The Clearing House
At the Center of Banking Since 1853®

March 23, 2018

Via Electronic Mail

Basel Committee on Banking Supervision
Bank for International Settlements
CH-4002 Basel Switzerland

Re: Consultative Document – Stress testing principles (December 2017)

Ladies and Gentlemen:

The Clearing House Association L.L.C.[1] appreciates the opportunity to comment on the Basel Committee on Banking Supervision's December 2017 consultative document[2] that would revise the Basel Committee's May 2009 stress testing principles.

The Clearing House strongly supports the maintenance of robust capital and liquidity by all banks as an essential tool for promoting safety and soundness and has long been supportive of stress testing and long argued that regulatory requirements should be appropriately tailored to the relative risk profile, business model, and other risk-related criteria of the banks subject to such requirements.

We therefore strongly support the proposal's articulation of stress testing principles that are more streamlined and stated at a higher level than the existing principles, intended not to impede innovation in stress testing, and designed to be more robust as stress testing develops over time. We also believe it is wholly appropriate that the proposed principles would expressly apply not only to banks, but also to those regulatory authorities that conduct stress tests. In

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[1] The Clearing House is a banking association and payments company that is owned by the largest commercial banks and dates back to 1853. The Clearing House Association L.L.C. is a nonpartisan organization that engages in research, analysis, advocacy and litigation focused on financial regulation that supports a safe, sound and competitive banking system. Its affiliate, The Clearing House Payments Company L.L.C., owns and operates core payments system infrastructure in the United States and is currently working to modernize that infrastructure by building a new, ubiquitous, real-time payment system. The Payments Company is the only private-sector ACH and wire operator in the United States, clearing and settling nearly $2 trillion in U.S. dollar payments each day, representing half of all commercial ACH and wire volume.

[2] Basel Committee, Consultative Document: *Stress testing principles* (December 2017), *available at* https://www.bis.org/bcbs/publ/d428.pdf.

particular, we wholly endorse the Basel Committee's statement that the principles are "intended to be applied on a proportionate basis, depending on size, complexity and risk profile of the bank or banking sector for which the authority is responsible."[3]

Similarly, we welcome the proposed principles' consistent recognition that it is appropriate for senior management to have responsibility for approval, implementation, review and challenge processes in connection with stress testing, with a bank's board having ultimate oversight for the bank's overall stress testing framework. We likewise welcome the Basel Committee's statement that authorities should have a "comprehensive governance structure for all aspects of their stress testing framework [that] is formulated by key stakeholders."[4] Finally, we appreciate the Basel Committee's recognition of the impact of regulatory reporting and data requirements on banks and strongly support its statement that "[a]uthorities should leverage, to the extent possible, data that are already provided by banks to authorities, such as through banks' regular supervisory reporting."[5]

This comment letter provides recommendations that we believe would further the Basel Committee's objectives, and in particular its desire to articulate principles that are "more enduring and less dependent on the current context of stress testing."[6] To that end, we offer six key recommendations:

- The principles should reflect that capital and liquidity stress testing are distinct, but complementary, exercises.
- The principles should identify key "stakeholders" with respect to supervisory stress tests and expressly identify banks and members of the public, such as investors and academics, as such key stakeholders.
- The principles should provide guidance on the use of supervisory stress tests to establish capital or liquidity requirements.
- The principles should further delineate the roles and responsibilities of a bank's board of directors and senior management in connection with stress testing.
- The principles should note that the frequency of stress tests should reflect the relative intensity of the stress test and that stress tests with varying degrees of intensity should occur with varying frequency.
- The principles should discuss practices that may make models and methodologies not fit for purpose.

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3 *Id.*, at 6.

4 *Id.*, at 8.

5 *Id.*, at 12.

6 *Id.*, at 5.

I. The principles should reflect that capital and liquidity stress testing are distinct, but complementary, exercises.

The principles would apply to both capital and liquidity stress testing. For example, the additional points for banks and authorities regarding Principle 1 (*Stress Testing Frameworks Should Have Clearly Articulated and Formally Adopted Objectives*) note that stress tests may, for banks, "inform capital and liquidity planning" and, for authorities, relate to "assessing the adequacy of levels of capital or liquidity of supervised banks."[7] The principles do not, however, address the interrelationship between capital and liquidity stress testing. Indeed, the only discussion of the relationship between capital and liquidity appears in the discussion accompanying Principle 7 (*Models and Methodologies to Assess the Impacts of Scenarios and Sensitivities Should be Fit for Purpose*), which notes, "The modelling choices and calibration decisions should consider the interactions between different risk types, as well as the linkages between models. In this regard, the links between solvency and liquidity stresses should be considered."[8]

Although liquidity and funding risks are relevant considerations in the context of a capital stress test,[9] and capital adequacy is likewise a relevant consideration in the context of a liquidity stress test,[10] capital and liquidity stress tests are and should remain separate exercises. Indeed, the differences in the relevant horizons are illustrative of the fundamental differences between capital and liquidity stress testing. The time horizon for capital stress testing typically spans multiple years.[11] In contrast, the time horizon for liquidity stress testing is almost always much shorter,[12] in some cases even intraday or overnight.

The principles should be revised to expressly recognize that capital and liquidity stress testing are distinct exercises and that it is entirely appropriate for banks and authorities to conduct capital stress tests separate from liquidity stress tests.

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7 *Id.*, at 7.

8 *Id.*, at 12.

9 For example, liquidity and funding risks can affect interest expense, which, in turn, would affect net income and capital levels. We note that such risks are currently reflected in U.S. supervisory stress testing through the Federal Reserve's models for pre-provision net revenues, which model five components of interest expense using various macroeconomic variables. *See* Federal Reserve, *Dodd-Frank Act Stress Test 2017: Supervisory Stress Tests Methodology and Results* (June 2017) (hereafter, the "2017 DFAST Results"), at 70 and 71, *available at* https://www.federalreserve.gov/publications/files/2017-dfast-methodology-results-20170622.pdf.

10 For example, market perceptions of a bank's capital adequacy can result in funding stress.

11 *See*, *e.g.*, 12 C.F.R. §§ 252.12(k), 252.42(j) and 252.52(k) (defining the planning horizon for DFAST as a "period of at least nine consecutive quarters"); *see also* Basel Committee, *Supervisory and bank stress testing: range of practices* (December 2017), at 7 ("The typical time horizon used by supervisors for a stress test scenario is two to three years. A small minority use a four to five year test horizon."), *available at* https://www.bis.org/bcbs/publ/d427.pdf.

12 *See*, *e.g.*, 12 C.F.R. §§ 252.35(a)(4) and 252.157(a)(4) (requiring overnight, 30-day, 90-day and one-year planning horizons for liquidity stress tests).

In addition, in light of the fundamental distinctions between capital and liquidity stress testing, the principles should note that where authorities seek to incorporate liquidity- and funding-related risks in capital stress tests (or capital-related risks in liquidity stress tests), the authorities should consider, and seek the views of internal and external stakeholders on, the effects of incorporating such risks on the design, calibration, coherence and plausibility of the stress scenarios used in the stress tests. The principles should also encourage authorities to consider whether the incorporation of such risks into a particular stress testing exercise would make the exercise duplicative of other stress tests with regard to the risks that are captured and the nature of the stresses applied.

II. The principles should identify key "stakeholders" with respect to supervisory stress tests and expressly identify banks and members of the public, such as investors and academics, as such key stakeholders.

The principles contain a number of references to "stakeholders" and the importance of consultation and communication among stakeholders. For example, Principle 2 (*Stress Testing Frameworks Should Include an Effective Governance Structure*) notes, "The stress testing framework should also ensure collaboration of all necessary stakeholders and the appropriate communication to stakeholders of the stress testing assumptions, methodologies, scenarios and results."[13] Similarly, Principle 9 (*Stress Testing Practices and Findings Should be Communicated within and across Jurisdictions*) notes, "[c]ommunication of stress testing activities across relevant internal and external stakeholders can have benefits for both banks and supervisors."[14] For banks, the principles at times distinguish between internal and external stakeholders, specifically providing that supervisors are external stakeholders.[15] The principles do not, however, identify relevant external stakeholders for supervisors.

As we have previously described,[16] transparent practices and processes that involve consultation and communication between banks and supervisors are essential to producing regulatory frameworks and outcomes that are better crafted, less uncertain, and more credible. Accordingly, we urge the Basel Committee to revise the principles to expressly identify key external stakeholders for authorities with respect to supervisory stress tests, including banks and other members of the public, such as investors and academics. Recognizing the status of banks

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[13] Consultative Document, at 7. The additional points for supervisors further note that "[a]uthorities should ensure that a comprehensive governance structure for all aspects of their stress testing framework is formulated by key stakeholders" and that the process should document, among other things "the nature and frequency of the communication of the results." *Id.*, at 8.

[14] *Id.*, at 14.

[15] *See id.*, at 10 ("This design process must be transparent to internal and relevant external stakeholders (such as the banks' supervisors).") and 12 ("The documentation of models used for stress testing, including performance testing, should be maintained and made available to senior management and other internal and external stakeholders, such as supervisors.").

[16] *See, e.g.*, The Clearing House, *Comment Letter re: Stress Testing Transparency Proposals (Dockets Nos. OP-1586, OP-1587 and OP-1588)* (January 22, 2018), *available at* https://www.theclearinghouse.org/-/media/tch/documents/tch%20weekly/2018/20180122_tch_comment_letter_re_stress_testing_transparency.pdf?la=en (the "Stress Testing Transparency Comment Letter").

and other members of the public as such key external stakeholders would further the Basel Committee's objectives. In particular, such recognition would promote consultation and communication among banks, other relevant members of the public and authorities, which would in turn facilitate (i) the development of supervisory stress testing models and methodologies that are fit for purpose, (ii) the design and application of supervisory stress testing frameworks through transparent processes, and (iii) more credible, informative and useful stress test results.

III. The principles should provide guidance on the use of supervisory stress tests to establish capital or liquidity requirements.

We strongly support the statement that stress test "scenarios should be sufficiently severe but plausible,"[17] as well as the statements addressing the importance of the relevance of economic stress scenarios.[18] Relevance and plausibility are mutually reinforcing concepts; a relevant economic stress scenario is more likely to be plausible, and a plausible economic stress scenario is more likely to be relevant. Further, plausibility is central to producing stress test results that provide credible and useful information to supervisors and banks, as well as other relevant members of the public. Indeed, plausibility is of even greater importance where authorities use supervisory stress tests to establish minimum capital or liquidity requirements. The use of implausible scenarios or modelling assumptions to establish minimum capital or liquidity requirements necessarily results in the miscalibration of those requirements.

For example, for U.S. banks with assets of $50 billion or more, the Federal Reserve's CCAR stress tests typically determine banks' binding capital constraints.[19] CCAR bases outcomes (and, therefore, banks' de facto minimum capital requirements) on economic scenarios, shocks and modelling assumptions that, in the aggregate, are implausible, duplicative with regard to the risks that are captured and the stresses that are applied, and of limited relevance in light of current and historical economic and market conditions, including during 2008-09. Specifically, CCAR stress tests combine: (i) a severe economic stress scenario, including significant stress in financial markets and an ahistorical rapid increase in unemployment, (ii) unprecedented instantaneous losses as a result of adverse market movements and counterparty defaults that are added on to projected losses based on the economic stress scenario (i.e., the global market shock and counterparty default scenario components); (iii) continued balance-sheet and RWA growth during an economic downturn; and

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17 Consultative Document, at 9.

18 *Id.*, at 9 ("The scenarios and sensitivities that are used in stress tests should be reviewed periodically to ensure that they remain relevant.") and 10 ("When developing stress test scenarios, authorities should take into account identified specific features or vulnerabilities of individual banks (eg their risk profiles and business models) and/or the banking sector as a whole.").

19 *See* The Clearing House, *The Capital Allocation Inherent in the Federal Reserve's Capital Stress Tests* (January 2017), *available at* https://www.theclearinghouse.org/~/media/TCH/Documents/TCH%20WEEKLY/2017/20170130_WP_Implicit_Risk_Weights_in_CCAR.pdf. *See also* Greenwood, Robin, Samuel G. Hanson, Jeremy C. Stein, and Adi Sunderam, *Strengthening and Streamlining Bank Capital Regulation*, Brookings Papers on Economic Activity (forthcoming), *available at* https://scholar.harvard.edu/files/stein/files/brookings-2017-paper.pdf (August 2017). For a detailed discussion of the miscalibrated capital requirements that result from CCAR stress testing, see the Stress Testing Transparency Comment Letter.

(iv) counterfactual and overly conservative capital action assumptions (i.e., that banks will make all of their planned capital distributions no matter how much stress they are under, and even if such distributions would be legally prohibited by the capital buffer framework in the regulatory capital rules).

Supervisory use of implausible, duplicative and overly severe economic stress scenarios and modelling assumptions to set minimum capital and liquidity levels requires banks to hold excessive capital and liquidity against losses that have not been realized and that are extremely unlikely to ever be realized. Such excessive and miscalibrated requirements have adverse real world consequences, including for economic growth and the vibrancy of capital markets.[20]

We urge the Basel Committee to revise the principles to address the interaction among supervisory stress tests, assessments of capital and liquidity adequacy, and the use of supervisory stress tests to establish prudential requirements, such as minimum capital or liquidity levels. In particular, the principles should note the potential adverse effects of implausible, duplicative and overly severe stress scenarios and modelling assumptions, especially where, as in CCAR, stress test results are used to set actual or de facto capital or liquidity requirements.

IV. The principles should further delineate the roles and responsibilities of a bank's board of directors and senior management in connection with stress testing.

We support the Basel Committee's efforts to recognize the different roles of a bank's board of directors and its senior management. The board is responsible for oversight of senior management's design, implementation and application of a stress testing framework. For example, Principle 2 (*Stress Testing Frameworks Should Include an Effective Governance Structure*) provides that: (i) policies and procedures should be approved by the board and/or senior management;[21] (ii) the board should have ultimate responsibility for the overall stress testing framework; (iii) the development and implementation of the framework may be delegated to senior management or a stress testing committee; and (iv) the board or an appropriate senior-level governance body is expected to understand the material aspects of the framework so it can engage with senior management or senior experts responsible for stress testing and challenge modeling assumptions, scenario selection and other assumptions underlying stress tests.[22] Principle 2 thus appropriately reflects the crucial distinction between a board's duty of oversight and senior management's responsibility for the bank's operations and recognizes that

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20 *See* Stress Testing Transparency Comment Letter; *see also* U.S. Department of the Treasury, *A Financial System That Creates Economic Opportunities, Banks and Credit Unions*, Report to President Donald J. Trump, Executive Order 13772 on Core Principles for Regulating the United States Financial System (June 2017), at 37 ("an excess of capital and liquidity in the banking system will detract from the flow of consumer and commercial credit and can inhibit economic growth") and 49 ("the continual ratcheting up of capital requirements is not a costless means of making the banking system safer"), *available at* https://www.treasury.gov/press-center/press-releases/Documents/A%20Financial%20System.pdf.

21 To further the appropriate delineation of the roles of the board and management, the final principles should be revised to reflect that policies should be approved by the board and/or senior management, but that it is the role of senior management, not the board, to approve procedures.

22 Consultative Document, at 7.

responsibility for the design, implementation, application and review and challenge of a stress testing framework appropriately belongs at the senior management, and not board, level.

Principle 2 should also address that the seniority of the individual or body receiving and reviewing information should inform the granularity with which information is provided and the frequency with which information is reviewed. Specifically, Principle 2 should state that the board of directors is expected to receive and review information less frequently than senior management and that the information the board does receive should be aggregated and less granular than that presented to senior management. Principle 2 should also note that the board may review and rely on summaries prepared by management and third-party experts as part of its oversight role.

Finally, the final principles should also clarify that references to the "board" include committees and subcommittees of the board and that the full board may delegate approval and other oversight functions to a committee (or subcommittee) in the appropriate exercise of the board's oversight responsibilities.

V. The principles should note that the frequency of stress tests should reflect the relative intensity of the stress test and that stress tests with varying degrees of intensity should occur with varying frequency.

Principle 3 (*Stress Testing Should be Used as a Risk Management Tool and to Inform Business Decisions*) notes, "To be a meaningful risk management tool, stress tests should be undertaken regularly. . . . The appropriate frequency will depend on several factors, including: the objectives of the stress test framework, the scope of the stress test, the size and complexity of the bank or banking sector, as well as changes in the macroeconomic environment."[23] Principle 3 should also note that (i) another factor informing the appropriate frequency is the intensity of the stress test (i.e., that more intensive exercises should occur with less frequency) and (ii) it may be appropriate to conduct similar stress tests with varying degrees of intensity at different, and potentially staggered, intervals.

VI. The principles should discuss practices that may make models and methodologies not fit for purpose.

Principle 7 (*Models and Methodologies to Assess the Impacts of Scenarios and Sensitivities Should be Fit for Purpose*) provides that: (i) at the modelling stage, the coverage, segmentation and granularity of the data and types of risks should be defined in line with the objectives of the stress testing framework; (ii) the sophistication of the models should be appropriate for both the objectives of the stress tests and the type and materiality of the portfolios to which the models are applied; and (iii) models and other methodologies should be well-justified and documented.[24] We strongly support this guidance and believe it would be beneficial if Principle 7 identified practices that do not promote, and may detract form, the use of models and methodologies that are fit for purposes. For example:

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[23] *Id.*, at 8.

[24] *See id.*, at 12.

- The use of a common set of one-size-fits all supervisory models (e.g., the CCAR models) is inconsistent with fitness for purpose because such models are not sensitive to meaningful variations among banks' businesses and portfolios, and they thus produce results that are imprecise and not representative of the applicable bank's risk profile.[25]

- In the context of supervisor-run stress tests, lack of disclosure of material elements and data underlying the models used in supervisory stress tests, which detracts from the ability of banks and other members of the public (such as academics and investors) to evaluate and make recommendations to promote the robustness of supervisory models.

- In the context of supervisory assessment of bank-run stress tests, the use of horizontal reviews and "peer benchmarking" to assess banks' stress testing models and methodologies would be inconsistent with fitness for purpose to the extent such reviews and benchmarking reduces heterogeneity in banks' stress testing models and detracts from banks' ability to tailor their stress testing models to reflect their own unique experiences, businesses, portfolios and risk profiles.

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The Clearing House appreciates the opportunity to comment on the proposal. If you have any questions, please contact me by phone at 212-612-9211 or by email at Brett.Waxman@theclearinghouse.org.

Respectfully submitted,

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cc: Michael Gibson
Mark Van Der Weide
(Board of Governors of the Federal Reserve System)

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[25] We believe that supervisory models should play a "challenger" role to complement banks' models where stress tests are used to determine de facto minimum capital requirements because banks' models are unique to each bank and, thus, more risk sensitive, more tailored and more precise than supervisory models. For a detailed discussion of the issues relating to the supervisory use of one-size-fits all models, see the Stress Testing Transparency Comment Letter.