practices is a critical aspect of the supervisory assessment of capital adequacy processes.

Model and Methodology Inventory Mapping to FR Y-14A
BHCs should submit an inventory of all models and methodologies used to estimate losses, revenues, expenses, balances, and risk-weighted assets (RWAs) and the status of validation/independent review for each. The inventory should include mapping that clearly conveys the methodology used for each FR Y-14A product line under each stress scenario.

Methodology Documentation ~~**of Internal Stress Testing Methodologies**~~
BHCs should include in their capital plan submissions thorough documentation that describes and makes transparent key methodologies and assumptions for performing stress testing on their portfolios. This documentation should describe how the BHC translated the macroeconomic factors (or market shock for the Trading and Counterparty Risk sections) associated with the scenario into the BHC's projections and technical details of any underlying statistical methods used, including information on model validation and independent review. Where judgment is an essential part of the projection, the methodology documentation should demonstrate the rationale and magnitude,

as well as the process involved to ensure consistency of projections with scenario conditions. Methodology documentation should include, at a minimum, the following documents:~~In particular, the design, theory, and logic underlying the methodology should be well documented and generally supported by published research and sound industry practice. The documentation should include~~

- **Methodology and Process Overview**
  BHCs should provide documentation that describes key methodologies, processes, and assumptions for performing stress testing on the BHC's portfolios, business, and performance drivers. Documentation should clearly describe the model-development process, the derivation of outcomes, and validation procedures, as well as assumptions concerning the evolution of balance sheet and RWAs under the scenarios, changing business strategies, and other impacts to a BHC's risk profile. Supporting documentation should clearly describe any known model weaknesses and how such information is factored into the capital plan.

- **Model Technical Documents**
  BHCs should submit model technical documentation for key models used to performing stress testing on the BHC's portfolios. The documentation should include:
  - A description of the model methodology;
  - An explanation of the theory, logic, and design underlying the model methodology and support from published research and sound industry practice;
  - A ~~•~~ discussion of historical data set construction, including data sources, adjustments to the data set, and documentation validating the use of any external data;
  - The ~~•~~ rationale for portfolio segmentation and a discussion on how a particular methodology and model captures the key characteristics and the unique risk drivers of each portfolio segment;

A~~• an explanation of the theory, logic, and design behind each model;~~

  - ~~•~~ ~~a~~ description of model selection and specification, variable choice, and estimation methodology, including the statistical results used to arrive at the selected model;
  - An ~~•~~ ~~an~~ analysis of the model output, including the congruence of inputs with the assumed economic scenario, the justification of any qualitative adjustment, along with the statistical analysis used to support the model output; and
  - A ~~•~~ ~~a~~ model inventory log specifying, at a minimum, the model's version, the date of model approval, the date of its last revision, its intended use, the name of its model owner and developer, the model's priority, the date of the model's last independent validation, and the date of the model's next expected independent validation.

~~Documentation should also include mapping that clearly conveys the methodology used for each FR Y-14A product line under each stress scenario.~~ If third-party models are used, the documentation should describe how the model was constructed, validated, and any known limitations of the model. Documentation should clearly describe assumptions concerning new growth and changes to credit policy. Supporting documentation should transparently describe internal governance around the development of comprehensive capital plans. Documentation should demonstrate that senior management has provided the board of

directors with sufficient information to facilitate the board's full understanding of the stress testing used by the firm for capital planning purposes.

- **Model Validation and Independent Review**
  Models employed by BHCs (either developed internally or supplied by a vendor) should be independently validated or otherwise reviewed in line with model risk management expectations presented in existing supervisory guidance, including Supervisory Letter SR 11-7. Institutions should provide model validation documentation on the following elements: conceptual soundness, inputs, transparency, implementation, reporting, model robustness and limitations, use of expert judgment, exception reports, outcomes analysis (backtesting and/or benchmarking) and qualitative adjustments.

~~**Documentation of Assumptions and Approaches**~~
Validation documentation should include the BHC's assessment of the vulnerability of their models to error, an understanding of any of their other limitations, and consideration of the risk to the BHC should estimates based on those models prove materially inaccurate. Specifically, validation reviews should examine the efficacy of model use in both base case and stress scenarios. While the use of existing risk measurement models and processes provides a useful reference point for considering stress scenario potential loss estimates, validation efforts should consider whether these processes generate outputs that are relevant in a stressful scenario or if the use of models should be supplemented with other data elements and alternative methodologies. To the extent available, the above items should also be provided for any vendor supplied models used by the BHC, along with any third party validation documentation available for the vendor supplied model.

- **Audit Reports**
  BHCs should submit audit reports from their internal audit of the capital adequacy process including reviews of the models and methodologies used in the process. (See "*Capital Planning at Large Bank Holding Companies: Supervisory Expectations and Current Range of Practice*").

- **Results Finalization and Challenge Materials**
  BHCs should ensure that they have sound processes for review, challenge and aggregation of estimates used in their capital planning processes. BHCs should submit documentation providing transparency into the review, challenge, and aggregation processes and the finalization of results.

Within this methodology documentation, BHCs should provide credible support for all assumptions used to derive loss estimates, including
assumptions related to the components of loss, severity of loss, and any known weaknesses in the translation of assumptions into loss estimates. BHCs should demonstrate that these assumptions are clearly conditioned on the stated macroeconomic scenario, are consistent with stated business strategies, and reflect the competitive environment of each business line. If firm-specific assumptions (other than broad macroeconomic assumptions) are used, also describe these assumptions and how they relate to reported projections. If the BHC models rely upon historical relationships, provide the historical data and clearly describe why these relationships are expected to be maintained in each scenario. The impact of assumptions concerning new growth or changes to

credit policy on forecasted loss estimates relative to historical performance should be clearly documented.

While judgment is an essential part of risk measurement and risk management, including for loss forecasting, BHCs should not be over-reliant on judgment to prepare their loss estimations without providing documentation or evidence of transparency and discipline around the process. BHCs should adequately support their judgments and should ensure that judgments are in line with scenario conditions. BHCs should be consistently conservative in the assumptions they make to arrive at loss rates. Where appropriate, documentation should quantify the impact of qualitative adjustments from modeled output.

Furthermore, within this methodology~~Supporting~~ documentation, BHCs ~~also~~ should include a thorough discussion of any material deviations from the instructions and how the materiality of such deviations was decided upon.

Additional information to be included in the methodology documentation is described in more detail in sections A.2 – A.10 below.

Consolidated Pro Forma Financials Methodology

BHCs should submit documentation that describes (1) how the various balance sheet and income statement line items were developed and reported, (2) the specific assumptions used to calculate regulatory capital, including a discussion of any proposed capital distributions, and (3) any other information necessary to understand the BHC's capital calculations (e.g., calculations related to the projections of the deferred tax asset or servicing assets that may be disallowed for regulatory capital purposes). *Additional information to be provided as part of this documentation is outlined in section A.1 below for the FR Y-14A Income Statement, Balance Sheet, and Capital sub-schedules.*

Governance

BHCs should include in their submission supporting documentation that transparently describes~~describe~~ internal governance around the development of stress testing models and methodologies, and discuss how the stress testing methodologies have been implemented in the BHC's existing firm-wide risk management practices. Furthermore, documentation should include a discussion of the stress testing outcomes in terms of the nature of the portfolio and the modeled scenario. The BHC should demonstrate that senior management provided the board of directors with sufficient information to facilitate the board's full understanding of the stress testing used by the firm for capital planning purposes and allow for the appropriate level of challenge of assumptions and outcomes.

- ~~**Validation and Independent Review**~~

~~In addition to being properly documented, models employed by BHCs (either developed internally or supplied by a vendor) should be independently validated or otherwise reviewed in line with model risk management expectations presented in existing supervisory guidance, including Supervisory Letter SR 11-7.~~

> ~~BHCs should also provide their model validation policy. Institutions should provide model validation documentation on the following elements: conceptual soundness, inputs, transparency, implementation, reporting, model robustness and limitations, use of expert judgment, exception reports, outcomes analysis (backtesting and/or benchmarking) and~~

~~qualitative adjustments. Validation documentation should include the BHC's assessment of the vulnerability of their models to error, an understanding of any of their other limitations, and consideration of the risk to the BHC should estimates based on those models prove materially inaccurate. Specifically, validation reviews should examine the efficacy of model use in both base case and stress scenarios. While the use of existing risk measurement models and processes provides a useful reference point for considering stress scenario potential loss estimates, validation efforts should consider whether these processes generate outputs that are relevant in a stressful scenario or if the use of models should be supplemented with other data elements and alternative methodologies. To the extent available, the above items should also be provided for any vendor supplied models used by the BHC, along with any third party validation documentation available for the vendor supplied model.~~

A.1 – Income Statement, Balance Sheet, and Capital

Income Statement, Balance Sheet, and Capital Sub-schedules
HCs should submit supporting documentation that clearly describes the methodologies used to make the loss, reserve change, and revenue projections that underlie the pro forma projections of equity capital. Each BHC should include in its supporting documentation a clear description of how the various balance sheet and income statement line items were reported.

Provide information on the specific assumptions used to calculate regulatory capital, including a discussion of any proposed capital distributions. When appropriate, clearly state assumptions related to the corporate tax rate and the evolution of the deferred tax assets. In situations where the BHC chooses not to project components of the balance sheet, those components should be held constant at the last current level and the BHC should explain why the zero delta assumption is appropriate in the given scenario.

BHCs should submit any other information and documentation necessary to support or understand its capital calculations. For example, a BHC could show the calculations related to the projections of the deferred tax asset or servicing assets that may be disallowed for regulatory capital purposes. Where applicable, BHCs should link the additional supporting documentation to the Summary Memo of Capital Methodology and Assumptions and the Capital sub-schedule.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as follows using the metadata tags provided:

Supporting Materials → Consolidated Pro Forma Financials Methodology → General

A.2 – Retail

HCs should submit separate documentation for their Retail-related projections. You may submit separate documents for different models and/or methodologies. Documentation should be submitted for all aspects of the retail portfolio, including purchased credit impaired loans and mortgage repurchase risk. Mortgage repurchase documentation should include descriptions of all important assumptions made in each scenario, including, but not limited to, assumptions about legal process outcomes and counterparty behavior. All retail documentation should include

documentation of assumptions, governance, validation and independent review as outlined in the Supporting Documentation section of the Overview.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Retail

Supporting Materials → Methodology Technical Document → Retail

Supporting Materials → Model Validation → Retail

If you submit separate documents for different models and/or methodologies, please identify the model and/or methodology in the Comment field.

A.3 – Wholesale

BHCs should submit separate documentation for their Wholesale (Corporate and CRE) loan balances and loss projections. You may submit separate documents for different models and/or methodologies. BHCs should include supporting documentation that describes the key methodologies and assumptions for performing stress testing on each wholesale portfolio. Documentation should include an index of documents submitted, a general overview document providing a broad summary of the stress testing methodologies utilized, and detailed supporting documentation that clearly describe the model development process, the derivation of outcomes, and validation procedures as outlined below. The methodologies' formulaic specification, assumptions, numerical techniques, and approximations should be explained in detail with particular attention to both their merits and limitations.

Specifically, documentation should include:

- Discussion of historical data set construction, including data sources, adjustments to the data set, and documentation validating the use of any external data.
- Time period of model calibration.
- Rationale for portfolio segmentation and a discussion on how a particular methodology and model captures the key characteristics and the unique risk drivers of each portfolio segment.
- A description of how the loss estimates appropriately capture the severity of the macroeconomic scenario, reflecting both industry and borrower characteristics. Documentation should include a justification for explanatory variables selected, including coefficients from statistical models, measures of their statistical significance, and qualitative assessments where appropriate. Where relevant, descriptive statistics, including their mean, median, minimum, maximum, and standard deviation should be outlined.
- Step-by-step examples of loss calculation, including a transparent breakdown of all components of forecasted loss (i.e., probability of default, severity of loss, exposure at default) and how each component is adjusted for the given macroeconomic scenario.
- Discussion of how losses were distributed to each quarter in the forecasted period as it relates to changes in the macroeconomic factors within the modeled scenario.
- Qualitative or quantitative adjustment to main model output. Firms should perform pre-adjustment/post-adjustment loss analysis and supply that analysis for material disparity.

Where the current total balances in the wholesale line items do not tie directly to the corresponding category on the FR Y-9C, BHCs should provide a reconciliation which accounts for all wholesale balances. To the extent that loss projection line items include the consolidation of various loan portfolios which have different risk characteristics, supporting documentation should break out the relevant sub- portfolio losses. Furthermore, BHCs should provide supporting documentation and forecasts for any wholesale loan portfolios acquired after the beginning quarter of the stress scenario and/or for loans covered by loss sharing agreements with the FDIC.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Wholesale

Supporting Materials → Methodology Technical Document → Wholesale

Supporting Materials → Model Validation → Wholesale

If you submit separate documents for different models and/or methodologies, please identify the model and/or methodology in the Comment field.

A.4 – Loans Held for Sale and Loans Accounted for Under the Fair Value Option

BHCs should submit separate documentation for their Fair Value Option and Held for Sale retail and wholesale loans. You may submit separate documents for different models and/or methodologies. The documentation should include:

- Total loss and outstanding fair market value balances segmented by Commercial/Wholesale, Commercial Real Estate and Retail along with explanation as to the main drivers of loss for each category noted above.
- Please document the amount of funded and non-funded commitments for wholesale loans and for retail loans please include the average amount of loans that had been rejected or were in not in conformance with agency standards.
- An attestation to completeness: describe the process and governance & oversight for ensuring the full set of positions were accounted for and included,
- Documentation should clearly make note of instances where different methodologies were used across different business lines with like assets,
- Documentation should make note where judgment was used in defining and allocating exposure,
- Where shocks were used that differed from prescribed shocks,
- Document approach and asset coverage under these approaches,
- Describe any additional broadening or simplification of the scenario done to get the requisite amount of granularity needed to run to scenario,
- Scenario design and choice for BHC scenario and method of application compared to the FRB scenario.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Wholesale or Retail

Supporting Materials → Methodology Technical Document → Wholesale or Retail

Supporting Materials → Model Validation → Wholesale or Retail

If you submit separate documents for different models and/or methodologies, please identify the model and/or methodology in the Comment field.

.A.5 – AFS/HTM Securities

Supporting documentation should clearly addresses the OTTI and OCI methodologies used by BHCs to complete the FR Y-14A Summary schedule. The documentation should, at a minimum, address the questions outlined below by major product/portfolio type (e.g., non-agency residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), auto asset-backed securities (ABS), corporate bonds, etc.).

Projected OTTI for AFS Securities and HTM Securities by CUSIP

OTTI Methodology

- Describe the model/methodology used to develop stressed OTTI losses. Please state whether a vendor or proprietary model was used.
- If a vendor model was used, please provide the name of the vendor model. If a vendor model was used, has the BHC performed an independent review of the vendor model?
- What data source(s) was used to estimate the model?
- What were the key inputs/variables and how were these determined? (e.g., how were default, severity, and other elements determined? What were the key inputs in determining default, severity, and other elements? What were the key assumptions and how were these assumptions determined?)
- If using a cash flow model, was a vendor or proprietary model used? If using a vendor model, please provide the name of the vendor and model.
- How did the model/methodology (whether vendor or proprietary) incorporate macroeconomic assumptions?
- If relevant, how were macroeconomic assumptions (as prescribed under the supervisory stress scenario) used to determine projected collateral default and severity?
- Were all securities reviewed for impairment? If not, describe the rationale, decision rule, or filtering process.
- If the threshold for determining OTTI on structured products was based on a loss coverage multiple, describe the multiple used.
- If OTTI was estimated for multiple quarters, describe the process for determining OTTI in each period of the forecast time horizon.
- Is the BHC using shortcuts or rules of thumb to recognize the OTTI charges for this analysis or going through the BHC's normal process for recognizing OTTI charges? If using shortcuts or rules of thumb, state how this process differs from the normal process for recognizing

OTTI charges.

Validation and Independent Review

- Has the model undergone model validation, with results reviewed independently of the business line?
- Has any performance testing been conducted on the model? If so, what type of performance testing has been conducted?
- Has the model been validated for its appropriate use?

Fair Market Value Determination

- If more than one third-party vendor is used as the principal pricing source for a given security, what are the criteria for determining the final price? (e.g., is a mean, median, weighting scheme or high/low price taken?) Is there a hierarchy of sources? If appropriate, describe responses by major product or portfolio type (e.g., non-agency RMBS, CMBS, Consumer ABS).
- If an internal model is used as the principal pricing source for a given security, are prices (from an internally created model) compared with third party vendor prices? If so, which vendors are used? If prices are not compared with third party vendors, state the reason. If appropriate, describe responses by major product/portfolio type (e.g., non-agency RMBS, CMBS, Consumer ABS.).
- Describe any additional adjustments made to prices determined by internal model(s) and/or third parties. How is the ultimate price determined?
- If an internal model is used as the principal pricing source for a given security, what are the primary market pricing variables used for fair value estimation?
- Describe briefly the BHC's price validation and verification process. Provide readily available documentation related to the BHC's price validation and verification process.

Projected OCI and Fair Market Value for AFS Securities

- Describe the model/methodology used to develop stressed OCI losses. If appropriate, describe responses by major product or portfolio type (e.g., non-agency RMBS, CMBS, Consumer ABS). State whether the same model was used to derive OTTI losses. If not, detail the specific model/methodology and rationale for utilizing a different model.
- Detail if a vendor or proprietary model was used. If a vendor model was used, provide the name of the vendor model. If a vendor model was used, has the BHC performed an independent review of the vendor model?
- What data source(s) was used to estimate the model?
- What were the key inputs/variables and how were these determined? (e.g., how were fair value losses, and other elements determined?) What were the key inputs in determining OCI loss and how were they determined?
- If using a cash flow model, was a vendor or proprietary model used? If using a vendor model, please provide the name of the vendor and model.
- How did the model/methodology (whether vendor or proprietary) incorporate macroeconomic assumptions? How were macroeconomic assumptions (as prescribed under the supervisory stress scenario) used to determine projected OCI?
- Were all securities reviewed for OCI? If not, describe the rationale, decision rule, or filtering process. If OCI was estimated for multiple quarters, describe the process for determining OCI in each period of the forecast time horizon.
- Is the BHC using shortcuts or rules of thumb to recognize the OCI charges for this analysis

or going through the BHC's normal process for recognizing OCI charges? If using shortcuts or rules of thumb, state how this process differs from the normal process for recognizing OCI charges.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Securities

Supporting Materials → Methodology Technical Document → Securities

Supporting Materials → Model Validation → Securities

If you submit separate documents for different models and/or methodologies, please identify the model and/or methodology in the Comment field.

A.6 – Trading

- Documentation should include supporting details explaining the main drivers and attribution of loss for the overall trading and MTM loss estimate, and for each respective primary risk/business unit area details on the loss attribution by the primary risk factors.
- Documentation should provide a complete and technical definition of second and higher order risk factors (cross gamma, vanna, etc.) and describe the methods undertaken by the firm to estimate the cross gamma and higher order effects.
    - Estimate the contribution to total losses from higher-order risks.
- Describe the evolution of risk per each risk area two weeks before and after the submission date, i.e. make note of positions that may expire or terminate within this time frame that significantly alters a risk profile.
- Describe the process and governance & oversight for ensuring the full set of positions were accounted for and included and also please make note of differences in the products and/or exposures included in the FR Y-14Q vs. the FR Y-14A.
- A detailed and technical description of modeling methods (including pricing models) used,
    - Documentation should clearly make note of instances where different methodologies were used across different business lines with like assets.
    - Document approach (full revaluation vs. grid based approach, e.g.) and asset coverage under these approaches,
    - Please identify those products or exposures where the firm used models or systems that were outside of the normal routine stress testing framework for the FRB stress scenario and indicate if they were reviewed or validated by an independent Model Review function.
- The decision-making used for allocating exposures according to risk area. Documentation should make note where judgment was used in defining and allocating exposure per each risk area.
- Where shocks were used that differed from prescribed shock
- Describe any additional broadening or simplification of the scenario done to get the requisite amount of granularity needed to run to scenario,
- Scenario design and choice for BHC scenario and method of application compared to the FRB scenario.

IntraLinks Instructions: When uploading the_supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Trading

Supporting Materials → Methodology Technical Document → Trading

Supporting Materials → Model Validation → Trading

If you submit separate documents for different models and/or methodologies, please identify the model and/or methodology in the Comment field.

A.7 – Counterparty Credit Risk

The documentation should include a detailed description of the methodologies used to estimate Trading IDR, CVA, and CCR IDR losses under the stress scenario as well as methodologies used to produce the data in the FR_Y-14A_CCR schedule. All information relevant for supervisors to understand the approach should be included. Any differences between the BHC and the FR scenarios in methodology, position capture, or other material elements of the loss modeling approach should be clearly described.

As part of the detailed methodology document, BHCs should provide an Executive Summary that gives an overview of each model and answers each of the questions below. If one of the questions below is not fully addressed in the Executive Summary, cite the page number(s) of the methodology document that fully addresses the question.

In addition to the Executive Summary, there should be a section of the methodology document devoted to any divergence from the instructions to the Counterparty Risk Sub-schedule or the FR_Y-14A Schedule. Use this section to explain any data that is missing or not provided as requested. This section should also be used to describe where and how judgment was used to interpret an instruction.

1. Data and systems
    a. What product types are included and excluded? Specifically, comment on whether equities are excluded and what types of securitized products, if any, are excluded. Comment on the materiality of any exclusions.
    b. Are there any issuer type exclusions? Comment on the materiality of any exclusions.
    c. Are there any exposure measurement or trade capture limitations impacting the Trading IDR loss estimate in Item 1 on the Counterparty Risk Sub-schedule in the SUMMARY_SCHEDULE or the data provided in Sub-schedules Corporate Credit-Advanced, Corporate Credit-EM, Sovereign Credit, Credit Correlation, IDR-Corporate Credit, or IDR-Jump To Default in the FR_Y-14Q_TRADING Schedule? If so, make sure to elaborate in the documentation, particularly where these limitations understate losses.
    d. Are there any discrepancies in position capture between the MV and Notionals

reported in Sub-schedules Corporate Credit-Advanced, Corporate Credit-EM, Sovereign Credit, Credit Correlation, or IDR- Corporate Credit in the FR_Y-14Q_TRADING Schedule? If so, elaborate on the discrepancies in the documentation.

   e. Are any index or structured exposures decomposed/unbundled into single name exposures on the IDR Corp Credit or IDR Jump to Default Sub-schedules in the FR_Y-14Q_TRADING Schedule? If so, provide a description of the exposures that are decomposed and the methodology used.
   f. What types of CVA hedges are included in the FR_Y-14Q_TRADING Schedule and Item 10 on the Trading Sub-schedule of the SUMMARY_SCHEDULE (e.g., market risk hedges, counterparty risk hedges)? Which, if any, of these hedges are excluded from the Trading IDR loss estimates (Item 1 on the Counterparty Risk Sub-schedule of the SUMMARY_SCHEDULE)? Confirm that hedges modeled in Trading IDR are excluded from CCR IDR.

2. PD methodology
   a. How is the severity of default risk treated? Is a stressed expected PD used, or is it an outcome in the tail of the default distribution? If an outcome in the tail is used, what is the tail percentile?
   b. How is default risk represented over the horizon of the stress test? Is a cumulative two- year PD or a one-year PD used as a model input? How is migration risk captured?
   c. What data sources and related time periods are used to generate the assumptions on stressed expected PD or the default distribution? In the documentation, provide a breakdown of PDs (e.g., by rating, asset category). Provide stressed PDs if a stressed PD is used, or provide PD inputs if an outcome in the tail is used.
3. Correlation assumptions
   a. What correlation assumptions are used in the Trading IDR models?
4. LGD methodology
   b. Do the models assume a static LGD or a stochastic LGD with a non-zero recovery rate volatility?
      i. If a static LGD is used, were the mean LGDs stressed? What data sources and related time periods were used to determine the LGDs? In the methodology documentation, provide the relevant breakdown of LGDs used in the model (e.g., by ratings, asset category).
      ii. If a stochastic LGD is used, elaborate on the assumptions generating the stochastic LGD in the documentation, including assumptions on the LGD mean and volatility and rationale for modeling choices.
5. Liquidity horizon
   a. What liquidity horizon assumptions are used?
6. Exposure at default (EAD)
   a. What Exposure at Default (EAD) is used for Trading IDR? For example, is the calculation based on actual issuer exposures, stressed exposures, a mix of both, or something else? If exposures are stressed, please explain how the exposures were stressed.
7. Treatment of gains
   a. Are any gains being reflected in the Trading IDR calculations? If so, elaborate in the documentation how gains are treated.
8. Model validation and documentation
   a. For any models used to report numbers in the SUMMARY_SCHEDULE or the FR_Y-

14A_Trading that are also used in Business as Usual (BAU) production, have those models been validated as used in BAU? If so, attach model validation documents. If not, elaborate in the documentation on any review process.

b. For any ad-hoc models used for CCAR that would not have been previously validated, what review if any has occurred? Elaborate in the documentation where appropriate.

CVA

1. Divergence from instructions
    a. In the FR_Y-14A_CCR or Summary Schedules, is liability-side CVA (i.e., DVA) included in any element of the submission? If so, elaborate in the documentation.
    b. In the FR_Y-14A_CCR or Summary Schedules, is bilateral CVA included in any element of the submission (i.e., CVA where the counterparty default probabilities are conditional on the survival of the BHC)? If so, elaborate in the documentation.
    c. Is there any place where CVA data is reported net of hedges on the FR_Y_14A_CCR Schedule or Item 2 on the Counterparty Risk Sub-schedule in the SUMMARY_SCHEDULE?
    d. In calculating Stressed Net CE in Sub-schedules 1a, 1b, 1c, 1d, and 1e in FR_Y-14A_CCR, are there any occasions where it is assumed additional collateral has been collected after the shock? If so, elaborate in the documentation.
    e. Are there any counterparties for which your firm did not fully implement the FR specification for the EE profiles on Sub-schedules 2a and 2b in the FR_Y-14A_CCR? If so, elaborate in the documentation.
2. Data and systems: In the documentation, clearly identify, describe, and comment on the materiality of any exclusions that prevent 100% capture of counterparties or trades. At a minimum, address the questions below and elaborate in the documentation where appropriate.
    a. Are any counterparties on Sub-schedule 1a of FR_Y-14A_CCR excluded from Sub-schedule 2a? Where specific counterparties are reported as top 200 counterparties on one Sub-schedule of the Schedule, but are not listed on other top 200 Sub-schedules, list these counterparties in the documentation by name and provide a reason for their exclusion.
    b. Are any counterparties excluded from the unstressed or stressed aggregate data reported in Sub-schedules 1e, 2b, or 3b of FR_Y-14A_CCR or the losses reported in the SUMMARY_SCHEDULE SUMMARY_SCHEDULE (Item 2 in the Counterparty Risk Sub-schedule)? In the documentation, elaborate on the nature, materiality, and rationale for these exclusions.
    c. Do the expected exposure (EE) profiles, CDS spreads, PDs, LGDs, discount factors, as provided on FR_Y-14A_CCR Schedule (Sub-schedules 2a and 2b), come from the same systems as that used for the calculation of CVA losses as provided in the SUMMARY_SCHEDULE (Item 2 in the Counterparty Risk Sub-schedule)? If not, elaborate in the documentation.
    d. For unstressed and stressed CVA reported in the FR_Y-14A_CCR Schedule, which counterparties, counterparty types, or trade types are calculated offline or using separate methodologies? Why are they calculated offline or with a different methodology? Elaborate in the documentation.

e. Are any add-ons used to calculate stressed CVA in the FR_Y-14A_CCR Schedule? Elaborate regarding the nature and rationale for each type of add-on in the documentation.
f. Are there any additional/ offline CVA reserves are reported in Sub-schedule 1e in theFR_Y-14A_CCR Schedule? If so, elaborate about the nature of these reserves in the documentation. Explain what counterparties, counterparty types, or trade types are included, why are they calculated as reserves, and how they are stressed.
g. Are there any exposure measurement or product capture limitations impacting the loss estimate in Item 2 on the Counterparty Risk Sub-schedule in the SUMMARY_SCHEDULE? If so, make sure to elaborate in the documentation, particularly where these limitations understate losses.
h. Does the firm conduct a reconciliation between the sum of items 15(a) in Schedule HC-L of the FRY-9C and the aggregate unstressed Gross CE on Sub-schedule 1e of the FRY-14A_CCR Schedule? Note that the figures in the FRY-9C are called "net current credit exposure", as the "net" refers to counterparty netting.
i. Are all sensitivities/ slides provided as requested? If slides are not provided as requested in the FR_Y-14A_CCR Schedule, elaborate in the documentation why they are missing or not provided correctly.
j. Are the sensitivities/ slides provided in Sub-schedule 4 of FR_Y-14A_CCR sourced from the same calculation engine and systems as used for the firm's loss estimates (Item 2 in the Counterparty Risk Sub-schedule in the SUMMARY_SCHEDULE)? If not, elaborate in the documentation.
k. Elaborate on how sensitivities/ slides in Sub-schedule 4 of FR_Y-14A_CCR were determined to be material. What qualifies a risk factor as immaterial?

3. LGD methodology
    a. For the LGD used to calculate PD, are market implied recovery rates used? If not, elaborate on the source of the LGD assumption in the methodology documentation.
    b. Is the same recovery/LGD used in the CVA calculation as is used to calculate PDs from the CDS spread? If not, in the documentation provide a detailed rationale and backup data to support the use of a different LGD, and provide the source of the LGD used to calculate CVA.
4. Exposure at default (EAD)
    a. What Margin Period of Risk (MPOR) assumptions are used for unstressed and stressed CVA?
    b. Are collateral values stressed in the numbers reported in the FR_Y_14A_CCR Schedule or Items 2 or 3 on the Counterparty Risk Sub-schedule in the SUMMARY_SCHEDULE? If so, elaborate on the stress assumptions applied.
    c. In the FR_Y-14A_CCR on Sub-schedules 2a and 2b, for the BHC specification, are downgrade triggers modeled in the exposure profiles?
5. Application of shocks
    a. Are the shocks applied to CVA (for calculating Item 2 in the Counterparty Risk Sub-schedule in the SUMMARY_SCHEDULE as well as the Stressed figures reported in FR_Y-14A_CCR) the same as those applied to the Trading Book (Item 10 in the Trading Sub-schedule in the SUMMARY_SCHEDULE)? Where they are different, or where shocks applied diverge from the FR shock scenario, elaborate in the documentation.

b. Have the models for CVA been validated? If not, elaborate on the review process, if any.

6. Model validation and documentation
    a. For any models used to report numbers in the SUMMARY_SCHEDULE or the FR_Y-14A_CCR that are also used in Business as Usual (BAU) production, have those models been validated as used in BAU? If so, attach model validation documents. If not, elaborate in the documentation on any review process.
    b. For any ad-hoc models used for CCAR that would not have been previously validated, what review if any has occurred? Elaborate in the documentation where appropriate.

CCR IDR

1. Data and systems
    a. Are there any exposure measurement or product capture limitations impacting the loss estimate in Item 3 on the Counterparty Risk Sub-schedule in the SUMMARY_SCHEDULE? If so, make sure to elaborate in the documentation, particularly where these limitations understate losses.
    b. What types of CVA hedges are included in CCR IDR? Confirm that hedges modeled in CCR IDR were excluded from Trading IDR.
2. PD methodology
    a. How is the severity of default risk treated? Is a stressed expected PD used, or is it an outcome in the tail of the default distribution? If an outcome in the tail is used, what is the tail percentile?
    b. How is default risk represented over the horizon of the stress test? Is a cumulative two- year PD or a one-year PD used as a model input? How is migration risk captured?
    c. What data sources and related time periods are used to generate the assumptions on stressed expected PD or the default distribution? In the documentation, provide a breakdown of PDs (e.g., by rating, counterparty type). Provide stressed PDs if a stressed PD is used, or provide PD inputs if an outcome in the tail is used.
3. Correlation assumptions
    a. What correlation assumptions are used in the CCR IDR models?
4. LGD methodology
    a. Do the models assume a static LGD or a stochastic LGD with a non-zero recovery rate volatility?
    b. If a static LGD is used, are the mean LGDs stressed? What data sources and related time periods are used to determine the LGDs? In the methodology documentation, provide the relevant breakdown of LGDs used in the model (e.g., by ratings, counterparty type).
    c. If a stochastic LGD is used, elaborate on the assumptions generating the stochastic LGD in the documentation, including assumptions on the LGD mean and volatility and rationale for modeling choices.
5. Liquidity horizon
    a. What liquidity horizon assumptions are used?
6. Exposure at default (EAD)
    a. Provide an overview of how EAD is modeled for CCR IDR.

b. Are any downgrade triggers assumed in the CCR IDR model? If so, elaborate in the documentation.
c. What Margin Period of Risk (MPOR) assumptions are modeled in CCR IDR?

7. Treatment of gains
   a. Are any gains being reflected in the CCR IDR calculations? If so, elaborate in the documentation how gains are treated.
8. Model validation and documentation
   a. For any models used to report numbers in the SUMMARY_SCHEDULE or the FR_Y-14A_CCR that are also used in Business as Usual (BAU) production, have those models been validated as used in BAU? If so, attach model validation documents. If not, elaborate in the documentation on any review process.
   b. For any ad-hoc models used for CCAR that would not have been previously validated, what review if any has occurred? Elaborate in the documentation where appropriate.

Other CCR Losses

a. Data and Systems
   a. What types of CCR losses are included in the "Other CCR Losses" Counterparty Risk Sub-schedule of the SUMMARY_SCHEDULE? What are the loss amounts for each major category of "Other CCR Losses"? For any material losses, discuss the methodology and rationale in the documentation.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Counterparty

Supporting Materials → Methodology Technical Document → Counterparty

Supporting Materials → Model Validation → Counterparty

If you submit separate documents for different models and/or methodologies, please identify the model and/or methodology in the Comment field.

A.8 – Operational Risk

The reporting institution should provide any supporting information including statistical results, data, summary tables, and additional descriptions in a separate document and cross reference the document to the respective question/item. BHCs may submit separate documents for different models and/or methodologies.

Documentation

Generally, a BHC should have robust internal controls governing its operational risk loss projection methodology and process components, including sufficient documentation, model validation and independent review. Supporting documentation should cover all models, loss and resource forecasting methodologies and processes. Adequate documentation includes comprehensive and clear policies and procedures. For models, adequate documentation includes specific delineation of

all key assumptions for projecting operational losses under each scenario, a description of the underlying operational risk data used to determine projected losses and the approach for translating the data into loss projections. If a budgeting process was used, the BHC should describe the budgeting process and provide specific detail on how operational losses are estimated. Adequate documentation includes articulating the models' vulnerability to error, and estimates of an error's impact should parameter specifications prove inaccurate. Documentation of all models should clearly identify the exact statistical process employed by the BHC including:

1. How the current set of explanatory factors was chosen, what variables were tested and then discarded, and how often the set of possible explanatory factors is reviewed and, if appropriate, revised;
2. If applicable, description of work the BHC has done to assess relationships between macroeconomic factors and operational risk losses, including relationships that were found to have the highest level of dependency, a summary of statistical results, and how these results were incorporated in the estimates;
3. A discussion of how pending litigation and reserves for litigation were incorporated into operational loss projections for all requested scenarios;
4. A detailed, transparent, and credible description of the foundation, approach, and process for making management adjustments to modeled results;
5. A description of the methodology for allocating an operational loss amount to a particular quarter;
6. An explanation summarizing the reasonableness of results, how they differ from expectations, and what the BHC does when the results are deemed "unreasonable";
7. A description of internal controls that ensure the integrity of reported results and that all material changes to the process and its components are appropriately reviewed and approved. BHCs should ensure that change control principles apply to forecasting models used in the stress scenario analysis program, including processes that rely on management judgment;
8. An assessment of how effective or accurate the model is;
9. Identification of possible drawbacks and limitations of the selected approach.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Operational Risk

Supporting Materials → Methodology Technical Document → Operational Risk

Supporting Materials → Model Validation → Operational Risk

If you submit separate documents for different models and/or methodologies, please identify the model and/or methodology in the Comment field.

A.9 – Pre-Provision Net Revenue (PPNR)

Each methodological memo should clearly describe how a BHC approached the PPNR projection process and translated macro-economic factors into the reported projections. Separate documents

may be submitted for different models and/or methodologies.

Projected Outcomes

1) Provide an explanation summarizing the reasonableness of projected outcomes relative to the stated macroeconomic scenario, business profile, as well as regulatory and competitive environment. Especially in the more adverse scenario(s), include substantial supporting evidence for PPNR estimates materially exceeding recently realized values.
2) BHCs should discuss linkages between PPNR projections and the balance sheet as well as other exposure assumptions used for related loss projections.
3) Include discussion of PPNR outcomes by component (i.e. Net Interest Income, Non Interest Income, and Non Interest Expense) and by major source of each component (e.g. by major balance/rate category, type of revenue/expense, and/or business activity).
4) Consideration should be given to how changes in regulation will impact the BHC's revenues and expenses over the projection period. The memo should include a section that addresses how recent or pending regulatory changes have impacted projected figures and business strategies and in which line items these adjustments are reflected.

Models and Methodology

1) The documentation should include a full list of all models and parameters used to generate projections of PPNR components for CCAR purposes and whether these models are also used as part of other existing processes (e.g. the business-as-usual budgeting and forecasting process). Where existing processes are leveraged, discuss how these are deemed appropriate for stress testing purposes, including any modifications that were necessary to fit a stressful scenario.
   Also discuss those items that are particularly challenging to project and identify limitations and weaknesses in the process.
2) Thorough discussion of use of management/expert judgment, including information about rationale and process involved in translation of macroeconomic scenario variables into projections of various PPNR components should be provided. Where a combination of a modeled approach and management judgment was used to project an item, quantify the impact of qualitative adjustments to modeled output.
3) Provide support for all key assumptions used to derive PPNR estimates, with a focus on the link of these assumptions to projected outcomes and whether the assumptions are consistent with the stated macroeconomic scenario, regulatory and competitive environment as well as business strategies for each of major business activities. Document the impact of assumptions concerning new growth, divestitures or other substantial changes in business profile on PPNR estimates. In cases where there is a high degree of uncertainty surrounding assumptions, discuss and reference sensitivity of projections to these assumptions. Also ensure that all relevant macro-economic factors used for PPNR projections are also reported on the firm submitted Scenario Schedule.
4) In addition to broad macro-economic assumptions that will guide the exercise, it is expected that more specific assumptions will be used by BHCs in projections of PPNR, including
   macro-economic factors other than those provided by the Federal Reserve System as well as BHC specific assumptions. Such assumptions and their link to reported figures,

standardized and/or BHC business segments and lines should be discussed in the methodology memo.

5) Where historical relationships are relied upon (e.g. ratios of compensation expense to total revenues), BHCs are expected to document the historical data used and describe why these relationships are expected to hold true in each scenario, particularly under adverse conditions.
6) Projecting future business outcomes inevitably relies on the identification of key relationships between business metrics and other explanatory variables. Key limitations and difficulties encountered by the BHC in the process to model these relationships should be identified and discussed in the memo.
7) Highlight changes in various aspects of BHC's PPNR forecasting models and methodology, primarily focusing on the changes that occurred since the last CCAR submission.

Projections Governance and Data

1) BHCs are asked to describe governance aspects for the PPNR projections development. This includes but is not limited to a description of:
    a. The roles of various business lines and management teams involved in the process b. How the projections are generated. Particular attention should be given to how the
        BHC ensures that assumptions are consistent across different business line projections, how assumptions are translated into projections of revenue and expenses, and the process of aggregating and reporting the results.
    c. Senior management's involvement of the process and the process in which the assumptions are vetted and challenged.

    Also note whether established policies and procedures are in place related to this process.
2) Also include a separate section devoted to any divergence from the instructions in completing the PPNR sub-schedules in the FR Y-14A and FR Y-14Q Schedules. Use this section to explain any data that is missing or not provided as requested. Use this section to discuss major instances where judgment was used to interpret PPNR instructions.
3) Discuss general data validation and reconciliation practices here as they pertain to FR Y-14Q/A submissions. PPNR is defined as the sum of net interest income and non-interest income net of non-interest expense, with components expected to reconcile with those reported in the FR Y-9C when adjusted for certain items (see "Commonly Used Terms and Abbreviations" section of FR Y14-Q/A PPNR instructions for guidance for such items). BHCs are encouraged to include information allowing confirmation that the data were reported per the PPNR definition. Documentation should discuss consistency of a given schedule with the BHC's external reporting and internal reporting and forecasting. Provide a description of broadly-defined types of business models currently used (e.g. Asset/Liability, Relationship, Business Product/Services/Activity as defined or named by the BHC). Provide reconciliation between BHC reporting used to manage and forecast operations and a standardized business segment/line view required for FR Y-14A reporting. Note if allocation methodologies were used when providing data for PPNR sub-schedules in FR Y-14A/Q Schedules.

4) Highlight changes in various aspects of BHC's PPNR forecasting governance and data, primarily focusing on the changes that occurred since the last CCAR submission.

Other

1) BHCs are also expected to address items requested in the Supporting Documentation portion of the Overview section (beginning on page 4) as applicable to PPNR if not already addressed per PPNR documentations guidance as stated above.
2) Other sections of the FR Y-14A and FR Y-14Q PPNR Instructions request additional information and supporting documentation. Please ensure that these items are also referenced and described in this memo. For example, include a discussion of small/medium/large business segmentation, as noted in section "B. PPNR Projections Sub-schedule."
3) BHCs are encouraged to submit any other information and documentation (including data series) that would support of the BHC's PPNR projections. One example of such information would be identification and discussion of major deviations of BHC historical performance from forecasted figures, focusing on the last four quarters and noting items that the BHC regards as non-recurring and/or non-core. Where applicable, it would be useful to reference this additional supporting information in the memo outlined above.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → PPNR/Balance Sheet

Supporting Materials → Methodology Technical Document → PPNR/Balance Sheet

Supporting Materials → Model Validation → PPNR/Balance Sheet

If you submit separate documents for different models and/or methodologies, please identify the model and/or methodology as one of the following types in the Comment field:

1. Net interest income and banking book balances,
2. Trading and investment banking revenue and related balances, and
3. All other non-interest income, non-interest expense, and other balances.

A.10 – MSR Projection Documentation

Supporting documentation should address the questions outlined below.

1. Models and Methodologies

- Describe the models and related submodels that were used to complete the submission, and please state whether the model is a third-party vendor or proprietary model.
    - o Income/Expense/Valuation Engine
    - o Prepayment Model
    - o Default Model
    - o Delinquency Model
    - o Hedging Simulation

- If a vendor model was used, please provide the name of the vendor model. If a vendor model was used, has the BHC performed an independent review of the vendor model?
- Has the model undergone rigorous model validation, with results reviewed independently of the business line?
- Has any performance testing been conducted on the model? If so, what type of performance testing has been conducted?
- What data sources were used to calibrate each model?
- What were the key inputs/variables and how were these determined?
- How did the model (whether vendor or proprietary) incorporate macroeconomic assumptions?

2. Assumptions

- For each quarter, what new loan capitalizations and amortizations are assumed over both the baseline and supervisory stress scenarios?
    - How were the new loan capitalization forecast assumptions developed?
    - What excess spread assumptions were made with respect to new loan capitalizations in each scenario and how was this assumption derived (e.g., historical buy-up/buy-down grids, etc.)?
    - How were HARP assumptions, if any, estimated?
    - What market share is assumed, and does this change within the stress scenario?
    - Does the submission include any MSR sales or purchases under the supervisory stress? If yes, please provide detail.
- What is the composition of the underlying portfolio of loans serviced for others with respect to the following, and how does this composition change (if at all) during the supervisory stress scenario?
    i. Loan type
    ii. Geographical region
    iii. FICO score
- How were macroeconomic assumptions as prescribed under the supervisory baseline and stress scenarios used to determine the respective projected loan prepayment, delinquency, and default experience for each quarter?
- How were macroeconomic assumptions that were not prescribed under the supervisory baseline and stress scenarios (for example, interest rate volatility, option adjusted spreads, primary to secondary spreads) used to determine the respective projected loan prepayment, delinquency, and default experience for each quarter?
- What are the voluntary prepayment speeds (e.g., conditional prepayment rates (CPRs) associated with refinancing) assumed for each quarter in the respective baseline and supervisory stress scenarios? Do not include constant default rates (CDRs).
- What are the factors that drive or explain the level and trend in prepayment speeds through the nine quarters over the baseline and supervisory stress scenarios?
- What are the default rates assumed for each quarter in the respective baseline and supervisory stress scenarios?
- What are the factors that drive or explain the level and trend in default rates through the nine quarters over the baseline and supervisory stress scenarios?
- How were the assumptions regarding cost of service with respect to both the baseline and stressed scenarios derived?
- Was inflation incorporated into the projection?
- What is the servicing cost structure on a per loan basis on a base and incremental basis for each level of delinquency? What are the foreclosure costs per loan?

- Does the cost structure per loan stay the same throughout the nine quarters with the number of delinquent loans changing, or do both change?
- What foreclosure time frames are used in the baseline scenario? Do these lengthen or contract in the supervisory stress?
- Is late fee income included in the submission?
    - If so, what is the BHC's actual late fee income structure, as well as waiver policy if applicable?
    - What is the late fee income assumed in the baseline and stress scenarios?
    - Is it assumed that late fees are 100% collectable in the stress scenario?
- Are earnings on escrow and other balances included in the submission?
    - If yes, how are the balances forecasted, and what is the crediting rate?
- Is cost to finance advances to investors relating to delinquent loans incorporated in the submission?
    - If yes, how is the borrowing rate determined?

3. Hedging and Rebalancing

- Are MSR hedges assumed to be rebalanced or rolled-over at any time during the nine quarter CCAR horizon? How often are hedges assumed to be rebalanced or rolled-over? What is the timing of such rebalancing or roll-over trades?
- What are the hedge rebalancing and/or roll-over rules applied during the baseline and stress scenarios?
- Are the hedge rebalancing and/or roll-over rules applied in the baseline and stress scenarios consistent with the firm's risk appetite statement and Board/management approved limit structure?
- To what degree does hedge effectiveness decline in the stress scenarios? How was this estimated?
- How is the impact of hedging instrument bid-ask spreads captured in the submission? To what degree does the bid-ask spread widen in the stress scenario? How was this estimated?
- How does the firm account for the liquidity risk from concentrated hedge positions?
- What is assumed regarding collateral requirements?
- What are the current risk tolerance limits with respect to MSR hedging

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → PPNR/Balance Sheet

Supporting Materials → Methodology Technical Document → PPNR/Balance Sheet

Supporting Materials → Model Validation → PPNR/Balance Sheet

In the Comment field, please identify the document as "MSR".

A.11 Documenting Consideration of Certain Off-Balance Sheet Risks

Supporting documentation should clearly highlight how each institution (i) identified unconsolidated entities and sponsored products to which the Firm has potential exposure, (ii) evaluated those entities / sponsored products under stressed scenario conditions, and (iii) projected and reported any associated

financial losses – whether in the form of non-contractual support or reflected elsewhere in PPNR (e.g., foregone revenue).

1. *Identification:* The submission should include a complete inventory of all off-balance sheet entities and sponsored products. Those assessed collectively may be aggregated for the purposes of reporting the information requested below, except that all investment management products that seek to maintain a stable net asset value (NAV) should be listed separately. Please include, at a minimum, the following information related to unconsolidated entities / sponsored products:
    - Product category. For example, Asset-Backed Commercial Paper conduits, Real Estate Investment Trusts, Hedge Funds, SEC-registered mutual funds, Collective Investment Funds, etc.
    - Total assets by product or category (for those that are aggregated).
    - Revenues earned by product or category for the most recent four quarters and a description of the nature of such revenues.
    - Product name and/or unique identifier for those listed separately
    - For stable NAV funds only, the regulatory framework by which each product is offered. For example, Investment Company Act of 1940, Rule 12 CFR 9.18, etc.

    Each firm should also include a brief description of the process utilized to develop the inventory.

2. *Evaluation Methodology:* Clearly describe the methodology that was applied to the inventory in order to determine the unconsolidated entities / sponsored products for which there is a potential for non-contractual support, for example based on client expectations. This should include even those entities / sponsored products which the firm may choose not to support but such a decision could lead to lost revenues and/or other costs. Indicate the resulting decision for each product or category.

3. *Determination of Related Losses:* For each unconsolidated entity / sponsored product for which it was determined that a client expectation of non-contractual support may exist:
    a) Describe the expected impact of macroeconomic and/or idiosyncratic stress factors to these entities / sponsored products.
        - This might include, but is not limited to, market value shocks, increased redemption activity, rollover risk, counterparty-default-related losses, etc.
        - Critical assumptions such as assumed counterparty LGD rates, velocity of redemptions amid stress, and nature of market shocks should be highlighted.
    b) Describe the decision framework applied in determining whether non-contractual support would be provided and include a discussion of the identified costs/benefits related to each decision by major category and/or product.
    c) Quantify and provide calculations of any related financial losses expected to be borne by the firm either in the form of non-contractual support or lost revenues and legal/operational costs and provide related calculations of those losses.
        - This should include both direct impacts (e.g., product closure and/or potential litigation costs) and indirect (i.e., second-order) impacts, such as lost revenue in other products that results from client attrition, where a decision to not support has been applied.
    d) Clearly indicate the line items within the Y-14A summary schedule where such projected financial losses have been recorded.

Schedule B – Scenario
No supporting documentation is required for this schedule.

Schedule C – Regulatory Capital Instruments
No supporting documentation is required for this schedule.

Schedule D – Regulatory Capital Transitions

Additional Information Required for SIFI Surcharge
In November 2011, the Basel Committee on Banking Supervision (BCBS) published its methodology for assessing an additional loss absorbency requirement for global systemically important banks (SIFI surcharge) that effectively serves as an extension of the capital conservation buffer. **As part of the FR Y-14A filing, each BHC must submit a separate document that includes management's best estimate of the likely SIFI surcharge that would be assessed under this methodology, along with an explanation of assumption used when determining the estimate.** Any BHC not currently designated as a global systemically important financial institution (G-SIFI) should include a SIFI surcharge assessment if management expects changes to its business model that would potentially lead to the BHC's designation as a G-SIFI. Supervisors will evaluate the methodology and assumptions used by BHCs in determining the SIFI surcharge, and may adjust such estimates as necessary when evaluating the Revised Capital Framework transition path.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as one of the following three document types (defined in the CCAR 2015 Summary Instructions and Guidance) using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Regulatory Capital

Supporting Materials → Methodology Technical Document → Regulatory Capital

Supporting Materials → Model Validation → Regulatory Capital

In the Comment field, please identify the document as "SIFI surcharge".

Note that if this information is already included the BHC's CCAR Capital Plan, then the BHC has the option of simply including text that clearly describes location of this information (e.g. file name, document page number, section title, etc.). If the BHC uses this option, the document should still use the naming convention described above.

Additional Information Required for Each Planned Action (Tied to Sub-schedule 6) for FR Y-14A submission

BHCs are required to provide a detailed description of each planned action in a separate attachment(s). The description of each planned action should include:

- Discussion of how each planned action aligns with the BHC's long term business strategy and risk appetite on a going concerns basis;
- Assessment of each planned action's impact on the BHC's capital and funding needs,

earnings, and overall risk profile;

- Assessment of market conditions and market capacity around each planned action (e.g., planned sale size and the availability and appetite of buyers and other potential sellers);
- Assessment of any potential execution risks to each planned action (e.g., contractual, accounting or structural limitations). The estimation of execution risk should be well documented for each planned action that are to occur;
- Discussion of any recent transactions conducted either by the BHC or by other institutions that would demonstrate or support the BHC's ability to execute each planned action at the level of impact projected.

IntraLinks Instructions: When uploading the supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as follows using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Regulatory Capital

In the Comment field, please identify the document as "Planned Capital Action" and include the appropriate "Action #" in column A of the Planned Actions Sub-schedule.

Included below are examples of other supporting documentation which should be included along with the description of each planned action:

- Detailed information on planned sales such as risk profile and size of the positions, indicative term sheets and contracts; potential buyer information; current marked to market (MTM), support for the execution price; potential associated loans, financing, or liquidity credit support arrangements; potential buy back commitments; and impact on any offsetting positions. If similar recent transactions have taken place, BHCs should provide information as a point of reference. BHCs should also describe any challenges that may be encountered in executing the sale.
- Detailed information on planned unwinds, such as risk profile and size of the positions, profit and loss (P&L) impact at execution or in the future; funding implications; impact on any offsetting positions; and trigger of consolidation or on-boarding of the underlying assets.
- Detailed information on planned run-offs, such as risk profile and size of the positions, impact on any offsetting positions; details on trades; and maturity dates.
- Detailed information on planned hedging, such as indicative term sheets and contracts; P&L impact at execution or during life of the hedges; and impact on counterparty credit RWA.
- Detailed information on changes to risk-weighted assets calculation methodologies, such as which data or parameters would be changed, whether the firm has submitted model application to its supervisors, and remaining work to be completed and expected completion date.
- Detailed information on expanded use of clearing houses, such as types of products to be cleared and central counterparties to be used.

BHCs should also provide detailed information on any alternative Regulatory Capital Transitions action plans in the event the firm falls short of the targets outlined in the Capital Plan, and trigger events that would result in a need to pursue any alternative action plans.

IntraLinks Instructions: When uploading the**A** supporting documentation to the IntraLinks collaboration site, supporting documents for this specific area should be categorized as follows

using the metadata tags provided:

Supporting Materials → Methodology and Process Overview → Regulatory Capital

n the Comment field, please identify the document as "Regulatory Capital Transitions action plan".

Schedule E – Operational Risk

No supporting documentation is required for this schedule.