

## Blackline: Dodd-Frank Act Stress Test Supervisory Guidance for Mid-sized Banking Organizations

### Final (March 2014) vs. Proposed (July 2013)

#### I. Introduction

In October 2012, the U.S. Federal banking agencies (“agencies”) issued the Dodd-Frank Act stress test rules<sup>1</sup> requiring companies with total consolidated assets of more than \$10 billion to conduct annual company-run stress tests pursuant to section 165(i)(2) of the Dodd-Frank Wall Street Reform and Consumer Protection Act (“DFA”).<sup>2</sup> This guidance outlines key supervisory expectations for companies with total consolidated assets of more than \$10 billion but less than \$50 billion that are required to conduct DFA stress tests (collectively “companies” or “\$10-50 billion companies”).<sup>3</sup> As discussed further below, it builds upon the interagency stress testing guidance issued in May 2012 for companies with more than \$10 billion in total consolidated assets (“May 2012 stress testing guidance”), that set forth general principles for a satisfactory stress testing framework.<sup>4</sup>

The supervisory expectations described in this guidance are tailored to the \$10-50 billion companies, similar to the manner in which the requirements in the ~~DFA~~ stress test rules required under the Dodd-Frank Act were tailored for this set of companies.<sup>5</sup> The

<sup>1</sup> See 77 FR 61238 (October 9, 2012) (OCC), 77 FR 62396 (October 12, 2012) (Board: Annual Company-Run Stress Test Requirements for Banking Organizations with Total Consolidated Assets over \$10 Billion Other than Covered Companies), and 77 FR 62417 (October 15, 2012) (FDIC).

<sup>2</sup> ~~Public Law~~ Pub. L. 111-203, 124 Stat. 1376 (2010). Each entity that meets the applicability criteria must conduct a separate stress test and provide a separate submission. For example, both a bank holding company between \$10-50 billion in assets and its subsidiary bank with between \$10-50 billion in assets must conduct a separate stress test; however, if a subsidiary bank of a \$10-50 billion bank holding company has \$10 billion or less in assets then it does not need to conduct a DFA stress test.

<sup>3</sup> For the OCC, the term “company” is used in this guidance to refer to a banking organization that qualifies as a “covered institution” under the OCC Annual Stress Test Rule. 12 CFR 46.2. For the Board, the term “company” is used in this guidance to refer to state member banks, bank holding companies, and savings and loan holding companies. 12 CFR 252. ~~13~~ 13. For the FDIC, the term “company” is used in this guidance to refer to insured state nonmember banks and insured state savings associations that ~~qualifies~~ qualify as a “covered bank” under the FDIC Annual Stress Test Rule. 12 CFR 325.202.

<sup>4</sup> See 77 FR 29458, “Supervisory Guidance on Stress Testing for Banking Organizations With More Than \$10 Billion in Total Consolidated Assets,” (May 17, 2012).

<sup>5</sup> ~~As indicated in the DFA stress test final rules, the agencies also plan to issue supervisory guidance~~ For example, expectations for companies with at least \$50 billion in total assets, data sources, data segmentation, sophistication of estimation practices, reports and public disclosure are generally reduced compared to the expectations for larger organizations. Consistent with the approach taken in the DFA stress test final rules, in general the agencies expect the guidance expectations for Dodd-Frank stress testing practices among companies with at least \$50 billion are elevated compared to \$10-50 billion ~~to contain standards that are comparable or elevated in all areas~~ companies.

additional information provided in this guidance should assist companies in complying with the ~~DFA~~ stress test rules [required under the Dodd-Frank Act](#) and conducting DFA stress tests that are appropriate for their risk profile, size, complexity, business mix, and market footprint. The DFA stress test rules allow flexibility to accommodate different practices across organizations, for example by not specifying specific methodological practices. Consistent with this approach, this guidance sets general supervisory expectations for stress tests, and provides, where appropriate, some examples of possible practices that would be consistent with those expectations.<sup>6</sup>

This guidance does not represent a comprehensive list of potential practices, and companies are not required to use any specific methodological practices for their stress tests. Companies may use various practices to project their losses, revenues, and capital that are appropriate for their risk profile, size, complexity, business mix, market footprint and the materiality of a given portfolio.

## II. Background

Stress tests are an important part of a company's risk management practices, ~~supporting a company's forward-looking assessment of its risks and helping to ensure that the company has sufficient capital to support its operations through periods of stress~~ and the agencies have previously highlighted ~~the~~[that](#) importance ~~of stress testing~~ as a means for companies to better understand the range of potential risks [facing them](#). Specifically, the May 2012 stress testing guidance sets forth the following five principles for an effective stress testing regime:

1. A company's stress testing framework should include activities and exercises that are tailored to and sufficiently capture the company's exposures, activities, and risks;
2. An effective stress testing framework should employ multiple conceptually sound stress testing activities and approaches;
3. An effective stress testing framework should be forward-looking and flexible;
4. Stress test results should be clear, actionable, well supported, and inform decision-making; and
5. A company's stress testing framework should include strong governance and effective internal controls.

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<sup>6</sup> [Companies subject to this guidance are not subject to the Federal Reserve's capital plan rule, the Federal Reserve's annual Comprehensive Capital Analysis and Review, supervisory stress tests for capital adequacy, or the related data collections supporting the supervisory stress test. 12 CFR 225.8 \(capital plan rule\); Supervisory and Company-Run Stress Test Requirements for Covered Companies 12 CFR 252, subparts E and F; and the Capital Assessment and Stress Testing information collection \(FR Y-14Q, FR Y-14M, and FR Y-14A\).](#)

~~The agencies expect that companies will follow the principles and expectations in the May 2012 stress testing guidance when conducting their DFA stress tests.~~ This DFA stress test guidance builds upon the May 2012 stress testing guidance, sets forth the supervisory expectations regarding each requirement of the DFA stress test rules, and provides illustrative examples of satisfactory practices. The guidance indicates where different requirements apply to banks, thrifts, and holding companies. The guidance is structured as follows:

- A. DFA Stress Test Timelines
- B. Scenarios for DFA Stress Tests
- C. DFA Stress Test Methodologies and Practices
- D. Estimating the Potential Impact on Regulatory Capital Levels and Capital Ratios
- E. Controls, Oversight, and Documentation
- F. Report to Supervisors, [and](#)
- G. Public Disclosure of DFA Stress Tests

The agencies expect that the annual company-run stress tests required ~~under~~[by](#) the ~~DFA~~[Dodd-Frank Act and the agencies'](#) stress test rules will be one component of the broader stress ~~-~~testing activities conducted by \$10\$-50 billion companies. [Notably, the DFA stress tests produce projections of hypothetical results and are not intended to be forecasts of expected or most likely outcomes.](#) The DFA stress tests may not necessarily capture a company's full range of risks, exposures, activities, and vulnerabilities that have a potential effect on capital adequacy. For example, DFA stress tests may not account for regional concentrations and unique business models, ~~or~~ [and](#) they may not fully cover the potential capital effects of interest rate risk or an operational risk event such as a regional natural disaster.<sup>7</sup> Consistent with the May 2012 stress testing guidance, a company is expected to consider the results of DFA stress testing together with other capital assessment activities to ensure that the company's material risks and vulnerabilities are appropriately considered in its overall assessment of capital adequacy. Finally, the DFA stress tests assess the impact of stressful outcomes on capital adequacy, and are not intended to measure the adequacy of a company's liquidity in the stress scenarios.

### III. Annual Tests Conducted By Companies

#### A. DFA Stress Test Timelines

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<sup>7</sup> For purposes of this guidance, the term "concentrations" refers to groups of exposures and/or activities that have the potential to produce losses large enough to bring about a material change in a banking organization's risk profile or financial condition.

**Rule Requirement: A company must conduct a stress test over a nine-quarter planning horizon based on data as of September 30 of the preceding calendar year.<sup>8</sup>**

Under the DFA stress test rules, stress test projections are based on exposures with the as-of date of September 30 and extend over a nine-quarter planning horizon that begins in the quarter ending December 31 of the same year and ends with the quarter ending December 31 two years later.<sup>9</sup> For example, a stress test beginning in the fall of 2013 would use an as-of date of September 30, 2013, and involve quarterly projections of losses, ~~PPNR~~, pre-provision net revenue (“PPNR”), balance sheet, risk-weighted assets, and capital beginning on December 31, 2013 of that year and ending on December 31, 2015. In order to project quarterly provisions, a company ~~would need to~~should estimate the adequate level of the allowance for loan and lease losses (“ALLL”) to support remaining credit risk at the end of each quarter—~~including~~. The ALLL estimation should include the final quarter—of the planning horizon, which may require additional projections of credit losses beyond 2015—~~to ensure~~. The ALLL ~~is~~projections for DFA stress testing should be generally consistent with ~~Generally Accepted Accounting Principles (GAAP)~~a company’s internal ALLL approach; however, some modifications might be necessary, as discussed in more detail below.

## B. Scenarios for DFA Stress Tests

**Rule Requirement: A company must use the scenarios provided annually by its primary Federal financial regulatory agency to assess the potential impact of the scenarios on its consolidated earnings, losses, and capital.<sup>10</sup>**

Under the ~~DFA~~-stress test rules implementing Dodd-Frank Act requirements, \$10-50 billion companies must assess the potential impact of a minimum of three macroeconomic scenarios—baseline, adverse, and severely adverse—provided by their primary supervisor on their consolidated losses, revenues, balance sheet (including risk-weighted assets), and capital. The ~~rule~~rules defines the three scenarios as follows:

- *Baseline scenario* means a set of conditions that affect the U.S. economy or the financial condition of a company that reflect the consensus views of the economic and financial outlook.
- *Adverse scenario* means a set of conditions that affect the U.S. economy or the financial condition of a company that are more adverse than those associated with the baseline scenario and may include trading or other additional components.

<sup>8</sup> 12 CFR 46.5 (OCC); 12 CFR 252.~~154~~14 (Board); 12 CFR 325.204 (FDIC).

<sup>9</sup> Planning horizon means the period of at least nine quarters, beginning with the quarter ending December 31, over which the relevant stress test projections extend.

<sup>10</sup> 12 CFR 46.6 (OCC); 12 CFR 252.~~154~~14 (Board); 12 CFR 325.204 (FDIC).

- *Severely adverse scenario* means a set of conditions that affect the U.S. economy or the financial condition of a company that overall are more severe than those associated with the adverse scenario and may include trading or other additional components.

The agencies Each agency will provide a description of the supervisory scenarios to companies no later than November 15 each calendar year. The scenarios provided by the agencies each agency are not forecasts but rather are hypothetical scenarios that companies will use to assess their capital strength in baseline and stressed economic and financial conditions. Companies should apply each scenario across all business lines and risk areas so that they can assess the effect of a common scenario on the entire enterprise, though the effect of the given scenario on different business lines and risks may vary.

The agencies believe that a uniform set of supervisory scenarios is necessary to provide a basis for comparison across companies. However, a company is not required to use all of the variables provided in the scenario, if those variables are not relevant or appropriate to the company's line of business. In addition, a company may, but is not required to, use additional variables beyond those provided by the agencies. For example, a company may decide to use a regional unemployment rate to improve the robustness of its stress test projections.<sup>11</sup> When using additional variables, companies should ensure that the paths of such variables (including their timing) are consistent with the general economic environment assumed in the supervisory scenarios. More specifically, it would be inappropriate to use a regional or local variable that exhibited limited stress compared to variables in the macroeconomic scenarios provided by the agencies, such as if the approach for deriving that additional variable was based on relatively benign conditions. Any use of additional variables should be well supported and documented.

In addition, a company may choose to project the paths of variables beyond the timeframe of the supervisory scenarios, if a longer horizon is necessary for the company's stress testing methodology. For example, a company may project the unemployment rate for additional quarters in order to calculate inputs to its end-of-horizon ALLL or to estimate the projected value of certain types of securities under the scenario.

Companies may use third-party vendors to assist in the development of additional variables based on the supervisory stress scenarios. In such instances, consistent with existing supervisory expectations,<sup>12</sup> companies should understand the third-party analysis used to develop additional variables, including the potential limitations of such analysis

<sup>11</sup> The use of additional variables may be used by companies to better link the DFA stress test scenario variables in the supervisory scenarios with a company's unique portfolios and risks. However, consistent with the May 2012 stress testing guidance, no single stress test can capture all possible effects on capital, meaning that the DFA stress tests may not capture the effects of all of a company's risks and vulnerabilities and may need to be supplemented by other stress testing activities.

<sup>12</sup> "Supervisory Guidance on Model Risk Management," OCC 2011-12, or "Guidance on Model Risk Management," Federal Reserve SR 11-7, April 4, 2011.

as it relates to stress tests, and be able to challenge key assumptions. Companies should also ensure that vendor-supplied variables they use are relevant for and relate to company-specific characteristics.

### C. DFA Stress Test Methodologies and Practices

**Rule Requirement: In conducting a stress test, for each quarter of the planning horizon, a company must estimate the following for each required scenario: losses, ~~pre-provision net revenue~~ PPNR, provision for loan and lease losses, and net income.**<sup>13</sup>

As noted above, companies must identify and determine the impact on capital from the supervisory scenarios, as represented through the supervisory scenario variables and any additional variables chosen by the company. A company's estimation processes should reasonably capture the relationship between the assumed scenario conditions and the projected impacts and outcomes to the company.<sup>14</sup> The agencies expect that the specific methodological practices used by companies to produce the estimates may vary across organizations.

Supervisors generally expect that all banking organizations, as part of overall safety and soundness, will continue to enhance their risk management practices. Accordingly, a \$10-50 billion company's DFA stress testing practices should evolve ~~and improve~~ over time. In addition, DFA stress testing practices for \$10-50 billion companies should be commensurate with each company's size, complexity, and sophistication. This means that, generally, larger or more sophisticated companies should ~~employ~~ consider employing not just the minimum expectations, but the more advanced practices described in this guidance. In addition, \$10-50 billion companies should consider using more than just the minimum expectations for the exposures and activities of highest impact and that present the highest risk.

The remainder of this section outlines key practices that all \$10-50 billion companies should incorporate into their methodologies for estimating losses, PPNR, provision for loan and lease losses ("PLL~~L~~<sub>5</sub>"), and net income. It begins with general expectations that apply across various types of estimation methodologies, and then provides additional expectations for specific areas, such as loss estimation, revenue estimation, and balance sheet projections. In making projections, companies should make conservative assumptions about management responses in the stress tests, and should include only those responses for which there is substantial support. For example, companies may account for hedges that are already in place as potential mitigating factors against losses but should be conservative in making assumptions about potential future hedging

<sup>13</sup> 12 CFR 46.6 (OCC); 12 CFR 252.~~155~~15(a)(1) (Board); 12 CFR 325.205(a)(1) (FDIC).

<sup>14</sup> Additionally, companies' methodologies should be sufficiently documented and transparent so that limitations and areas of uncertainty are clearly identified for users of stress test results and other stakeholders.

activities and not necessarily anticipate that actions taken in the past could be taken under the supervisory scenarios.

## 1. Data Sources

Companies are expected to have appropriate management information systems and data processes that enable them to collect, sort, aggregate, and update data and other information efficiently and reliably within business lines and across the company for use in DFA stress tests. Data used for DFA stress tests should be reliable and generally consistent across time.

In cases where a company may not currently have a full cycle of historical data or data in sufficient granularity on which to base its analyses, it may use an alternative data source, such as a data history drawn from other organizations of ~~demonstrably~~ comparable market presence, concentrations, and risk profile (for example, regulatory reporting or vendor-supplied data), as a proxy for its own risk profile and exposures. Companies with limited internal data should develop ~~specific~~ strategies to accumulate the data necessary to improve their estimation practices over time, as having internal data relevant to current exposures generally improves loss projections and provides a better basis for assessment of those projections. The agencies recognize that in some cases companies may not initially have internal data on certain portfolios and thus may rely on proxy data for some time. Such practices may be acceptable provided that the company demonstrates that proxy data are relevant to the company's own exposures and appropriate for the estimation being conducted, and that the company is actively collecting internal data.

Over the long term, companies may continue to use ~~such~~ proxy data to benchmark the estimates produced using internal data or to augment any gaps in internal data (for example, if a company is moving into a new business area). However, companies should use proxy data cautiously, as these data may not adequately represent a company's own exposures, business activities, underwriting, and risk characteristics.

Even when a company has extensive historical data, it should look beyond the assumptions based on or embedded in those historical data. Companies should challenge conventional assumptions to ensure that a company's stress test is not constrained by its own past experience. This is particularly important when historical data does not contain stressful periods or if the specific characteristics of the scenarios are unlike the conditions in the available historical data.

## 2. Data Segmentation

To account for differences in risk profiles across various exposures and activities, companies should segment their portfolios and business activities into categories based on common or related risk characteristics. The company should select the appropriate level of segmentation based on the size, materiality, and risk of a given portfolio, provided there are sufficiently granular historical data available to allow for the desired segmentation. The minimum expectation is that companies will segment their portfolios

and business activities using the categories listed in the \$10-50 billion reporting form.<sup>15</sup> A company may use more granular segmentation than the \$10-50 billion reporting form categories, particularly for more material, concentrated, or relatively riskier portfolios. For instance, a company could have a commercial loan portfolio containing loans to different industries with varying sensitivities to the scenario variables.

More advanced portfolio segmentation can take several forms, such as by product (construction versus income-producing real estate), industry, loan size, credit quality, collateral type, geography, vintage, maturity, debt service coverage, or loan-to-value (LTV) ratio. The company may also pool exposures with common or correlated risk characteristics, such as segmenting loans to businesses related to automobile production. Companies may also segment the portfolio according to geography, if they engage in activities in geographic areas with differing economic and financial characteristics. Such segmentation may be particularly valuable in situations where geographic areas show varying sensitivity to national economic and financial changes or where different scenario variables are necessary to capture key risks (such as projecting wholesale loan losses for regions with different industrial concentrations). For any type of segmentation that is more granular than the categories in the \$10-50 billion reporting form, a company should maintain a map of internally defined segments to the \$10-50 billion reporting form categories for accurate reporting.

Some companies' business line or risk assessment functions may ~~already~~ segment data with more granularity, ~~i.e., that is,~~ beyond the \$10-50 billion reporting form categories, which would support their DFA stress tests. Enhanced data details on borrower and loan characteristics may identify distinct and separate credit risks within a reporting category more effectively, and therefore yield a more accurate risk assessment than simply analyzing the larger aggregate portfolio. Greater segmentation, particularly for larger or riskier portfolios, may prove especially useful in estimating the risks to a portfolio under the adverse or severely adverse scenarios, because aggregated or less segmented portfolios may mask or distort the effect of potentially more stressful conditions on sub-portfolios. While \$10-50 billion reporting form categories represent the minimum acceptable segmentation, larger or more sophisticated \$10-50 billion companies should consider whether that level of segmentation is sufficient for the risk in their portfolios.

### 3. Model risk management

Companies should have in place effective model risk management practices, including validation, for all models used in DFA stress tests, consistent with existing supervisory guidance.<sup>16</sup> This includes ensuring that DFA stress test models are subject to appropriate

<sup>15</sup> For purposes of this guidance, the term “\$10-50 billion reporting form” refers to the relevant reporting form a \$10-50 billion company will use to report the results of its DFA stress tests to its primary Federal financial regulatory agency. ~~For Federal Reserve regulated companies the relevant reporting form is the FR Y-16, for OCC regulated companies the relevant form is the OCC DFAST-10-50, and for FDIC regulated companies the relevant form is the FDIC DFAST-10-50.~~

<sup>16</sup> OCC 2011-12 and FR SR 11-7.

standards for model development, implementation and use, model validation, and model governance. Companies should ensure an effective challenge process by unbiased, competent, and qualified parties is in place for all models. There should also be sufficient documentation of all models, including model assumptions, limitations, and uncertainties. Senior management should have appropriate understanding of DFA stress test models to provide summary information to the company's board of directors that allows directors to assess and question methodologies and results. In some cases, companies may not be able to validate all the models used in their DFA stress tests prior to submission; this may be appropriate provided that companies have (1) made an effort to identify models based on materiality and highest risk and prioritize validation activities accordingly, (2) applied compensating controls so that the output from models that are not validated or are only partially validated is not treated the same as the output from fully validated models, and (3) clearly documented such cases and made them transparent in reports to model users, senior management, and other relevant parties. Companies should have an explicit exception process when models are put into production without validation, with heightened levels of management approval for more material models. There should also be timelines with explicit plans for conducting the remaining areas of validation for such models and recognition that any provisional use without validation is temporary.

Companies should ensure that their model risk management policies and practices generally apply to the use of vendor and third-party products as well. This includes all the standards and expectations outlined above and in existing supervisory guidance. If a company is using vendor models, senior management is expected to demonstrate knowledge of the model's design, intended use, applications, limitations and assumptions. For cases in which knowledge about a vendor or third-party model is limited for proprietary or other reasons, companies should take additional steps to ensure that they have an understanding of the model and can confirm it is functioning as intended. For example, companies may need to conduct more sensitivity analysis and benchmarking if information about a vendor model is limited for proprietary or other reasons. Additionally, a company should have as much ~~in-house~~ internal knowledge as possible ~~in~~ and contingency plans to prepare for the ~~event~~ possibility of vendor contract termination ~~and should have contingency plans in cases where~~ or other situations in which a vendor model is no longer available.

In cases where there are noted weaknesses or limitations in models or data used for stress tests, a company may choose to apply qualitative adjustments to the model or its output that are expert judgment-based. In most cases, however, estimation ~~based~~ solely based or heavily reliant on qualitative adjustments should not be the main component of final loss estimates. Where qualitative adjustments are made, they should be consistently determined and applied, and subject to a well-defined process that includes a well-supported rationale, methodology, proper controls, and strong documentation. When expert judgment is used on an ongoing basis, the estimates generated by such judgment should be subject to outcomes analysis, to assess performance equivalent to that used to evaluate a quantitative model. Large qualitative adjustments to the stress test results, especially on a repeated basis, may be indicative of a flawed process.

#### 4. Loss estimation

For their DFA stress tests, companies are expected to have credible loss estimation practices that capture the risks associated with their portfolios, business lines, and activities. Credit losses associated with loan portfolios and securities holdings should be estimated directly and separately (as described in this section), whereas other types of losses should be incorporated into estimated PPNR (as described in the next section). Processes for loss estimation should be consistent, repeatable, transparent, and well documented. Companies should have a transparent and consistent approach for aggregating loss estimates across the enterprise. For example, inputs from all parts of the company should rely on common assumptions and map to specific loss categories of the \$10-50 billion reporting form. A company should ensure that all enterprise loss estimation approaches reflect reasonably sufficient rigor and conservatism, and that, for loss estimation, the scenarios are applied consistently across the company.

Each company's loss estimation practices should be commensurate with the materiality of the risks measured and well supported by sound, empirical analysis. The practices may vary in complexity, depending on data availability and the materiality of a given portfolio. In general, loss estimation practices for credit risk are expected to be more advanced than other elements of the stress test, given that credit risk usually represents the largest potential risk to capital adequacy among \$10-50 billion companies.

Companies should be [mindful](#) [aware](#) that the credit performance in a benign economic environment could differ markedly from that during more stressful periods, and the differences could become greater as the severity of stress increases. For example, companies that experienced low losses on their construction loans during a benign economic environment, due to the presence of interest reserves or other risk [mitigating](#) factors, may experience a sharp and rapid rise in losses in a scenario where market conditions deteriorate for a prolonged period. A company's decision whether to use consistent or different loss estimation processes for various supervisory scenarios [would](#) [should](#) depend on the sensitivity of a company's loss estimation process to a given scenario.

A company may use a consistent process for loss estimation for all scenarios if that process is sufficiently sensitive to the severity of each scenario. Alternately, a company may use different loss estimation processes for different scenarios if the process it uses for the baseline scenario does not adequately capture the sensitivity of loss estimates to adverse and severely adverse scenarios. For example, a company may use its budgeting process for its baseline loss projections, if appropriate, but it should use a different process for the adverse and severely adverse scenarios if its budgeting process does not capture the potential for sharply elevated losses during stressful conditions. Whatever processes a company chooses should be conditioned on each of the three macroeconomic scenarios provided by supervisors.

Companies may choose loss estimation processes from a range of available methods, techniques, and levels of granularity, depending on the type and materiality of a portfolio, and the type and quality of data available. For instance, some companies may choose to base their stress loss estimates on industry historical loss experience, provided that those estimates are consistent with the conditions in the supervisory scenarios. Companies

should choose a method that best serves the structure of their credit portfolios, and they may choose different methods for different portfolios (for example, wholesale versus retail). Furthermore, companies may use multiple methods to estimate losses on any given credit portfolio, and investigate different methods before settling on a particular approach or approaches. Regardless of whether a company uses historical loss experience or a more sophisticated modeling technique to estimate losses in a given scenario, the company should verify that resulting loss estimates are appropriately conditioned on the scenario, and any assumptions used are well understood and documented.

In estimating losses based on historical experiences, companies should ensure that historical loss experience contains at least one period when losses were substantially elevated and revenues substantially reduced, such as the downturn of a credit cycle. In addition, companies should ensure that any historical loss data used are consistent with the company's current exposures and condition. This could occur, for instance, if a company has shifted the proportion of its commercial lending from large corporations to smaller businesses, and the shift is not appropriately reflected in its historical loss data. If neither a company's own data history nor industry loss data include periods of stress comparable to the supervisory adverse or severely adverse scenario, the company should make reasonable, conservative assumptions based on available data.

Companies may choose to estimate credit losses at an aggregate level, at a loan-segment level, or at a loan-by-loan level. Aggregate approaches generally involve estimating loan losses for portfolios of loans, such as the \$10-50 billion reporting form categories or more granular categories. Loan segmentation approaches group individual loans into segments or pools of obligors with similar risk characteristics to estimate losses. For example, individual 30-year fixed-rate mortgage loans may be pooled into one segment, and 5-year adjustable-rate mortgages (ARMs) into another segment, each to be modeled separately based on the balance, loss, and default history in that loan segment. Loan segments can also be determined based on additional risk characteristics, such as credit score, LTV ratio, borrower location, and payment status. Finally, loan-level approaches estimate losses for each loan or borrower and aggregate those estimates to arrive at portfolio-level losses.

Some of the more commonly used modeling techniques for estimating loan losses include net charge-off models, roll-rate models, and transition matrices. Net charge-off models typically estimate the net charge-off rate for a given portfolio, based on the historical relationship between the net charge offs and relevant risk factors, including macroeconomic variables. Roll-rate models generally estimate the rate at which loans that are current or delinquent in a given quarter roll into delinquent or default status in the next quarter, conditioning such estimates on relevant risk factors. Transition matrices estimate the probability that risk ratings on loans could change from quarter to quarter and observe how transition rates differ in stressful periods compared with less stressful or baseline periods. Some companies may also use an ~~expected-loss~~ approach, where the probability of default, loss given default, and exposure at default are estimated for individual loans, conditioning such estimates on each loan or portfolio risk characteristics and the economic scenario. Companies can benefit from exploring different modeling approaches, giving due consideration to cost effectiveness and with the understanding

that more sophisticated methodologies will not necessarily prove more practicable or robust.

Loss estimation practices should be commensurate with the overall size, complexity, and sophistication of the company, as well as with individual portfolios, to ensure they fully capture a company’s risk profile. Accordingly, smaller, less sophisticated \$10-50 billion companies may employ simpler loss estimation practices that rely on industry historical loss experience at a higher level of aggregation. On the other hand, larger or more sophisticated \$10-50 billion companies, [including those with more complex portfolios](#), should consider more advanced loss estimation practices that identify the key drivers of losses for a given portfolio, segment, or loan, determine how those drivers would be affected in supervisory scenarios, and estimate resulting losses.

Loss [projections](#)[estimates](#) should include projections of other-than-temporary impairments (OTTI) for securities both held for sale and held to maturity. OTTI projections should be based on positions as of September 30 and should be consistent with the supervisory scenarios and standard accounting treatment. Companies should ensure that their securities loss estimation practices, including definitions of loss used, remain current with regulatory and accounting changes.

## 5. Pre-provision net revenue estimation

The projection of potential revenues is a key element of a stress test. For the DFA stress test, companies are required to project PPNR over the planning horizon for each supervisory scenario.<sup>17</sup> Companies should estimate PPNR at a level at least as granular as the components outlined in the \$10-50 billion reporting form. Companies should be mindful that revenue patterns could differ markedly in baseline versus stress periods, and should therefore not make assumptions that revenue streams will remain the same or follow similar paths across all scenarios. In estimating PPNR, companies should consider, among other things, how potentially higher nonaccruals, increased collection costs, and changes in funding sources during the adverse and severely adverse scenarios could affect PPNR. Companies should ensure that PPNR projections are generally consistent with projections of losses, the balance sheet, and risk-weighted assets. For example, if a company projects that loan losses would be reduced because of declining loan balances under a severely adverse scenario, PPNR would also be expected to decline under the same scenario due to the decline in interest income. Companies should ensure transparency and appropriate documentation of all material assumptions related to PPNR.

There are various ways to estimate PPNR under stress scenarios and companies are not required to use any specific method. For example, companies may project each of [the](#) three main components of PPNR (net interest income, non-interest income, and non-interest expense) or sub-components of PPNR (e.g., interest income or fee income), on an aggregate level for the entire company or by business line. Companies may base their

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<sup>17</sup> The DFA stress test rules define PPNR as net interest income plus non-interest income less non-interest expense. Non-operational or non-recurring income and expense items should be excluded.

PPNR estimates on internal or industry historical experience, or use a more sophisticated model-based approach to project PPNR. For example, some companies may project PPNR based on a historical relationship between PPNR or broad components of PPNR and macroeconomic variables. In those instances, companies may use the level of PPNR or the ratio of PPNR to a relevant balance sheet measure, such as assets or loans. Some companies may use a more granular breakout of PPNR (for example, interest income on loans), identify relevant economic variables (for example, interest rates), and employ models based on historical data to project PPNR. Some companies may use their asset-liability management models to project some components of PPNR, such as net interest income.

A company may estimate the stressed components of PPNR based on its own or industry-wide historical income and expense experience, particularly during the early development of a company's stress testing practices. When using its own history, a company should ensure that the data include at least one stressful period; when using industry data, a company should ensure that such data are relevant to its portfolios and businesses and appropriately reflect potential PPNR under each supervisory scenario. If neither its own data nor industry data include the period of stress that is comparable to the supervisory adverse or severely adverse scenario, a company should make conservative assumptions, based on available data, and appropriately adjust its historical PPNR data downward in its stressed estimate. A company that has been experiencing merger activity, rapid growth, volatile revenues, or changing business models should rely less on its own historical experience, and generally make conservative assumptions.

It may be appropriate for smaller or less sophisticated \$10-50 billion companies **may to** employ PPNR estimation approaches that project the three main components of PPNR at the aggregate, company-wide level based on industry experience. Larger or more sophisticated \$10-50 billion companies should consider PPNR estimation practices that more fully capture potential risks to their business and strategy by collecting internal revenue data, estimating revenues within specific business lines, exploring more advanced techniques that identify the specific drivers of revenue, and analyzing how the supervisory scenarios affect those revenue drivers. Whatever process a company chooses to employ, projected revenues and expenses should be credible and reflect a reasonable translation of expected outcomes consistent with the key scenario variables.

In addition to the credit losses associated with loan portfolios and securities holdings, described in the previous section, that should be estimated directly and separately, companies may determine that other types of losses could arise under the supervisory scenarios. These other types of losses should be included in projections of PPNR to the extent they would arise under the specified scenario conditions. For example, any trading losses arising from the scenario conditions should be included in the non-interest income component of PPNR. As another example, companies should estimate under the non-interest expense component of PPNR any losses associated with requests by mortgage investors – including both government-sponsored enterprises as well as private-label securities holders – to repurchase loans deemed to have breached representations and warranties, or with investor litigation that broadly seeks damages from companies for losses.

Companies with material representation and warranty risk may consider a range of legal process outcomes, including worse than expected resolutions of the various contract claims or threatened or pending litigation against a company and against various industry participants. Additionally, in estimating non-interest income, companies with significant mortgage servicing operations should consider the effect of the supervisory scenarios on revenue and expenses related to mortgage servicing rights and the associated impact to regulatory capital.

PPNR estimates should also include any operational losses that a company estimates based on the supervisory scenarios provided. Companies should address operational risk in their PPNR projections if such events are related to the supervisory scenarios provided, or if there are pending related issues, such as ongoing litigation, that could affect losses or revenues over the planning horizon.<sup>18</sup>

## 6. Balance sheet and risk-weighted asset projections

A company is expected to project its balance sheet and risk-weighted assets for each of the supervisory scenarios. In doing so, these projections should be consistent with scenario conditions and the company's prior history of managing through the different business environments, especially stressful ones. For example, ~~if~~ a company ~~that~~ has reduced its business activity and balance sheet during past periods of stress or ~~if it~~ ~~that~~ has contingent exposures, ~~that~~ should ~~be taken~~ take these factors into consideration. The projections of the balance sheet and risk-weighted assets should be consistent with other aspects of stress test projections, such as losses and PPNR. In addition, balance sheet and risk-weighted asset projections should remain current with regulatory and accounting changes.

Companies may use a variety of methods to project balance sheet and risk-weighted assets. In certain cases, it may be appropriate for a company to use simpler approaches for balance sheet and risk-weighted asset projections, such as a ~~constant portfolio assumption~~ static balance sheet and static risk-weighted assets over the planning horizon; however, companies should consider whether such an approach is appropriate if they have more volatile balance sheets and risk-weighted assets, such as from mergers, acquisitions, or organic growth. Alternatively, a company may rely on estimates of changes in balance sheet and risk-weighted assets based on their own or industry-wide historical experience, provided that the internal or external historical balance sheet and risk-weighted asset experience contains stressful periods. As in the case of loss estimation and PPNR, using industry-wide data might be more appropriate when internal data lack sufficient history, granularity, or observations from stressful periods; however, companies should take caution when using the industry data and provide appropriate documentation for all material assumptions.

<sup>18</sup> As noted above, there may be certain aspects of operational risk that a company is not expected to address in DFA stress tests; however, the company should consider those other aspects of operational risk as part of broader stress testing described in the May 2012 stress testing guidance.

~~In stress scenarios, companies should justify major changes in the composition of risk-weighted assets, for example, based on assumptions about a company's strategic direction, including events such as material sales, purchases, or acquisitions.~~

~~Furthermore, companies should be mindful that any assumptions about reductions in business activity that would reduce its balance sheet and risk-weighted assets over the planning horizon (such as tightened underwriting) are also likely to reduce PPNR. Such assumptions should also be reasonable in that they do not substantially alter the company's core businesses and earnings capacity. Companies should document and explain key underlying assumptions, as appropriate.~~

Some companies may choose to employ more advanced, model-based approaches to project balance sheet and risk-weighted assets. For example, a company may project outstanding balances for assets and liabilities based on the historical relationship between those balances and macroeconomic variables. In other cases, a company could project certain components of the balance sheet, for example, based on projections for originations, ~~pay-downs~~ [paydowns](#), drawdowns, and losses for its loan portfolios under each scenario. Estimated prepayment behavior conditioned on the relevant scenario and the maturity profile of the asset portfolio could inform balance [sheet](#) projections.

In stress scenarios, companies should justify major changes in the composition of risk-weighted assets, for example, based on assumptions about a company's strategic direction, including events such as material sales, purchases, or acquisitions. Furthermore, companies should be mindful that any assumptions about reductions in business activity that would reduce their balance sheets and risk-weighted assets over the planning horizon (such as tightened underwriting) are also likely to reduce PPNR. Such assumptions should also be reasonable in that they do not substantially alter the company's core businesses and earnings capacity. Any case in which balance sheet and risk-weighted asset projections decline over the period, and therefore positively affect capital ratios, should be well supported by analysis and data.

## 7. Estimates for immaterial portfolios

Although stress testing should be applied to all exposures as described above, the same level of rigor and analysis may not be necessary for lower-risk, immaterial, portfolios. Portfolios considered immaterial are those that would not represent a consequential effect on capital adequacy under any of the scenarios provided. For such portfolios, it may be appropriate for a company to use a less sophisticated approach for its stress test projections, provided that the results of that approach are conservative and well documented. For example, estimating losses under the supervisory scenarios for a small portfolio of municipal securities may not involve the same sophistication as a larger portfolio of commercial mortgages.

## 8. Projections for quarterly provisions and ending allowance for loan and lease losses

The DFA stress test rules require companies to project quarterly PLLL.<sup>19</sup> Companies are expected to project PLLL based on projections of quarterly loan and lease losses and the appropriate ALLL balance at each quarter-end for each scenario. In projecting PLLL, companies are expected to maintain an adequate loan-loss reserve through the planning horizon, consistent with supervisory guidance, accounting standards, and a company's internal practice. Estimated provisions should recognize the potential need for higher reserve levels in the adverse and severely adverse scenarios, since economic stress leads to poorer loan performance. ~~The ALLL at the end of the planning horizon should be consistent with GAAP, including any losses projected beyond the nine-quarter horizon.~~

The ALLL at the end of the planning horizon should include any losses projected beyond the nine-quarter horizon. Given that loss projections for the stress tests can in some cases be conducted at a portfolio level, the ALLL projections may also be conducted at a similar level, provided that they are consistent with the company's existing methodologies to calculate ALLL. Management should ensure that the company's projected ALLL is sufficient to cover remaining loan losses under the scenario for each quarter of the planning horizon, including the last quarter.

## 9. Projections for quarterly net income

Under the DFA stress test rules, companies must estimate projected quarterly net income for each scenario. Net income projections should be based on loss, revenue, and expense projections described above. Companies should also ensure that tax estimates, including deferred taxes and tax assets, are consistent with relevant balance sheet and income (loss) assumptions and reflect appropriate accounting, tax, and regulatory changes.

### D. Estimating the potential impact on regulatory capital levels and capital ratios

**Rule Requirement: In conducting a stress test, for each quarter of the planning horizon a company must estimate: the potential impact on regulatory capital levels and capital ratios (including regulatory capital ratios and any other capital ratios specified by the primary supervisor), incorporating the effects of any capital actions over the planning horizon and maintenance of an allowance for loan losses appropriate for credit exposures throughout the planning horizon.<sup>20</sup>**

In the DFA stress test rules, companies are required to estimate the impact of supervisory scenarios on capital levels and ratios, based on the estimates of losses, PPNR, loan and lease provisions, and net income, as well as projections of the balance sheet and risk-weighted assets. Companies must estimate projected quarterly regulatory capital levels and regulatory capital ratios for each scenario. Stress tests are intended to assess the negative impact on companies' capital positions from hypothetical stress conditions; as such, the agencies expect companies' post-stress capital ratios under the adverse and

<sup>19</sup> [12 CFR 46.6\(a\)\(1\) \(OCC\); 12 CFR 252.15\(a\)\(1\) \(Board\); 12 CFR 325.206\(b\) \(FDIC\).](#)

<sup>20</sup> [12 CFR 46.6\(a\)\(2\) \(OCC\); 12 CFR 252.15\(a\)\(2\) \(Board\); 12 CFR 325.205\(a\)\(2\) \(FDIC\).](#)

severely adverse scenarios ~~will~~to be lower than under the baseline scenario. Any rare cases in which ratios are higher under the adverse and severely adverse scenarios should be very well supported by analysis and documentation. Projected capital levels and ratios should reflect applicable regulations and accounting standards for each quarter of the planning horizon.

~~In particular, in July 2013, the Board and OCC issued a final rule and the FDIC issued an interim final rule regarding regulatory capital requirements for banking organizations. The final rules revise the criteria for regulatory capital, introduce a new minimum common equity tier 1 capital requirement of 4.5 percent of risk-weighted assets, as well as a minimum supplementary leverage ratio requirement of 3 percent that would apply to companies subject to the advanced approaches capital rules. The new minimum capital requirements would be phased in over a transition period. The final rules will take effect beginning on January 1, 2014, for banking organizations subject to the agencies' advanced approaches rules (other than savings and loan holding companies) and on January 1, 2015, for all other banking organizations. Compliance with the supplementary leverage ratio for companies subject to the advanced approaches rules will be required starting in 2018. \$10-50 billion companies should measure their regulatory capital levels and regulatory capital ratios for each quarter in accordance with the rules that would be in effect during that quarter in accordance with the transition arrangements set forth in the final rules.~~

**Rule Requirement:** A bank holding company or savings and loan holding company is required to make the following assumptions regarding its capital actions over the planning horizon:

1. For the first quarter of the planning horizon, the bank holding company or savings and loan holding company must take into account its actual capital actions as of the end of that quarter.
2. For each of the second through ninth quarters of the planning horizon, the bank holding company or savings and loan holding company must include in the projections of capital:
  - (a) Common stock dividends equal to the quarterly average dollar amount of common stock dividends that the company paid in the previous year (that is, the first quarter of the planning horizon and the preceding three calendar quarters);
  - (b) Payments on any other instrument that is eligible for inclusion in the numerator of a regulatory capital ratio equal to the stated dividend, interest, or principal due on such instrument during the quarter; and

**(c) An assumption of no redemption or repurchase of any capital instrument that is eligible for inclusion in the numerator of a regulatory capital ratio.<sup>21</sup>**

In their DFA stress tests, bank holding companies and savings and loan holding companies are required to calculate pro forma capital ratios using a set of capital action assumptions based on historical distributions, contracted payments, and a general assumption of no redemptions, repurchases, or issuances of capital instruments. A holding company should also assume it will not issue any new common stock, preferred stock, or other instrument that would count in regulatory capital in the second through ninth quarters of the planning horizon, except for any common issuances related to expensed employee compensation.

While holding companies are required to use specified capital action assumptions, there are no specified capital actions for banks and thrifts. A bank or thrift should use capital actions that are consistent with the scenarios and the company's internal practices in their DFA stress tests. For banks and thrifts, projections of dividends that represent a significant change from practice in recent quarters, for example to conserve capital in a stress scenario, should be evaluated in the context of corporate restrictions and board decisions in historical stress periods. Additionally, a holding company should consider that it is required to use certain capital assumptions that may not be the same as the assumptions used by its bank subsidiaries. Finally, any assumptions about mergers or acquisitions, and other strategic actions should be well documented and should be consistent with past practices of management and the board during stressed economic periods. Should the stress-test submissions for the bank or thrift and its holding company differ in terms of projected capital actions (e.g., different dividend payout assumptions during the stress test horizon for the bank versus the holding company) as a result of the different requirements of the DFA stress test rules, the institution should address such differences in the narrative portion of their submissions.

### **E. Controls, Oversight, and Documentation**

**Rule requirement: Senior management must establish and maintain a system of controls, oversight and documentation, including policies and procedures, that are designed to ensure that its stress testing processes are effective in meeting the requirements of the DFA stress test rule. These policies and procedures must, at a minimum, describe the company's stress testing practices and methodologies, and describe the processes for validating and updating practices and methodologies consistent with applicable laws, regulations, and supervisory guidance. The board of directors, or a committee thereof, of a company must approve and review the policies and procedures of the stress testing processes as frequently as economic conditions or the condition of the company may warrant, but no less than annually.<sup>22</sup>**

<sup>21</sup> 12 CFR 252.~~455~~15(b).

<sup>22</sup> 12 CFR 46.5(d) (OCC); 12 CFR 252.~~455~~15(c) (Board); 12 CFR 325.205(b) (FDIC).

Pursuant to the DFA stress test requirement, a company must establish and maintain a system of controls, oversight, and documentation, including policies and procedures that apply to all of its DFA stress test components. This system of controls, oversight, and documentation should be consistent with the May 2012 stress testing guidance. Policies and procedures for DFA stress tests should be comprehensive, ensure a consistent and repeatable process, and provide transparency regarding a company's stress testing processes and practices for third parties. The policies and procedures should provide a clear articulation of the manner in which DFA stress tests should be conducted, roles and responsibilities of parties involved (including any external resources), and describe how DFA stress test results are to be used. These policies and procedures also should be integrated into other policies and procedures for the company. The board (or a committee thereof) must approve and review the policies and procedures for DFA stress tests to ensure that policies and procedures remain current, relevant, and consistent with existing regulatory and accounting requirements and expectations as frequently as economic conditions or the condition of the company may warrant, but no less than annually.

Senior management must establish policies and procedures for DFA stress tests and should ensure compliance with those policies and procedures, assign competent staff, oversee stress test development and implementation, evaluate stress test results, and review any findings related to the functioning of stress testing processes. Senior management should ensure that weaknesses – as well as key assumptions, limitations and uncertainties – in DFA stress testing processes and results are identified, communicated appropriately within the organization, and evaluated for the magnitude of impact, taking prompt remedial action where necessary. Senior management, directly and through relevant committees, should also be responsible for regularly reporting to the board regarding DFA stress test developments (including the process to design tests and augment or map supervisory scenarios), DFA stress test results, and compliance with a company's stress testing policy.

A company's system of documentation should include the methodologies used, data types, key assumptions, and results, as well as coverage of the DFA stress tests (including risks and exposures included). For any models used, documentation should include sufficient detail about design, inputs, assumptions, specifications, limitations, testing, and output. In general, documentation on methodologies used should be consistent with existing supervisory guidance.

Companies should ensure that other aspects of governance over methodologies used for DFA stress tests are appropriate, consistent with the May 2012 stress testing guidance. Specifically, companies should have policies, procedures, and standards for any models used. Effective governance ~~would~~ should include validation and effective challenge for any assumptions or models used, and a description of any remedial steps in cases where models are not validated or validation identifies substantial issues. A company should ensure that internal audit evaluates model risk management activities related to DFA stress tests, which should include a review of whether practices align with policies, as well as how deficiencies are identified, monitored, and addressed.

**Rule requirements: The board of directors and senior management of the company must receive a summary of the results of the stress test. The board of directors and senior management of a company must consider the results of the stress test in the normal course of business, including, but not limited to, the company’s capital planning, assessment of capital adequacy, and risk management practices.<sup>23</sup>**

A company’s board of directors is ultimately responsible for the company’s DFA stress tests. Board members must receive summary information about DFA stress tests, including results from each scenario. The board or its designee should **actively** appropriately evaluate and discuss this information, ensuring that the DFA stress tests ~~appropriately reflect~~ are consistent with the company’s risk appetite, and overall ~~strategy and business plans, overall stress testing practices, and contingency plans, directing changes where appropriate~~ strategy. The board should ensure it remains informed about critical review of elements of the DFA stress tests conducted by senior management or others (such as internal audit), especially regarding key assumptions, uncertainties, and limitations.

~~AI~~ In addition, the board of directors and senior management of a \$10-50 billion ~~companies~~ company must consider the role of stress testing results in normal business including in the capital planning, assessment of capital adequacy, and risk management practices of the company. A company should appropriately document the manner in which DFA stress tests are used for key decisions about capital adequacy, including capital actions and capital contingency plans. The company should indicate the extent to which DFA stress tests are used in conjunction with other capital assessment tools, especially if the DFA stress tests may not necessarily capture a company’s full range of risks, exposures, activities, and vulnerabilities that have the potential to affect capital adequacy. Importantly In addition, a company should ~~ensure that~~ determine whether its post-stress capital results are aligned with its internal capital goals ~~and risk appetite~~. For cases in which post-stress capital results are not aligned with a company’s internal capital goals, senior management should provide options it and the board would consider to bring them into alignment.

**F. Report to Supervisors**

**Rule Requirement: A company must report the results of the stress test to its primary supervisor and to the Board of Governors by March 31, in the manner and form prescribed by the agency.<sup>24</sup>**

All \$10-50 billion companies must report the results of their DFA company-run stress tests on the \$10-50 billion reporting form. This report will include a company’s quantitative projections of losses, PPNR, balance sheet, risk-weighted assets, ALLL, and

<sup>23</sup> 12 CFR 46.5(d) and 46.6(c)(2) (OCC); 12 CFR 252.15515(c)(3) (Board); 12 CFR 325.205(b)(2) and (3) (FDIC).

<sup>24</sup> 12 CFR 46.7 (OCC); 12 CFR 252.15616 (Board); 12 CFR 325.206 (FDIC).

capital on a quarterly basis over the duration of the scenario and planning horizon. In addition to the quantitative projections, companies are required to submit qualitative information supporting their projections. The report of the stress test results must include, under each scenario: a description of the types of risks included in the stress test, a description of the methodologies used in the stress test, an explanation of the most significant causes for the changes in regulatory capital ratios, and any other information required by the agencies. In addition, the agencies may request supplemental information, as needed.

If significant errors or omissions are identified subsequent to filing, a company must file an amended report. For additional information, see the instructions provided with the reporting templates.

### G. Public Disclosure of DFA Test Results

**Rule Requirement: A company must disclose a summary of the results of the stress test in the period beginning on June 15 and ending on June 30.<sup>25</sup>**

Under the DFA stress test rules, a company must make its first DFA stress test-related public disclosure between June 15 and June 30, 2015, by disclosing summary results of its annual DFA stress test, using September 30, 2014, financial statement data.<sup>26</sup> The regulation requires holding companies to include in their public disclosure a summary of the results of the stress tests conducted by any subsidiaries subject to DFA stress testing.<sup>27</sup> A bank can satisfy this public disclosure requirement by including a summary of the results of its stress test in its parent company's public disclosure (on the same timeline); however the agencies can require a separate disclosure if the parent company's public disclosure does not adequately capture the impact of the scenarios on the bank.

The summary of the results of the stress test, including both quantitative and qualitative information, should be included in a single release on a company's Web site, or in any other forum that is reasonably accessible to the public.

Each bank or thrift must publish a summary of its stress tests results separate from the results of stress tests conducted at the consolidated level of its parent holding company, but the company may include this summary with its holding company's public disclosure. Thus, a bank or thrift with a parent holding company that is required to conduct a company-run DFA stress test under the Federal Reserve Board's DFA stress test rules will have satisfied its public disclosures requirement when the parent holding company

<sup>25</sup> 12 CFR 46.8 (OCC); 12 CFR 252.15717 (Board); 12 CFR 325.207 (FDIC).

<sup>26</sup> [The exception is any \\$10-50 billion state member bank that is a subsidiary of a bank holding company or a savings and loan holding company with average total consolidated assets of \\$50 billion or more; in that case, the state member bank subsidiary must disclose a summary of the results of the stress test in the period beginning on March 15 and ending on March 31.](#)

<sup>27</sup> 12 CFR 252.15717(b).

discloses summary results of [its](#) subsidiary’s annual stress test in satisfaction of the requirements of the applicable regulations of the company’s primary Federal regulator, unless the company’s primary [Federal](#) regulator determines that the disclosures at the holding company level does not adequately capture the potential impact of the scenarios on the capital of the companies.

A company must disclose, at a minimum, the following information regarding the severely adverse scenario:

- a. A description of the types of risks included in the stress test;
- b. A summary description of the methodologies used in the stress test;
- c. Estimates of—
  - Aggregate losses;
  - PPNR;
  - PLLL;
  - Net income; and
  - Pro forma regulatory capital ratios and any other capital ratios specified by the primary ~~supervisor~~[Federal regulator](#);
- d. An explanation of the most significant causes for the changes in regulatory capital ratios; and
- e. For bank holding companies and savings and loan holding companies: for a stress test conducted by an insured depository institution subsidiary of the bank holding company or savings and loan holding company pursuant to section 165(i)(2) of the Dodd-Frank Act, changes in regulatory capital ratios and any other capital ratios specified by the primary Federal ~~financial regulatory agency~~[regulator](#) of the depository institution subsidiary over the planning horizon, including an explanation of the most significant causes for the changes in regulatory capital ratios.

It should be clear in the company’s public disclosure that the results are conditioned on the supervisory scenarios. Items to be publicly disclosed should follow the same definitions as those provided in the confidential report to supervisors. Companies should disclose all of the required items in a single public release, as it is difficult to interpret the quantitative results without the qualitative supporting information.

<b>Differences in DFA Stress Test Requirements for Holding Companies versus Banks and Thrifts</b>		
	<b>Bank Holding Companies and Savings and Loan Holding Companies</b>	<b>Banks and Thrifts</b>
<b>Capital actions used for company-run stress tests</b>	Capital actions prescribed in Federal Reserve Board’s DFA stress tests rules. Generally based on historical dividends, contracted payments, and no repurchases or issuances.	No prescribed capital actions. Banks and thrifts should use capital actions consistent with the scenario and their internal business practices.
<b>Public disclosure of company-run stress tests</b>	Disclosure must include information on stress tests conducted by subsidiaries subject to DFA stress tests.	Disclosure requirement met when parent company disclosure includes the required information on the bank or thrift’s stress test results, unless the company’s primary regulator determines that the disclosure at the holding company level does not adequately capture the potential impact of the scenarios on the capital of the company.