

# The Nexus Between Sovereign and Financial Sector

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**Viral V. Acharya**

NYU Stern Finance

Ph.D. Elective Course (FINC.GB.4309)

Spring 2025 Tentative Course Outline

## **Meetings:**

- Monday, January 20, 1:30pm – 4:30pm, **ORGANIZATIONAL** meeting via Zoom
- Monday, January 27 – May 5, 1:30pm – 4:30pm, Gruber room

## **Overview:**

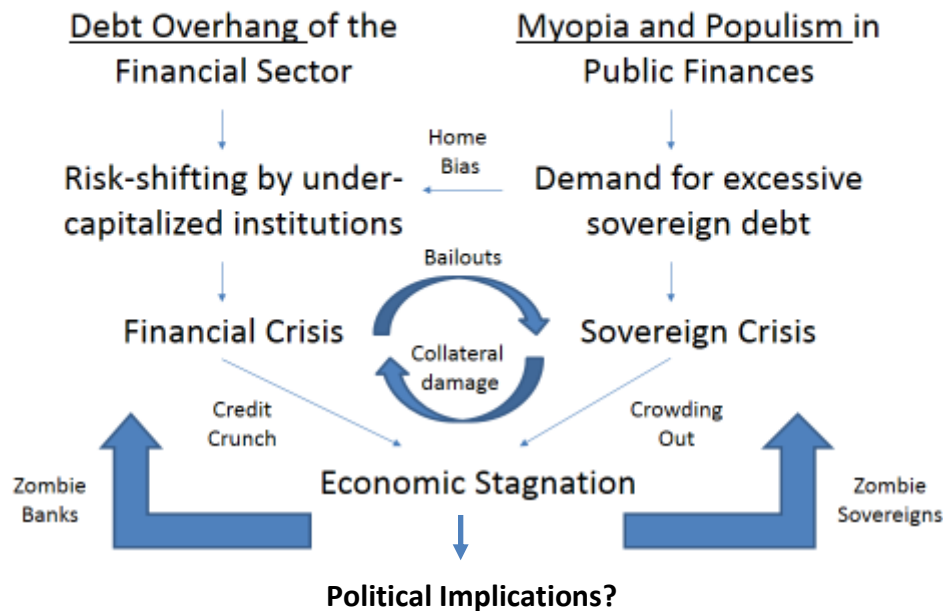
The objective of this course is to provide theoretical and empirical foundation for the nexus of credit risk between financial sector and sovereigns. This nexus has recently been at the heart of the ongoing sovereign and financial sector crises in Europe, while historically having been a greater focus in emerging market debt crises and Japan.

The course will focus on

- (1) Providing micro-foundations of sovereign debt given that there is no explicit institutional structure such as bankruptcy code which allows creditors to extract repayments, and how political economy considerations such as government myopia and populism affect the demand and nature of sovereign debt;
- (2) Understanding how credit risk migrates from the financial sector to the sovereign and vice-versa, in what is increasingly being called the “unholy nexus” or “doom loop” or the “diabolical loop”;
- (3) Tying this nexus to micro-foundations of sovereign debt repayments as well as to incentives of highly-leveraged intermediaries such as banks;
- (4) Tracing out the real-sector consequences of this nexus and isolating the channel through which it affects the real-sector;
- (5) Studying the efficacy of regulatory interventions when the banking sector becomes under-capitalized, especially with a focus on emergence of zombie lending, misallocation of capital, protracted recovery with permanent output losses, and policy traps.
- (6) Finally, understanding the channels through which unconventional monetary policy and lender-of-last-resort actions of central banks affect the banking sector, the sovereign and the real economy.

The ultimate objective is to make sense of the following flow-chart of risks and their sources, from my Toulouse Lectures in Economics on “The Nexus Between Financial Sector and Sovereign Credit Risks”.

## Summary



### Structure of Meetings and Evaluation:

Several of the in-class presentations will be done by Viral Acharya, especially on the theory and models; the rest by the doctoral students enrolled in the course. We will sort out who presents what at the organizational meeting.

Regardless of the presentation, all enrolled or attending the course will be required to write a high-quality literature survey of up to 10 pages covering any one of the topics and the related papers (included below or otherwise). The survey will be due one week after the course is over.

The grade for the course will be based on assessment of this survey.

I will give some OPTIONAL homework in the form of exercises and/or open questions around the theoretical models we discuss. Those who submit these will receive EXTRA credit towards the grade based on quality of their work.

Those presenting and actively participating in the class will get a dinner out of me! 😊

## **Student Accessibility**

If you will require academic accommodation of any kind during this course, you must notify me at the beginning of the course (or as soon as your need arises) and provide a letter from the Moses Center for Student Accessibility (212-998-4980, [mosescsa@nyu.edu](mailto:mosescsa@nyu.edu)) verifying your registration and outlining the accommodations they recommend.

For more information, visit the CSA website:

<https://www.nyu.edu/students/communities-and-groups/student-accessibility.html>

## **Student Wellness**

Classes can get stressful. I encourage you to reach out if you need help. The NYU Wellness Exchange offers mental health support. You can reach them 24/7 at [212 443 9999](tel:2124439999), or via the “NYU Wellness Exchange” app. There are also drop in hours and appointments. Find out more at:

<http://www.nyu.edu/students/health-and-wellness/counseling-services.html>

## **Name Pronunciation and Pronouns**

NYU Stern students now have the ability to include their pronouns and name pronunciation in Albert. I encourage you to share your name pronunciation and pronouns this way. Please utilize this link for additional information:

<https://www.nyu.edu/students/student-information-and-resources/registration-records-and-graduation/forms-policies-procedures/pronouns-and-name-pronunciation.html>

## **Religious Observances and Other Absences**

NYU’s [Calendar Policy on Religious Holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. You must notify me in advance of religious holidays or observances that might coincide with exams, assignments, or class times to schedule mutually acceptable alternatives. Students may also contact [religiousaccommodations@nyu.edu](mailto:religiousaccommodations@nyu.edu) for assistance.

Except for religious observances or other absences that may be required in compliance with nondiscrimination law, this class otherwise requires attendance and participation and cannot accommodate conflicts. Please review all class dates at the start of the semester and review all course requirements to identify any foreseeable conflicts with exams, course assignments, projects, or other items required for participation and attendance. If you are aware of a potential conflict, it is strongly recommended that you do not take this class.

**Inclusion Statement**

*This course strives to support and cultivate diversity of thought, perspectives, and experiences. The intent is to present materials and activities that will challenge your current perspectives with a goal of understanding how others might see situations differently. By participating in this course, it is the expectation that everyone commits to making this an inclusive learning environment for all.*

## **Week 1-2: Micro-foundations for Sovereign Debt Repayment**

Course overview by Viral Acharya

Students will present:

### **Week 1 (1/27):**

- EATON, J. AND M. GERSOVITZ (1981), "Debt with Potential Repudiation: Theoretical and Empirical Analysis", *The Review of Economic Studies*, 48 (2), 289-309.
- BULOW, J. AND K. ROGOFF (1989), "A Constant Recontracting Model of Sovereign Debt", *Journal of Political Economy*, 97 (1), 155-178.
- BULOW, J. AND K. ROGOFF (1989), "Sovereign Debt: Is to Forgive Forget? ", *American Economic Review*, 79 (1), 43-50.

### **Week 2 (2/3):**

- BRONER, F., A. MARTIN, AND J. VENTURA (2010), "Sovereign Risk and Secondary Markets", *American Economic Review*, 100 (4), 1523-1555.
- DU, W. AND J. SCHREGER (2022), "Sovereign Risk, Currency Risk, and Corporate Balance Sheets", *Review of Financial Studies*, 35 (10), 4587-4629.

## **Week 3-4: Sovereign and Financial Sector Nexus: Role of Government Myopia**

### **Week 3 (2/10):**

Students will present:

- AGUIAR, M. AND M. AMADOR (2011), "Growth in the Shadow of Expropriation", *Quarterly Journal of Economics*, 126 (2), 651-697.

Viral Acharya will present:

- ACHARYA, V. V. AND R. G. RAJAN (2013), "Sovereign Debt, Government Myopia, and the Financial Sector", *Review of Financial Studies*, 26 (6), 1526-1560.

### **Week 4 (2/24):**

Viral Acharya will present:

- ACHARYA, V. V., R. G. RAJAN, AND J. SHIM (2024), "Sovereign Debt and Economic Growth when Government is Myopic and Self-interested", *Journal of International Economics – Special Issue of NBER International Seminar on Macroeconomics*, 150, 103906.

Students will present:

- AGUIAR, M., M. AMADOR, AND G. GOPINATH (2009), "Expropriation Dynamics", *American Economic Review*, 99 (2), 473-479.

Recommended related literature:

- BOLTON, P. AND O. JEANNE (2011), "Sovereign Default Risk and Bank Fragility in Financially Integrated Economies", *IMF Economic Review*, 59, 162-194.
- GENNAIOLI, N., A. MARTIN, AND S. ROSSI (2014): "Sovereign Default, Domestic Banks, and Financial Institutions", *Journal of Finance*, 69 (2), 819-866.
- UHLIG, H. (2013), "Sovereign Default Risk and Banks in a Monetary Union", *German Economic Review*, 15 (1), 23-41.

### **Week 5 (3/3): Convenience Yield**

Students will present:

- BRUNNERMEIER, M.K., S. MERKEL, AND Y. SANNIKOV (2024): "Safe Assets," *Journal of Political Economy*, 132 (11).

Viral Acharya will present:

- ACHARYA, V. V. AND T. LAARITS (2023): " When Do Treasuries Earn the Convenience Yield? — a Hedging Perspective," *Working Paper*.

Recommended related literature:

- ACHARYA, V. V. AND L.H. PEDERSON, (2005), "Asset Pricing with Liquidity Risk", *Journal of Financial Economics*, 77 (2), 375-410.
- KRISHNAMURTHY, A. AND A. VISSING-JORGENSEN (2012): "The Aggregate Demand for Treasury Debt", *Journal of Political Economy*, 120 (2), 233-267.
- HOLMSTROM, B. AND J. TIROLE (2001), "LAPM: A Liquidity-based Asset Pricing Model", *Journal of Finance*, 56 (5), 1837-1867.

### **Week 6 (3/10): Sovereign and Financial Sector Nexus: Banking Crises and Bailouts**

Viral Acharya will present:

- ACHARYA, V. V., I. DRECHSLER, AND P. SCHNABL (2014), "A Pyrrhic Victory? Bank Bailouts and Sovereign Credit Risk", *Journal of Finance*, 69 (6), 2689-2739.
- ACHARYA, V. V. AND S. STEFFEN (2015), "The Greatest Carry Trade Ever? Understanding Eurozone Bank Risks", *Journal of Financial Economics*, 115, 215-236.

Students will present:

- FARHI, E. AND J. TIROLE (2018), "Deadly Embrace: Sovereign and Financial Balance Sheets Doom Loops", *Review of Economic Studies*, 85 (3), 1781-1823.

Recommended related literature on Banking Crises and Bailouts:

- CROSIGNANI, M. (2021): " Bank Capital, Government Bond Holdings, and Sovereign Debt Capacity," *Journal of Financial Economics*, 141(2), 693-704.

- ACHARYA, V. V., L. BORCHERT, M. JAGER AND S. STEFFEN (2021), "Kicking the Can Down the Road: Government Interventions in the European Banking Sector", *Review of Financial Studies*, 34 (9), 4090-4131.
- BRUNNERMEIER, M.K. (2015), "Diabolic Loop between Sovereign and Banking Risk", *G7 Bundesbank and BMF Panel Discussion*.
- GENNAIOLI, N., A. MARTIN, AND S. ROSSI (2018): "Banks, Government Bonds, and Default: What Do the Data Say?" *Journal of Monetary Economics*, 98, 98-113.

Recommended related literature on Banks and Regulatory Moral Hazard:

- ACHARYA, V. V., R. ENGLE, AND D. PIERRET (2014), "Testing Macroprudential Stress Tests: The Risk of Regulatory Risk Weights", *Carnegie-Rochester Public Policy Conference Volume of the Journal of Monetary Economics*, 65, 36-53.
- ACHARYA, V. V., D. PIERRET, AND S. STEFFEN (2021), "Lender of Last Resort, Buyer of Last Resort, and a Fear of Fire Sales in the Sovereign Bond Market", *Financial Markets, Institutions, and Instruments*, 30 (4), 87-112.
- BOCOLA, L. (2016), "The Pass-Through of Sovereign Risk", *Journal of Political Economy*, 124 (4), 879-926.
- KIRSCHENMANN, K., J. KORTE, AND S. STEFFEN (2020), "A Zero-Risk Weight Channel of Sovereign Risk Spillovers", *Journal of Financial Stability*, 51, 100780.
- PEREZ, D. J. (2018), "Sovereign Debt, Domestic Banks and the Provision of Public Liquidity", *being revised for resubmission, Review of Economic Studies*.

## **Week 7-11: Zombie Lending**

### **Week 7 (3/17):**

Students will present:

- PEEK, J. AND E. ROSENGREN (2005): "Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan," *American Economic Review*, 95 (4), 1144-1166.
- CABALLERO, R. J., T. HOSHI, AND A. K. KASHYAP (2008): "Zombie Lending and Depressed Restructuring in Japan," *American Economic Review*, 98 (5), 1943-1977.

Viral Acharya will present:

- ACHARYA, V. V., T. EISERT, C. EUFINGER, AND C. HIRSCH (2018): "Real Effects of the Sovereign Debt Crises in Europe: Evidence from Syndicated Loans," *Review of Financial Studies*, 31 (8), 2855-2896 (lead article).
- ACHARYA, V. V., T. EISERT, C. EUFINGER, AND C. HIRSCH (2019): "Whatever it Takes: The Real Effects of Unconventional Monetary Policy", *Review of Financial Studies*, 32 (9): 3366-3411.

### **Week 8 (3/31):**

Matteo Crosignani will present:

- CROSIGNANI, M. AND S. PRAZAD (2024): "Extend-and-Pretend in the U.S. CRE Market," *Federal Reserve Bank of New York Staff Reports*, 1130.

Students will present:

- FARIA-E-CASTRO, M., P. PAUL AND J. M. SÁNCHEZ (2024), "Evergreening", *Journal of Financial Economics*, 153, 103778.

Recommended related literature:

- BANERJEE, R. AND B. HOFMANN (2018): "The Rise of Zombie Firms: Causes and Consequences," *BIS Quarterly Review*.
- BLATTNER, L., L. FARINHA, AND F. REBELO (2023): "When Losses Turn into Loans: The Cost of Weak Banks," *American Economic Review*, 113 (6), 1600-1641.

### **Week 9 (4/7):**

Tim Eisert will present:

- ACHARYA, V. V., M. CROSIGNANI, T. EISERT AND C. EUFINGER (2024), "Zombie Credit and (Dis-)Inflation: Evidence from Europe", *Journal of Finance*, 79 (3), 1883-1929.

Students will present:

- GOPINATH, G., S. KALEMLI-ÖZCAN, L. KARABARBOUNIS AND C. VILLEGAS-SANCHEZ (2017), "Capital Allocation and Productivity in South Europe", *Quarterly Journal of Economics*, 132 (4): 1915-1967.

Recommended related literature:

- BONFIM, D., G. CERQUEIRO, H. DEGRYSE AND S. ONGENA (2022), "On-Site Inspecting Zombie Lending", *Management Science*, 69 (5), 2547-3155.
- PASSALACQUA, A., P. ANGELINI, F. LOTTI AND G. SOGGIA (2021), "The Real Effects of Bank Supervision: Evidence from On-site Bank Inspections", *Working Paper*.

### **Week 10 (4/14):**

Viral Acharya will present:

- ACHARYA, V.V., S. LENZU AND O.WANG (2021), "Zombie Lending and Policy Traps", *Working Paper*.

Students will present:

- ASRIYAN, V., L. LAEVEN, A. MARTIN, A. VAN DER GHOTE AND V. VANASCO (2024), "Falling Interest Rates and Credit Misallocation: Lessons from General Equilibrium", *Forthcoming at Review of Economic Studies*.



### **Week 11 (4/21):**

Stephan Luck will present:

- CORREIA, S., S. LUCK AND E. VERNER (2024), "Failing Banks", *Working Paper*.

Students will present:

- BARON, M., E. VERNER AND W. XIONG (2021), "Banking Crises Without Panics", *Quarterly Journal of Economics*, 136 (1), 51-113.

### **Week 12-13: Unintended Consequences of Ultra-Accommodative Monetary Policy**

### **Week 12 (4/28):**

Viral Acharya will present:

- ACHARYA, V. V. AND R. RAJAN (2024), "Liquidity, Liquidity Everywhere, Not a Drop to Use. Why Flooding Banks with Central Bank Reserves May Not Expand Liquidity", *Journal of Finance*, 79 (5), 2943-2991.

Students will present:

- HADDAD, V., A. MOREIRA AND T. MUIR (2024), "Asset Purchase Rules: How Quantitative Easing Transformed the Bond Market", *Working Paper*.

Recommended related literature:

- ACHARYA, V. V., R. CHAUHAN, R. RAJAN AND S. STEFFEN (2023), "Liquidity Dependence and the Waxing and Waning of Central Bank Balance Sheets", *Working Paper*.
- BORIO, C. E. AND B. HOFMANN (2017): "Is monetary policy less effective when interest rates are persistently low?", *Working Paper*.
- COPELAND, A., D. DUFFIE AND Y. YANG (2021), "Reserves Were Not So Ample After All", *Working Paper*.
- CROSIGNANI, M., M. FARIA-E-CASTRO, AND L. FONSECA (2020), "The (Unintended?) Consequences of the Largest Liquidity Injection Ever", *Journal of Monetary Economics*, 112, 97-112.
- HADDAD, V., A. MOREIRA AND T. MUIR (2024), "Whatever It Takes? The Impact of Conditional Policy Promises", *Conditionally Accepted at American Economic Review*.

### **Week 13 (5/5):**

Students will present:

- J. ABADI, M. K. BRUNNERMEIER AND Y. KOBAYASHI (2023), "The Reversal Interest Rate", *American Economic Review*, 113 (8), 2084-2120.

Olivier Wang will present:

- ACHARYA, V. V., G. PLANTIN AND O. WANG (2024), “Indebted Supply and Monetary Policy: A Theory of Financial Dominance”, *Working Paper*.

Recommended related literature:

- ACHARYA, V. V. AND G. PLANTIN (2023), “Monetary Easing, Leveraged Payouts and Lack of Investment”, *Forthcoming at Management Science*.
- ACHARYA, V. V., G. PLANTIN, P. REGGIANI AND I. YAO (2024), “Monetary Easing, Lack of Investment and Financial Instability”, *Journal of Financial Intermediation*, 59, 101100.
- FORBES, K., J. GAGNON, AND C. G. COLLINS (2021), “Low Inflation Bends the Phillips Curve around the World”, *Working Paper*.
- P. BENIGNO AND G. B. EGGERTSSON (2024), “Revisiting the Phillips and Beveridge Curves: Insights from the 2020s Inflation Surge”, *Working Paper, presented at Jackson Hole 2024*.