

A Case for Full Model, Scenario and Results Transparency in the Federal Reserve's Stress Testing Process

Randall D. Guynn
Partner and Head of the Financial Institutions Group
Davis Polk & Wardwell LLP

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Full model, scenario and results transparency in the Federal Reserve's stress testing process is essential to the public accountability, political legitimacy and continued independence of the Federal Reserve.

Transparency is essential to the proper functioning of any democratic system of government. The public can't hold their elected representatives accountable without full information about what they're doing and how they're doing it. That's why the lawmaking process in Congress is generally open to the public and why laws enacted by Congress are published. That's why the Administrative Procedure Act requires agencies to subject their rulemaking to public notice and comment, and why regulations are published in the Federal Register. And that's why judicial proceedings are almost always open to the public and final decisions are published.

There are, of course, legitimate exceptions to the strong public interest in transparency. But those exceptions are generally very narrow. For example, Congress has created exceptions from the general presumption in favor of transparency for matters that would compromise

¹ A summary version of this paper was delivered as a response to a discussion paper by Professor Mark Flannery at the Federal Reserve's annual stress-testing conference on July 9, 2019. See Panel Discussion, *Dynamism and Transparency in Stress Testing*, at Conference, Stress Testing: Discussion and Review, Federal Reserve Bank of Boston (July 9, 2019), available [here](#); Mark J. Flannery, *Transparency and Model Evolution in Stress Testing* (June 30, 2019), available [here](#).

national security. If the public believes that Congress or the President are hiding too much information from public scrutiny, the public can replace those representatives in the next election with individuals who are more committed to transparency.

The public interest in transparency is even higher with respect to the actions of unelected representatives such as Federal Reserve principals and staff who are not subject to direct public elections. As a result, robust transparency is especially critical to the public accountability, political legitimacy and continued independence of the Federal Reserve.

Secrecy may be justified at the Federal Reserve or other U.S. banking regulators, but only in exceptional circumstances. In general, secrecy is only justified if it's necessary to prevent a serious, identifiable and immediate public harm such as a financial panic or to encourage regulated firms to voluntarily share proprietary information with the Federal Reserve or other U.S. banking regulators. And those justifications are only persuasive if there is not a more narrowly tailored means other than secrecy to prevent the public or firm-specific harm.

While the U.S. banking regulators have long treated certain information developed in the supervisory process as exempt from the ordinary transparency requirements,² my law partner Meg Tahyar recently argued persuasively in testimony before the Senate Banking Committee that a modern explosion in what has been classified as confidential supervisory information is inconsistent with the rule of law and has made the historic balance between

² Margaret E. Tahyar, *Are Bank Regulators Special?*, Banking Perspectives (The Clearing House Association, 2018).

transparency and secrecy untenable.³ Most of the secrecy is no longer justified by any legitimate need to protect the public against any serious, identifiable or immediate harm or to encourage banks to voluntarily share proprietary information. Instead, its main effect, if not its purpose, seems to be to insulate the supervisory process from public accountability. But this lack of transparency is inconsistent with the rule of law and tends to undermine the public's confidence in the Federal Reserve's supervisory process and, if left unchecked, will eventually undermine the political legitimacy and independence of the Federal Reserve.

As applied to the stress-testing process, these principles mean that the Federal Reserve should provide full transparency into all aspects of its stress-testing operations, unless secrecy is needed to prevent a specific, serious and immediate public harm such as a financial panic or to encourage firms to voluntarily share proprietary information.

To its credit, the Federal Reserve has recently provided substantially more transparency about its supervisory models, scenario design and stress testing results.⁴ But the Federal Reserve has been reluctant to provide full transparency based on a concern that full transparency might undermine the effectiveness of its stress tests.⁵

³ Statement of Margaret E. Tahyar, Guidance, Supervisory Expectations, and the Rule of Law: How Do the Banking Agencies Regulate and Supervise Institutions?, Hearing Before the Senate Committee on Banking, Housing, and Urban Affairs (April 30, 2019).

⁴ See, e.g., Board of Governors of the Federal Reserve System, *Comprehensive Capital Analysis and Review 2019: Assessment Framework and Results* (June 2019); *Dodd-Frank Act Stress Test 2019: Supervisory Stress Test Methodology* (March 2019); *Enhanced Disclosure of the Models Used in the Federal Reserve's Supervisory Stress Test*, Final Notification, 84 Fed. Reg. 6784 (Feb. 28, 2019); *Policy Statement on the Scenario Design Framework for Stress Testing*, 12 C.F.R. Part 252, Appendix A; *Amendments to Policy Statement on the Scenario Design Framework for Stress Testing*, Final Rule, 84 Fed. Reg. 6651 (Feb. 28, 2019); *Stress Testing Policy Statement*, Final Rule, 84 Fed. Reg. 6664 (Feb. 28, 2019).

⁵ See, e.g., Board of Governors of the Federal Reserve System, *Enhanced Disclosure of the Models Used in the Federal Reserve's Supervisory Stress Test*, Final Notification, 84 Fed. Reg. 6784, 6785, 6786 (Feb. 28, 2019).

In their papers, Professors Feldberg, Metrick and Flannery all seem to support this reluctance and to be against any further model or scenario transparency, and question the wisdom of some of the transparency already provided.⁶

Feldberg and Metrick distinguish between inputs and outputs transparency.⁷ They are generally in favor of outputs transparency but against inputs transparency.⁸ Among other problems, they believe that further inputs transparency would enable banks to “game the system.”⁹ This argument is similar to the Federal Reserve’s narrower concern that further model transparency would enable the banks to take actions that would change the results of the stress test without actually changing the risks they face, giving a misleading picture of their actual vulnerabilities.¹⁰

But “gaming” is a loaded word that’s too vague to justify an exception to the strong presumption in favor of transparency. Much of what is labeled as gaming is indistinguishable from compliance. For example, when the posted speed limit is 75 and you observe cars driving at 74.9 or even 79.9 on average, is that gaming or compliance? You say to-may-toe; I say to-maw-toe.

The Federal Reserve’s narrower justification for secrecy based on a specific form of gaming is more persuasive, but it’s not persuasive enough to overcome the strong presumption in favor of transparency. There’s a more narrowly tailored means other than secrecy that can effectively deter banks from engaging in such manipulative behavior. The Federal Reserve can

⁶ Flannery, Greg Feldberg & Andrew Metrick, *Stress Tests and Policy* (June 11, 2019), available [here](#); Mark J. Flannery, *Transparency and Model Evolution in Stress Testing* (June 30, 2019), available [here](#).

⁷ Feldberg & Metrick, p. 4.

⁸ *Id.*

⁹ *Id.*

¹⁰ Board of Governors of the Federal Reserve System, *Enhanced Disclosure of the Models Used in the Federal Reserve’s Supervisory Stress Test*, Final Notification, 84 Fed. Reg. 6784, 6785 (Feb. 28, 2019).

issue a regulation against specific forms of gaming and impose penalties for failure to comply with that regulation in the form of matters requiring attention (MRAs), matters requiring immediate attention (MRIAs), downgrades of supervisory ratings, delays in upgrading supervisory ratings, enforcement actions or even civil money penalties if it detects such gaming.

Like Professors Feldberg and Metrick, Professor Flannery is generally against any further model or scenario transparency and even describes the Federal Reserve's recent disclosures about loss rates as "the beginning of a slippery slope" toward the disclosure of equations and parameters.¹¹

His first argument is that the benefits of further model transparency would not be significant to the banks because they "are [already] pretty good at predicting required capital."¹² But that description of the public benefits of further model transparency is too narrow. Rather than focusing narrowly on the benefits to the banks, the focus should be on the benefits to the broader public, including the banks, academic experts, members of Congress and the Federal Reserve itself. Such a broader view would show that the benefits include:

- Making the Federal Reserve's stress-testing process more accountable to the public, thereby promoting and preserving the Federal Reserve's political legitimacy and independence.
- Giving the public, including academic and industry experts, sufficient information to perform an effective evaluation of the strengths and weaknesses of the Federal Reserve's supervisory models.

¹¹ Flannery, p. 12.

¹² Flannery, p. 8.

- Giving the Federal Reserve the benefit of more informed, credible challenge from the public, which should help it identify and correct weaknesses in both its supervisory models and the firms' company models.
- Increasing public confidence in the stress tests.
- Helping the banks better understand the capital implications of their business decisions before they make them.

Professor Flannery's second argument is that greater model transparency "would substantially reduce the regulatory value of stress tests and impede their dynamism."¹³ He also implicitly argues that subjecting the Federal Reserve's supervisory scenarios to public notice and comment would produce the same adverse effects.¹⁴ As evidence for these assertions, he cites ineffective stress tests by the Office of Federal Housing Enterprise Oversight (OFHEO) of Fannie Mae and Freddie Mac on the eve of the 2008 financial crisis.¹⁵ According to one study, those tests were ineffective because OFHEO was required to provide full model and scenario transparency through a formal public notice and comment process.¹⁶ That process was so slow and costly that it deterred OFHEO from updating its supervisory models or data in a timely manner, thereby reducing the dynamism and regulatory value of its stress test.¹⁷

But this example is insufficient to overcome the strong presumption in favor of transparency. The OFHEO example does not provide a persuasive reason for assuming that the Federal Reserve would fail to update its models and data promptly if it provided full model or

¹³ Flannery, p. 12.

¹⁴ Flannery, p. 16.

¹⁵ Flannery, pp. 8-10.

¹⁶ See Flannery, p. 9, citing W. Scott Frame, Kristopher Gerardi & Paul S. Willen, *The Failure of Supervisory Stress Testing: Fannie Mae, Freddie Mac and OFHEO*, Federal Reserve Bank of Atlanta, Working Paper (March 2015), available [here](#).

¹⁷ Flannery, p. 8-10.

scenario transparency or solicited public comment on its supervisory scenarios. OFHEO was widely considered to be a weak regulator, like the Office of Thrift Supervision (OTS), and was therefore abolished and replaced by the Federal Housing Finance Authority (FHFA) on the eve of the financial crisis. The most logical explanation for OFHEO's failure to update its supervisory models or data was its lack of backbone as a regulator, not the model or scenario transparency requirements to which it was subject.

In contrast, the Federal Reserve is a strong regulator and would not lack the backbone to promptly update its models and data merely because it received resistance from the banks or other members of the public if it subjected its models and scenarios to public notice and comment. Similarly, there's no reason to assume the Federal Reserve couldn't limit the public notice and comment period for its supervisory scenarios to 30 days, or in emergencies even a shorter period, and promptly proceed with its scenarios as proposed or quickly adjust them, depending on the quality and nature of the comments and its own independent judgment. Moreover, the Federal Reserve is likely to benefit from comments on its proposed scenarios, such as whether they are likely to have a disproportionate impact on some subset of covered banks, such as the trading banks, commercial banks or custody banks, which the Federal Reserve may have miscalculated or overlooked. It's better for the Federal Reserve to be aware of this disparate impact in advance rather than to walk into a stress test blindly.

Professor Flannery's third argument is that increased model transparency could result in a model monoculture that could lead to an increased correlation of assets, making the financial

system more vulnerable to adverse shocks.¹⁸ This reason is also insufficient to overcome the strong presumption in favor of transparency.

First, since the Federal Reserve's supervisory model determines each bank's minimum capital requirements, we already have a single model that creates incentives for increased asset correlation. But contrary to conventional wisdom, that bias is a one-way bias in favor of lower-risk assets rather than higher-risk assets, as long as the chief risk officers (CROs) of the banks genuinely believe that their proprietary models are more accurate than the Federal Reserve's supervisory models.

For example, suppose that the Federal Reserve's supervisory model says that a particular category of assets is more risky than a bank's proprietary model and therefore results in a higher capital charge than the bank would otherwise allocate to those assets based on its proprietary model. The bank will respond to the higher capital charge by reducing its exposure to that category of assets. Now suppose that the Federal Reserve's supervisory model says that a particular category of assets is less risky than a bank's proprietary model and therefore results in a lower capital charge than the bank would otherwise allocate to those assets based on its proprietary model. Will the bank respond to the lower capital charge by increasing its exposure to this category of assets? No it won't, as long as it is a rational wealth maximizer and its CRO genuinely believes that its own model is more accurate than the Federal Reserve's supervisory model and that the supervisory process generally rewards conservatism.

In short, any rational bank will follow the more conservative of the two models, if those assumptions are true, which is highly likely. Thus, any further model monoculture produced by

¹⁸ Flannery, p. 8. See also Feldberg & Metrick, p. 4.

full model transparency is likely to lead to increased herding in low-risk assets not high-risk assets.

Moreover, if herding in low-risk assets is undesirable because it reduces asset diversification or pushes high-risk assets into the shadow banking system, the banks' different business models should lean against such herding. This is because the banks will respond differently to the same capital charges for a particular category of assets depending on their business model—i.e., whether they are trading banks, commercial banks, custody banks or some other category of banks.

Finally, the Federal Reserve has a more narrowly tailored means other than model secrecy to deter herding even in low-risk assets: if it observes such behavior, it can impose capital surcharges on that category of assets to encourage an appropriate level of diversification.

Professor Flannery's final argument is that increased scenario transparency in the form of disclosing details about the annual global market shock before the "as of" date would enable banks to enter into strategic hedges to reduce the impact of the global market shock on the "as of" date and then strategically remove the hedge immediately afterward.¹⁹ Such window dressing would undermine the effectiveness of the Federal Reserve's stress test if banks could engage in such behavior without detection or consequences. But because it should be easy for the Federal Reserve to detect and deter such behavior through the imposition of penalties in the form of MRAs, MRIAs, rating downgrades, delays in rating upgrades, enforcement actions

¹⁹ Flannery paper, p. 17.

or civil money penalties, this argument is not sufficient to overcome the strong presumption in favor of transparency.

Nevertheless, because the purpose of the global market shock is to test a bank's resiliency against an unexpected market shock, it would be unrealistic to disclose the global market shock before the "as of" date. Thus, the Federal Reserve would be justified in keeping that information secret until after the "as of" date.

In conclusion, the Federal Reserve should provide full model, scenario and results transparency to the public, unless it can show that such transparency would result in a serious, specific and immediate harm to the public such as a material increase in the risk of a financial panic or would deter banks from voluntarily sharing proprietary information with the Federal Reserve that is important for the Federal Reserve to know in order to carry out its statutory duties. Transparency is essential to the public accountability, political legitimacy and continued independence of the Federal Reserve. Failure to provide such transparency in the absence of such a justification will undermine the ability of the public to hold the Federal Reserve accountable for its actions or omissions and, if left unchecked, will undermine the political legitimacy and continued independence of the Federal Reserve.