# J. Nellie Liang

Senior Fellow, Economic Studies The Brookings Institution 1775 Massachusetts Ave. NW Washington, DC 20036

## **Previous Experience:**

Under Secretary for Domestic Finance, U.S. Department of Treasury Nominated by President Joe Biden, confirmed by the U.S. Senate, Jul. 2021 to Jan. 2025.

Senior official responsible for Treasury debt management, fiscal payments and receipts, and developing policies for financial institutions and markets to promote economic growth and financial stability. Reporting offices include Financial Institutions, Financial Markets, Fiscal Services, Financial Stability Oversight Council, Office of Financial Research, and Office of Capital Access.

### Key policy priorities:

- Implementing U.S. Treasury market reforms to strengthen resilience, including improving transparency, Treasury buybacks, and central clearing;
- Modernizing U.S. payments for fast payment systems and tokenization;
- Developing financial regulatory policies for new technologies, such as fintech and artificial intelligence, and cloud service providers;
- Executing responses to financial crises, including the failures of two regional banks and a global bank in March 2023 to prevent broader contagion;
- Improving liquidity risk management at banks given faster depositor runs;
- Reducing systemic risks from increasing leverage in the nonbank financial sector;
- Evaluating insurance market outcomes as climate-related physical risks increase; and
- Developing market principles to improve the integrity of voluntary carbon markets.

# Chair, Financial Stability Board (FSB) Standing Committee on Assessment of Vulnerabilities (SCAV). Feb. 2023 to Jan. 2025.

As Chair of SCAV, FSB's main committee for identifying and assessing systemic risks in the international financial system, worked with FSB members to develop priorities and directed key working groups.

#### Key priorities:

- Assessing global financial stability risks as central banks combat higher inflation;
- Evaluating bank deposit runs and interest rate risks and liquidity risks at nonbank financial firms;
- Measuring leverage at nonbank financial firms and sovereign bond repo markets;

- Promoting regulations for global stablecoins and tokenization;
- Assessing how financial firms are adopting artificial intelligence and whether new regulations are needed; and
- Developing a framework and metrics to measure financial stability risks from increasing climate-related events.

Senior Fellow, Economic Studies, Brookings Institution, 2017-2021

Visiting Scholar, International Monetary Fund, Monetary and Capital Markets, 2017-2021

Lecturer, Yale University School of Management, 2018-2021

Member, Panel of Economic Advisors, Congressional Budget Office, 2016-2021

Director, Division of Financial Stability, Federal Reserve Board, 2010 to 2017

- Started the Office of Financial Stability Policy and Research in 2010, which became the Division of Financial Stability in 2016.
- Developed and led a new program to support the Board's responsibilities for financial stability.
- Produced reports on risks to financial stability and macroprudential policies to mitigate those risks, and regularly briefed the Board and Federal Open Market Committee (FOMC).

Associate Director, Division of Research and Statistics, Federal Reserve Board, 2006 to 2010

- Directed staff work on capital markets, real estate finance, business and household financial conditions, and the U.S. aggregate financial accounts for the Board and FOMC.
- Worked during the 2007 to 2009 global financial crisis to implement policies to stabilize the financial system. Co-led the Supervisory Capital Assessment Program, known as the "Stress Tests," in 2009.

#### **Education:**

- Ph.D. in Economics, University of Maryland, 1986
- B.A. in Economics, University of Notre Dame, 1979

#### **Selected Speeches and Presentations 2022 to 2024:**

- Strengthening Treasury Market Resilience and the Expansion of Central Clearing, Federal Reserve Bank of Chicago, Nov. 2024.
- Modernizing the Regulatory Framework for Domestic Payments, Federal Reserve Bank of Chicago, Oct. 2024.
- Voluntary Carbon Market Integrity, Climate Week, New York, Sep. 2024.

- Strengthening Treasury Market Liquidity and What Remains, Georgetown University, Sep. 2024.
- Depositor Behavior, Bank Liquidity, and Run Risk, OCC Bank Research Symposium, June 2024.
- Remarks on Nonbank Financial Institutions and Access to Liquidity in Stress, European Central Bank and Federal Reserve Bank of New York, June 2024
- Artificial Intelligence in Finance, OECD and FSB Roundtable, May 2024.
- Remarks on Macroprudential Policy for Investment Funds, Central Bank of Ireland, May 2024
- Modernizing U.S. Money and Payments: Technological and Regulatory Considerations, Peterson Institute for International Economics, April 2024.
- Remarks on Data and Financial Stability, Brookings Institution, Dec. 2023.
- Remarks at the 2023 Treasury Market Conference, Federal Reserve Bank of New York, Nov. 2023.
- Recent Developments in Macroprudential Policy in the U.S., European Central Bank Macroprudential Policy and Research Conference, Oct. 2023.
- Systemic Liquidity and Financial System Resilience, International Swaps and Derivatives Association, May 2023.
- Testimony before the Committee on Financial Services, U.S. House, and the Banking Committee, U.S. Senate, March 2023.
- Remarks on the Future of the U.S. Money and Payments System, Atlantic Council, Mar. 2023.
- Remarks at the 2022 Treasury Market Conference, Federal Reserve Bank of New York, Nov. 2022.
- Remarks on Ensuring Responsible Development in Digital Assets, Brookings Institution, Sep. 2022.
- Testing Macroprudential Policy Frameworks for Banks and Nonbanks, King's College, London, July 2022.
- Testimony on Stablecoins before the Committee on Financial Services, U.S. House, and the Banking Committee, Feb. 2022.

#### **Selected Publications and Working Papers:**

Adrian, Tobias, Federico Grinberg, Nellie Liang, Sheheryar Malik, and Jie Yu (2022), "The Term Structure of Growth-at-Risk," American Economic Journal: Macroeconomics, Vol. 14, No. 3, July 2022, pp. 283-323.

Edge, Rochelle and Nellie Liang (2022), "Financial Stability Committees and the Basel III Countercyclical Capital Buffer," International Journal of Central Banking, Dec.

Edge, Rochelle and Nellie Liang (2021), "New Financial Stability Governance Structures and Central Banks," FEDS working paper No. 2019-19, revised July 2021.

First Responders: Inside the U.S. Strategy for Fighting the 2007-2009 Global Financial Crisis, (2020), editors Ben Bernanke, Timothy Geithner, and Henry Paulson, with Nellie Liang, Yale University Press. Translated to Chinese, 2023, CITIC Press.

Liang, Nellie and Pat Parkinson (2020). "Enhancing Liquidity of the U.S. Treasury Market under Stress," Working Paper, Brookings Hutchins Center #72, Dec.

Liang, Nellie (2020). "Corporate Bond Market Dysfunction during COVID-19 and lessons from the Fed's Responses," Working Paper, Brookings Hutchins Center #69, Oct.

English, William and Nellie Liang (2020). "Designing the Main Street Lending Program: Challenges and Options," Journal of Financial Crises 2(3), 1-40. https://elischolar.library.yale.edu/journal-of-financial-crises/vol2/iss3/1

Adrian, Tobias, Fernando Duarte, Nellie Liang, Pawel Zabcyzk (2020). "NKV: A New Keynesian Model with Vulnerability," AEA *Papers and Proceedings*, 110, May, 470-76.

Aikman, David, Andreas Lehnert, Nellie Liang, and Michele Modugno (2020). "Credit, Financial Conditions, and Monetary Policy Transmission," *International Journal of Central Banking*, June.

Adrian, Tobias, Dong He, Nellie Liang, and Fabio Natalucci (2019). "A Monitoring Framework for Global Financial Stability," Staff Discussion Note No. 19/06, International Monetary Fund, Aug. <a href="https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2019/08/23/A-Monitoring-Framework-for-Global-Financial-Stability-46645">https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2019/08/23/A-Monitoring-Framework-for-Global-Financial-Stability-46645</a>

Kohn, Donald and Nellie Liang (2019), "Understanding the Effects of the U.S. Stress Tests," prepared for the Federal Reserve System Conference Stress Testing: A Discussion and Review, July. https://www.brookings.edu/research/understanding-the-effects-of-the-u-s-stress-tests/

Liang, Nellie (2019). "Financial Stability and Monetary Policy," *Business Economics*, Vol 54(3), July. <a href="https://doi.org/10.1057/s11369-019-00123-w">https://doi.org/10.1057/s11369-019-00123-w</a>

Adrian, Tobias and Nellie Liang (2018), "Monetary Policy, Financial Conditions, and Financial Stability," *International Journal of Central Banking*, Vol 14(1), pp. 73-131, Jan.

Edge, Rochelle and Nellie Liang (2019), "New Financial Stability Governance Structures and Central Banks," Working Paper, Brookings Hutchins Center #50, Feb. (revised), and in *Monetary Policy and Financial Stability in a World of Low Interest Rates*, Reserve Bank of Australia 2017 Conference volume, Jonathan Hambur and John Simon (eds.).

Liang, Nellie, Meg McConnell, and Phillip Swagel (2020), "Evidence on the Outcomes from the Financial Crisis Response," in *First Responders: Inside the U.S. Strategy for Fighting the 2007-2009 Global Financial Crisis*, (2020), editors Ben Bernanke, Timothy Geithner, and Henry Paulson, with Nellie Liang, Yale University Press.

Alvarez, Scott, William Dudley, and Nellie Liang (2020), "Nonbank Financial Institutions: New Vulnerabilities and Old Tools." in *First Responders: Inside the U.S. Strategy for Fighting the 2007-2009 Global Financial Crisis*, (2020), editors Ben Bernanke, Timothy Geithner, and Henry Paulson, with Nellie Liang, Yale University Press.

Falato, Antonio, and J. Nellie Liang (2016). "Do Creditor Rights Increase Employment Risk? Evidence from Loan Covenants," *Journal of Finance*, vol 71, no. 6, pp. 2545-2590.

Adrian, Tobias, Daniel M. Covitz, and J. Nellie Liang (2015). "Financial Stability Monitoring," *Annual Review of Financial Economics*, vol. 7, pp. 357-395.

Covitz, Daniel, Nellie Liang, and Gustavo A. Suarez (2013). "The Evolution of a Financial Crisis: Collapse of the Asset-Backed Commercial Paper Market," *Journal of Finance*, vol. 68, no. 3, pp. 815-848.

Liang, Nellie (2014). "Financial Stability: Lessons Learned from the Recent Crisis and Implications for the Federal Reserve," in Evanoff, Douglas D., Cornelia Holthausen, George G. Kaufman, Manfred Kremer, eds., *The Role of Central Banks in Financial Stability: How Has It Changed?* World Scientific Studies in International Economics, vol. 30. Hackensack, N.J. and Singapore: World Scientific, pp. 69-81.

Liang, Nellie (2013). "Systemic Risk Monitoring and Financial Stability," *Journal of Money Credit and Banking*, vol. 45, pp. 129-135.

Cordell, Larry, Karen Dynan, Andreas Lehnert, Nellie Liang, and Eileen Mauskopf (2010). "The Incentives of Mortgage Servicers: Myths and Realities," in Kolb, Robert W. ed., *Lessons from the Financial Crisis*. Hoboken, NJ: John Wiley & Sons, pp. 231-237.

Brown, Jeffrey R., Nellie Liang, and Scott Weisbenner (2007). "Executive Financial Incentives and Payout Policy: Firm Responses to the 2003 Dividend Tax Cut," *Journal of Finance*, vol. 62, no. 4, pp. 1935-1965.

Brown, Jeffrey R., Nellie Liang, and Scott Weisbenner (2007). "Individual Account Investment Options and Portfolio Choice: Behavioral Lessons from 401(k) Plans," *Journal of Public Economics*, vol. 91, no. 10, pp. 1992-2013.

### **Selected Conference Presentations before 2021**

The 2020 Treasury Market Conference, hosted by the U.S. Treasury, Federal Reserve Board, Federal Reserve Bank of New York, Securities and Exchange Commission, and the Commodities Futures Trading Commission, "Enhancing the resilience of the U.S. Treasury Market," Sep. 29.

National Bureau of Economic Research, Panel Discussion of COVID-19 and Macroeconomic Policy, July 8, 2020

Brookings Papers on Economic Activity conference, Mar. 2020. Discussant of "When is Growth at Risk?"

Brookings Institution, "The Repo Market Disruption: What happened, why, and should something be done about it?" Dec. 5, 2019.

Banco de Mexico, "Financial Stability and Central Banks," Nov. 1, 2019

Federal Reserve System Conference, "Stress Testing: A Discussion and Review," Federal Reserve Bank of Boston, Jul. 9, 2019

Deutsche Bundesbank, Sveriges Riksbank, and De Nederlandsche Bank, Fifth Annual Macroprudential Conference, "Financial Stability Committees and the Basel III Countercyclical Capital Buffer," May 2019.

Brookings Institution, Sep 2018, "The 2007-2009 Financial Crisis: An Economic Perspective," (with Andrew Metrick), at Responding to the Global Financial Crisis: What We Did and Why We Did it, Brookings Institution.

https://www.brookings.edu/wp-content/uploads/2018/08/Overview-Presentation-9-11-18-FINAL.pdf

Bank of International Settlements, Jun 2018, "Progress on Dynamic Macroprudential Policies," at 17<sup>th</sup> Annual Research Conference

Bank of International Settlements, Mar 2018, "Term Structure of Growth-at-Risk," Research Conference.

Peterson Institute, Oct 2017, "Rethinking Financial Stability" at Rethinking Macroeconomic Policy Conference.

International Finance and Banking Society, July 2017, Keynote address "Financial Regulations and Macroeconomic Stability," Oxford, UK. https://www.brookings.edu/wp-content/uploads/2017/07/liang\_financialregulationsandmacroeconomicstability.pdf

ECB Macroprudential Policy and Research Conference, May 2017, paper discussant.

Reserve Bank of Australia, Mar. 2017, "New Financial Stability Governance and Central Banks," at Monetary Policy and Financial Stability in a World of Low Interest Rates.

Bank of England, Workshop on Macroprudential Policy for Housing, Nov. 2016, "U.S. Implementation of Macroprudential Policies," panel presentation.

MIT Golub Center for Finance and Policy, Sep. 2016, "Causes of and Policy Responses to the U.S. Financial Crisis: What Do We Know Now that the Dust has Settled?" Systemic Risk, moderator.

Bank of Canada, CIGI, IMF, Peterson Institute Joint Workshop, May 2016, "Macroprudential and Monetary Policy in the U.S," Reinventing the Role of Central Banks in Financial Stability.

European Central Bank, April 2016, "Financial Vulnerabilities, Macroeconomic Dynamics, and Monetary Policy," paper presentation.

Federal Reserve Bank of San Francisco, Mar. 2016, Discussant of Lars Svensson "Cost-Benefit Analysis of Leaning against the Wind: Are Costs Larger also with Less Effective Macroprudential Policy?" Macroeconomics and Monetary Policy Conference.

Columbia School of International and Public Affairs, Nov. 2015, "U.S. Macroprudential Policies and Supervisory Stress Tests," Next Steps for Macroprudential Policies, panel presentation.

Brookings Institution, Nov. 2015, Discussion of Darrell Duffie "Stability-Liquidity Tradeoffs in Post-Crisis Bond Markets," at Are We Safer? A Look at the Financial System, Post-Crisis, panel presentation.

Bank of England, Sep. 2015, "U.S. Implementation of Countercyclical Capital Buffers and Stress Tests," Workshop on Countercyclical Capital Buffers, panel presentation.

Stanford Graduate School of Business, Mar. 2015, "Shadow Banking, Low Interest Rates, and Financial Stability," at Financial Market Adaptation to Regulations and Monetary Policy, panel presentation.

Brookings Institution, Jan. 2015, "Asset Management and Financial Stability," Asset Management, Financial Stability, and Economic Growth, panel presentation.

NBER Summer Institute, Jul. 2014, "Do Creditor Rights Increase Employment Risk? Evidence from Loan Covenants," paper presentation.

Financial Intermediation Research Society, Jun. 2014, "Do Creditor Rights Increase Employment Risk? Evidence from Loan Covenants," paper presentation.

IMF and Peoples Bank of China, New Issues in Monetary Policy: International Experience and Relevance for China, Mar. 2014, "Cyclical Macroprudential Policies," panel presentation.

Tsinghua University, Mar. 2014, "The Evolution of a Financial Crisis: The Collapse of the ABCP Market," paper presentation.

ICI and Center for Financial Policy University of Maryland, Conference on Mutual Funds and ETFs, Oct. 2013, "Short-term Funding and the Collapse of the ABCP Market," paper presentation.

Federal Reserve Bank of Cleveland and Office of Financial Research, May 2013, "Implementing Macroprudential Policies," Conference on Financial Stability Analysis: Using the Tools, Finding the Data."

Central Bank of Turkey, Sep. 2012, "A Framework to Monitor Systemic Risk," G-20 Conference on Financial Systemic Risk.

Financial Stability Oversight Council and Office of Financial Research, Macroprudential Toolkit Conference, Dec. 2011, Paper discussant of Bisias, Flood, Lo, and Valavanis "A Survey of Systemic Risk Analytics."

Federal Reserve Bank of Chicago, Nov. 2011, Lessons Learned from the Financial Crisis and Implications for the Fed," International Banking Conference.

NBER Summer Institute, Jul. 2011, "Macroprudential Regulation: The State of Play," panel participant.

Pew Center / New York University, Jun. 2011, "Systemic Risk Measurement and Monitoring," Systemic Risk Monitoring, panel presentation.

Bank of Canada, Liquidity and Systemic Risk, Nov. 2010, "Collapse of the Asset-Backed Commercial Paper Market," paper presentation.

Yale Conference on Financial Crisis Research, Jul. 2010, "Panic in the Asset-Backed Commercial Paper Market," paper presentation

#### **Select Other Publications**

Brown, Jeffrey R., Nellie Liang, and Scott Weisbenner (2006). "401(k) Matching Contributions in Company Stock: Costs and Benefits for Firms and Workers," *Journal of Public Economics*, vol. 90, no. 6-7, pp. 1315-1346.

Coronado, Julia, and Nellie Liang (2006). "The Influence of PBGC Insurance on Pension Fund Finances," in Blitzstein, David, Olivia Mitchell S. and Stephen Utkus P. eds., Restructuring Retirement Risks. Oxford and New York: Oxford University Press, pp. 88-108.

Amromin, Gene, Paul Harrison, Nellie Liang, and Steve Sharpe (2005). "How did the 2003 Dividend Tax Cut Affect Stock Prices and Corporate Payout Policy?" Finance and Economics Discussion Series 2005-57. Board of Governors of the Federal Reserve System.

Liang, Nellie (2005). "Are Empowerment and Education enough? Underdiversification in 401(k) Plans: Comment," *Brookings Papers on Economic Activity*, vol. 2005, no. 2, pp. 202-208.

Helwege, Jean, and Nellie Liang (2004). "Initial Public Offerings in Hot and Cold Markets," *Journal of Financial and Quantitative Analysis*, vol. 39, no. 3, pp. 541-569.

Amromin, Gene, and Nellie Liang (2003). "Hedging Employee Stock Options, Corporate Taxes, and Debt," *National Tax Journal*, vol. 56, no. 3, pp. 513-533.

Fenn, George W., and Nellie Liang (2001). "Corporate Payout Policy and Managerial Stock Incentives," *Journal of Financial Economics*, vol. 60, no. 1, pp. 45-72.

Liang, Nellie, and Scott Weisbenner (2001). "Who Benefits from a Bull Market? An Analysis of Employee Stock Option Grants and Stock Prices," Finance and Economics Discussion Series 2001-57. Board of Governors of the Federal Reserve System.

Liang, J. Nellie, and Steven A. Sharpe (1999). "Share Repurchases and Employee Stock Options and their Implications for S&P 500 Share Retirements and Expected Returns," Finance and Economics Discussion Series 1999-59. Board of Governors of the Federal Reserve System.

Fenn, George W., and Nellie Liang (1998). "New Resources and New Ideas: Private Equity for Small Businesses," *Journal of Banking and Finance*, vol. 22, no. 6-8, pp. 1077-1084.

Amel, Dean F., and J. Nellie Liang (1997). "Determinants of Entry and Profits in Local Banking Markets," *Review of Industrial Organization*, vol. 12, no. 1, pp. 59-78.

Fenn, George W., Nellie Liang, and Stephen Prowse (1997). "The Private Equity Market: An Overview," *Financial Markets*, Institutions and Instruments, vol. 6, no. 4, pp. 1-105.

Helwege, Jean, and Nellie Liang (1996). "Is there a Pecking Order? Evidence from a Panel of IPO Firms," *Journal of Financial Economics*, vol. 40, no. 3, pp. 429-458.

Fenn, George W., Nellie Liang, and Stephen Prowse (1995). "The Economics of the Private Equity Market," Staff Studies 168. Board of Governors of the Federal Reserve System.

Hannan, Timothy H., and J. Nellie Liang (1995). "The Influence of Thrift Competition on Bank Business Loan Rates," *Journal of Financial Services Research*, vol. 9, no. 2, pp. 107-122.

Berkovec, James A., and J. Nellie Liang (1993). "Selection in Failed Bank Auction Prices: An Econometric Model of FDIC Resolutions," Finance and Economics Discussion Series 93-40. Board of Governors of the Federal Reserve System.

Hannan, Timothy H., and J. Nellie Liang (1993). "Inferring Market Power from Time-Series Data: The Case of the Banking Firm," *International Journal of Industrial Organization*, vol. 11, no. 2, pp. 205-218.

Amel, Dean F., and J. Nellie Liang (1992). "The Relationship between Entry into Banking Markets and Changes in Legal Restrictions on Entry," *Antitrust Bulletin*, vol. 37, no. 3, pp. 631-649.

Liang, J. Nellie, and James M. O'Brien (1992). "Equity Underwriting Risk," In The Changing Market in Financial Services: Proceedings of the Fifteenth Annual Economic Policy Conference of the Federal Reserve Bank of St. Louis. Kluwer Academic, pp. 129-158.

Amel, Dean F., and J. Nellie Liang (1990). "Dynamics of Market Concentration in U.S. Banking, 1966-86," *International Journal of Industrial Organization*, vol. 8, no. 3, pp. 375-384.

Liang, Nellie, and Stephen A. Rhoades (1988). "Geographic Diversification and Risk in Banking," *Journal of Economics and Business*, vol. 40, no. 4, pp. 271-284.