January 19, 2018

Ann E. Misback, Secretary
Board of Governors of the Federal Reserve System
20th Street and Constitution Avenue NW
Washington, DC 20551

VIA ELECTRONIC MAIL: regs.comments@federalreserve.gov

Re: Docket No. OP-1586: Enhanced Disclosure of the Models Used in the Federal Reserve's Supervisory Stress Test; Docket No. OP-1587: Stress Testing Policy Statement; and Docket No. OP-1588: Policy Statement on the Scenario Design Framework for Stress Testing (collectively, the "**Proposals**")

Dear Ms. Misback:

The Committee on Capital Markets Regulation (the "**Committee**") is grateful for the opportunity to comment on the Federal Reserve System's (the "**Fed**") Proposals to: enhance disclosure of the models used in the Fed's annual supervisory stress tests (Docket No. OP-1586, the "**Model Disclosure Proposal**")[1]; adopt a policy statement on the development, implementation, and validation of models used in the stress tests (Docket No. OP-1587, the "**Model Policy Statement Proposal**")[2]; and amend its policy statement on the scenario design framework for the stress tests (Docket No. OP-1588, the "**Scenario Design Framework Amendment Proposal**").[3]

Founded in 2006, the Committee is dedicated to enhancing the competitiveness of U.S. capital markets and ensuring the stability of the U.S. financial system. Our membership includes thirty-eight leaders drawn from the finance, investment, business, law, accounting, and academic communities. The Committee is chaired jointly by R. Glenn Hubbard (Dean, Columbia Business School) and John L. Thornton (Chairman, The Brookings Institution) and directed by Hal S. Scott (Nomura Professor and Director of the Program on International Financial Systems, Harvard Law School). The Committee is an independent and nonpartisan 501(c)(3) research organization, financed by contributions from individuals, foundations, and corporations.

The Proposals are aimed at increasing the "transparency of [the Fed's] stress testing program while maintaining [its] ability to test the resilience of the nation's largest and most

[1] 82 Fed. Reg. 59,547 (Dec. 15, 2017).
[2] 82 Fed. Reg. 59,528 (Dec. 15, 2017).
[3] 82 Fed. Reg. 59,533 (Dec. 15, 2017).

complex banks."[4] The Committee commends the Fed for undertaking efforts to provide more transparency and additional disclosure about the scenarios (i.e., assumptions about the hypothetical stressful economic and financial market conditions banks may face on a going-forward basis) and models (i.e., statistical formulas for ultimately projecting a bank's estimated capital ratio given the applicable scenario and bank-specific inputs) used in its annual supervisory stress tests. As the Fed has noted in the Proposals, increased transparency can enhance the credibility of the stress tests, facilitate public feedback and input, and better help the public understand and interpret the results of the stress tests.[5] Those are all important objectives given the critical importance of the scenarios and models to results of the stress tests, which act as *de facto* capital constraints.

The Committee, however, does not believe that the Proposals go far enough because they do not provide the public the opportunity to comment on the scenarios and models before they are finalized and applied in the annual stress tests, and because the Proposals do not adequately explain why the models cannot be fully disclosed. As the Committee asserted in a September 2016 report, the opaque process through which the scenarios and models are developed could be subject to legal challenge for violating the Administrative Procedure Act's requirement that agency rules be subject to public notice and comment.[6]

These Proposals do not eliminate the potential for legal challenges under the APA. Moreover, to the extent legitimate reasons exist for not fully disclosing the models, the Fed's Proposals do not sufficiently evaluate whether those reasons are sufficiently valid or could be ameliorated in a manner that could allow for more complete disclosure. The Committee also believes that the Fed should consider whether adopting processes similar to those used by the Bank of England to develop scenarios and models could increase the transparency, predictability, and robustness of the Fed-run stress tests. Specifically, the Fed should (a) consider implementing a marginal approach to scenario design that uses the prior year's scenarios as a starting point and then explains the reasons why changes were made in the current year, and (b) analyze whether bank-developed models could serve a key role in the stress tests rather than exclusive reliance on Fed models.

In this comment letter, we first summarize why the scenarios and models are susceptible to legal challenges under the APA's procedural requirements. Second, we explain why the Proposals do not alleviate the policy concerns with respect to the scenarios. Third, we discuss why we believe the Fed should give more consideration to fully disclosing the models.

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[4] FED. RESERVE, *Federal Reserve board requests comment on package of proposals that would increase the transparency of its stress testing program* (Dec. 7, 2017), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20171207a.htm.

[5] 82 Fed Reg. at 59,531, 59,547.

[6] COMM. ON CAPITAL MKTS. REGULATION, THE ADMINISTRATIVE PROCEDURE ACT AND FEDERAL RESERVE STRESS TESTS: ENHANCING TRANSPARENCY (Sept. 2016), http://www.capmktsreg.org/wp-content/uploads/2016/10/Final_APA_Fed_Stress_Test_Statement1.pdf (Deutsche Bank and ICBA dissented from the report).

A. *The Scenarios and Models Are Susceptible to Legal Challenge if not Subject to Public Notice and Comment*

In September 2016, the Committee issued a report concerning the lack of transparency surrounding the Fed's stress tests, particularly about the development of the scenarios and the use of the Fed models used in conducting them (the "**Committee's Report**"). We noted that neither the scenarios nor models are subject to public notice and comment before they are applied by the Fed in the annual stress test exercises. Instead, the scenarios, while publicly disclosed, are published as a *fait accompli*.[7] And the models are only broadly disclosed in qualitative terms in an appendix to the publicly released stress tests results, while the details of the models are kept confidential and secret.[8]

From a legal perspective, the fact that the scenarios and models are developed behind the scenes without general public input is problematic because the stress tests could be invalidated under the Administrative Procedure Act of 1946 (the "**APA**"). The APA generally requires that agency rules be subject to public notice and comment before being finalized and be published once finalized.[9] If APA procedural requirements are not satisfied, then the agency action can be challenged before a federal court and reversed.[10]

The Committee's Report explained that there is a significant chance that the scenarios and models could be classified as agency rules covered by the APA's procedural requirements and susceptible to challenge. Agency rules are understood to be agency actions that regulate future conduct and are primarily concerned with policy considerations.[11] The scenarios and models should be categorized as rules, in the Committee's view, because: (a) the scenarios represent uniform macroeconomic assumptions and the models represent predicted responses to those conditions that are applied uniformly to the banks subject to the stress tests; (b) the scenarios and models have future effect through their significant influence over whether a bank will have a high enough projected capital ratio to pass the stress test and thus be permitted to make dividend payments or engage in stock buybacks; and (c) the scenarios and models operate to implement *de facto* capital requirements for banks (and in almost all instances are the binding constraints on a bank's required amount of capital). Because the scenarios and models are developed in advance of and separately from the Fed's ultimate determination of whether a bank has sufficient capital based on the results of a stress test, they function as rules that are pre-determined and consistently applied across banks. They function no less as rules than do the capital ratio requirements used in the stress tests, which the Fed treats (appropriately) as rules.[12] Thus, a legitimate case exists that the scenarios and models should be subject to public notice and comment and fully disclosed.

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[7] *Id.* at 6.
[8] *Id.* at 7-8.
[9] 5 U.S.C. § 553, *id.* § 552(a)(1)(D).
[10] *Id.* § 706(2).
[11] U.S. DEP'T OF JUSTICE, ATTORNEY GENERAL MANUAL ON THE ADMINISTRATIVE PROCEDURE ACT 14-15 (1947); *see also* United States v. Florida E. C. R. Co., 410 U.S. 224, 245 (1973).
[12] COMM. ON CAPITAL MKTS. REGULATION, *supra* note 6, at 13.

The Committee's Report acknowledged that there may be valid grounds for keeping the models secret. Specifically, the Fed has asserted that full disclosure of the models could result in gaming of the stress tests. Yet, other than general assertions, the Fed had not presented a robust analysis to justify the claim and the Committee recommended that the Fed conduct a public analysis of that possibility and subject the analysis to public notice and comment.[13] This still has not been done.

None of the Proposals relating to increased transparency surrounding the scenarios or models provide for a public notice and comment process as individual scenarios are developed or as models are built or modified. Specifically, the Fed's Scenario Design Framework Amendment Proposal only modifies the existing scenario design framework to provide additional public guidance about how the unemployment rate and changes in house prices used in the scenarios will be determined.[14] However, it does not modify the existing framework to provide for a process for the public to be able to comment on the specifics of the scenarios developed each year. Likewise, the Fed's Model Policy Statement Proposal and Model Disclosure Proposal do not establish any public notice and comment process on the specifics of the models.

From a policy perspective, the lack of transparency and public participation in the development of scenarios and models is concerning because it deprives the Fed of the information, analyses, and knowledge that the public could provide to ensure the scenarios and models were as valid and robust as possible. It also threatens to undermine public confidence in the stress tests. Those concerns are particularly acute with respect to these important components of stress tests because of the extraordinary impact passing or failing a stress test has on a bank's operations, including its ability to pay dividends to shareholders or buyback stock.

B. *The Fed's Discretion Reinforces the Importance of the Fed Establishing a Notice and Comment Process for the Scenarios*

Public input on the scenarios is especially important every year because the scenarios are not static and can change each year. For example, the Fed's own scenario design framework states that the economic variables included in the scenarios can change over time, the relationship between macroeconomic variables can change over time, and some variables require the Fed to apply informed judgment about the appropriate value or path.[15] In addition, the Fed has stated it may be necessary to add particularly salient risks to the scenarios in a given year, which would thus change over time.[16]

The Fed clearly has significant discretion each year as to the variables to include in the scenarios and the values to assign to various economic variables. While the scenario design framework provides some insight into the scenario design process, it does not bind or constrain the Fed. And, while the scenario design framework states that the Fed will

[13] *Id.* at 21-22.
[14] 82 Fed. Reg. at 59,536-37.
[15] *Id.* at 59,540-41.
[16] *Id.* at 59,543.

gather and consider information from academics, forecasters, private-sector analysts, and others before it publishes the scenarios, that process is not transparent, and the Fed does not provide a mechanism for the public to review, critique, and comment on the reasonableness or coherence of proposed scenarios before they are final.[17]

The Committee continues to recommend that the Fed develop a process to subject scenarios to public notice and comment and take into account any public comments before the scenarios are finalized each year. The Fed has not stated that an annual public and notice comment process would not be feasible, but to the extent it might not be, policymakers could consider a two-year stress testing cycle to enable greater public input and participation.

Moreover, the Committee believes that the scenario design and public comment process could be streamlined if the Fed adopted an approach similar to that used by the Bank of England. Specifically, the Bank of England takes a marginal approach, which means that that the scenarios are modified from the prior year, based on macroeconomic changes, thus making them more predictable. Such an approach would limit the changes that the public would need to evaluate each year. In addition, it could help prevent the unnecessary and economically detrimental over-hoarding of capital that can result from uncertainty about the scenarios to be included in the stress tests.

C. *The Proposals Do Not Adequately Justify Why the Models Cannot Be Fully Disclosed*

The Fed's Model Policy Statement Proposal and Model Disclosure Proposal take important and commendable steps to increase transparency surrounding the models used in the Fed-run stress tests. The Model Policy Statement Proposal discloses seven principles that the Fed considers when developing models,[18] discloses important policies,[19] and explains how the models are independently and comprehensively validated.[20] The Model Disclosure Proposal details how the Fed will increase the level of detail provided in the qualitative description of the models in the annual stress tests results release, disclose estimated loss rates for groups of loans derived from the Fed's models, and publish a portfolio of hypothetical loans with associated loss rates derived from the Fed's models.[21]

The Committee believes those are important and productive steps. The Model Policy Statement Proposal provides more insight into how the Fed thinks about developing

[17] *Id.* at 59,546.

[18] The models used in the stress tests are designed to result in projections that are: (1) developed independently; (2) forward-looking; (3) consistent and comparable across firms; (4) generated using simple approaches where possible; (5) robust and stable; (6) conservative; and (7) focus on the ability to capture the impact of economic stress. 82 Fed. Reg. at 59,530.

[19] These include ensuring soundness in model design, the disclosure of the same information to firms and the public about the results and other information related to stress tests, and how the Fed will deal with mussing or erroneous data provided by firms, among other things. *Id.* at 59,531-33.

[20] The Fed explains that an independent unit of validation staff works with an advisory council of academic experts to validate models, that validators and model development teams are kept separate and independent, and that the model validation program employs technically expert staff. *Id.* at 59,533.

[21] *Id.* at 59,548.

its models, the considerations it views as most salient, and provides some assurances about the Fed's existing internal systems that attempt to ensure the soundness and robustness of the models. The Model Disclosure Proposal, if implemented, will provide greater granularity about the key variables used in different models, and publishing the Fed's estimated loss rates for groups of loans could allow firms to engage in analyses or evaluations of their portfolios comprised of similar loan types to estimate how they might perform under the Fed's model.

However, none of the Proposals would result in the full disclosure of the Fed's models. Absent a sufficiently supported justification, models should be fully disclosed to improve transparency, public confidence, and the ability of stakeholders to provide input, feedback, and recommendations. Although the Committee's Report acknowledged that there could be legal or policy reasons for keeping the models confidential, the Committee recommended that the Fed conduct a public analysis of whether there were legitimate grounds to do so.[22] The Fed's Proposals do not provide an adequate analysis or justification for keeping the models secret.

The Fed's Proposals identify two reasons for keeping the models confidential. First, that full disclosure could result in the gaming of the stress tests. In the Fed's words, this would occur if, "firms . . . [used the models] to make modifications to their businesses that change the results of the stress tests without changing the risks they face."[23] The Fed has said such behavior could increase correlations in asset holdings across banks.[24] Second, in conducting firm-run stress tests, firms might be incentivized to use models similar to the [Fed's]," which could "create a 'model monoculture,' in which all firms have similar internal stress testing models which may miss key idiosyncratic risks faced by the firms."[25]

As to "gaming," the Vice Chairman for Supervision, Randal Quarles, stated in a recent speech that he was not concerned about that risk because he believes that when people know what the rules are they comply with rules rather than try to break them.[26] Moreover, the Fed's Proposals do not evaluate whether the risk of gaming could be ameliorated through the exercise of its supervisory powers or by adoption of an anti-circumvention rule.[27]

The model monoculture concern could be addressed by conducting the stress tests, like the Bank of England, with the banks' models and then requiring specific modifications

[22] COMM. ON CAPITAL MKTS. REGULATION, *supra* note 6, at 22-23.
[23] 82 Fed. Reg. at 59,548.
[24] *Id.*
[25] *Id.*
[26] Ryan Tracy, *Quarles: Fed to Propose More Transparent Bank Stress Tests*, WALL ST. J. (Dec. 1, 2017), https://www.wsj.com/articles/quarles-fed-to-propose-more-transparent-bank-stress-tests-1512176369.
[27] A research paper out of the Federal Reserve Bank of Philadelphia also states that any risk of "gaming" can potentially be outweighed by the ability of banks to more optimally invest in socially desirable assets if they understand how the models work. Yaron Leitner & Basil Williams, Model Secrecy and Stress Tests, Working Paper No. 17-41 (Nov. 2017), https://www.philadelphiafed.org/-/media/research-and-data/publications/working-papers/2017/wp17-41.pdf. The Fed's Proposals do not evaluate whether the potential benefits of disclosure could outweigh the risks of disclosure.

in a specific bank's models where they materially deviate without a justifiable reason from the models of their peers or of the Fed's own models.[28] The Fed, again like the Bank of England, could discuss the need for adjustments with each bank, and if necessary order banks to change their models. This approach would allow the Fed to exercise oversight and some control over models where convergence may be warranted while also creating an environment in which a diverse set of models can be developed, recognizing that no one bank or the government has the answer as to how to assess risk. Importantly, such an approach would reduce the concentrated dependence on the Fed's own models on stress test outcomes.

More generally, we also believe that using bank models instead of relying on the Fed's models would improve the stress testing process. For example, banks' models can be developed to capture idiosyncratic risks in individual banks' portfolios. An approach more reflective of banks' businesses and idiosyncratic risks could better promote lending, investment, and the efficient allocation of capital.

D. Conclusion

The Committee believes that the development of the scenarios and models should be as transparent as possible and that they should be subject to a public notice and comment process before they are finalized and applied in each year's round of stress tests. To do otherwise risks subjecting the Fed's scenarios and models to legal challenge. A successful challenge could disrupt an important exercise that enhances the safety, soundness, and stability of the financial system. Moreover, greater public participation should provide the Fed with more information, perspectives, and analysis, allowing it to challenge its own assumptions and develop more robust and sound scenarios and models.

Thus, while the Committee commends the Fed for engaging in a process to increase transparency, we believe more can and should be done. We recommend that the Fed subject the scenarios to public notice and comment each year and consider implementing a marginal approach to scenario changes from year to year. We also recommend that the Fed conduct a more thorough and robust analysis about the extent to which the models can be fully disclosed and evaluate whether using bank models as a starting point for stress testing analyses could increase transparency and ensure the existence of a multitude of independently developed models, and thus avoid undesirable convergence of risk-taking.

More generally, while not addressed by the Proposals, the Committee wishes to use this opportunity to reiterate its previously communicated view that the surcharge applied

[28] Rohan Churm, *Presentation: Stress Test Modeling at the Bank of England: Past, Present and Future* 14-15 (Mar. 9, 2017), https://bfi.uchicago.edu/sites/default/files/file_uploads/Stress-Test-Modeling-BOE-Churm.pdf; *The Bank of England's Approach to Stress Testing the U.K. Banking System* 15-16 (Oct. 2015), https://www.bankofengland.co.uk/-/media/boe/files/stress-testing/2015/the-boes-approach-to-stress-testing-the-uk-banking-system.pdf?la=en&hash=CF6C217F37C1F8C61655CC1C0FAC5B8DD8B3C88E.

to global systemically important banks ("G-SIBs") should not be included as part of the Fed's stress testing.[29]

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Thank you very much for your consideration of our views. Should you have any questions or concerns, please do not hesitate to contact the Committee's Director, Prof. Hal S. Scott (hscott@law.harvard.edu), or Executive Director of Research, John Gulliver (jgulliver@capmktsreg.org), at your convenience.

Respectfully submitted,

Glenn Hubbard CO-CHAIR	John L. Thornton CO-CHAIR	Hal S. Scott DIRECTOR

[29] Letter from the Comm. on Cap. Markets Regulation to the Board of Governors of the Federal Reserve System (April 1, 2015), http://www.capmktsreg.org/wp-content/uploads/2015/04/04_01_15_G-SIB_capital_surcharge_letter.pdf.