Nexus between Sovereign and Financial Sectors

Viral V. Acharya NYU Stern Finance Ph.D. Elective Course (FINC.GB.4309.P1) Spring 2020

Meetings:

Thursdays 2-5pm in the Gruber Conference Room (9th floor of KMEC - 44 West 4th St). There will be an ORGANIZATIONAL meeting a week before the course formally starts.

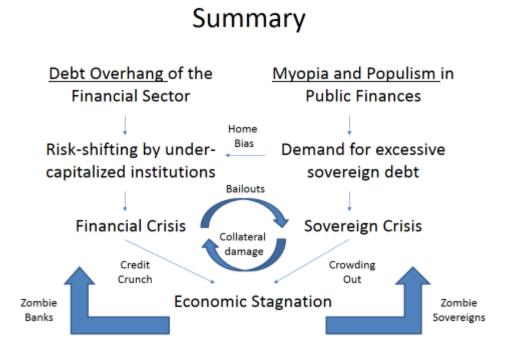
Overview:

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

- 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; and,
- (5) Finally, studying the efficacy of regulatory interventions that have been designed such as the regulatory stress tests of banks, design of risk weights in bank capital requirements, and unconventional monetary policy and lender-of-last-resort actions of central banks.

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



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. Jack Shim will serve as an administrative aide.

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! 😊

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

Course overview by Viral Acharya

Students will present paper(s) based on the following literature:

Week 1 (2/6):

- 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, 11, 155-178.
- BULOW, J. AND K. ROGOFF (1989), "Sovereign Debt: Is to Forgive Forget?", American Economic Review, 79, 1, 43-50.

Week 2 (2/13):

- BRONER, F., A. MARTIN, AND J. VENTURA (2010), "Sovereign Risk and Secondary Markets", *American Economic Review*, 100, 1523-1555.
- DU, W. AND J. SHREGER (2016), "Sovereign Risk, Currency Risk, and Corporate Balance Sheets", *(being revised for resubmission, Review of Financial Studies)*

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

Viral Acharya will present

Week 3 (2/20):

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

Week 4 (2/27):

• ACHARYA, V. V., R. G. RAJAN, AND J. SHIM (2020), "Sovereign Debt as a Double-Edged Sword – Dynamics of Debt and Growth under Government Myopia", *Working Paper, NYU Stern*

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, 819-866.
- UHLIG, H. (2013), "Sovereign Default Risk and Banks in a Monetary Union", *German Economic Review*, 15, 23-41.

Week 5-6: Sovereign and Financial Sector Nexus: Banking Crises and Bailouts

Week 5 (3/5): 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, 2689-2739. Professor Matteo Crosignani (Michigan Ross) or a student will present

• CROSIGNANI, M. (2015): "Why Are Banks Not Recapitalized During Crises?," (being revised for resubmission, Journal of Financial Economics)

Week 6 (3/12): Students will present:

• ACHARYA, V. V., S. STEFFEN, AND L. BORCHERT (2018), "Kicking the Can Down the Road: Government Interventions in the European Banking Sector", *(being revised for resubmission, Review of Financial Studies)*

and from the Recommended related literature:

- BRUNNERMEIER, M.K. (2015), "Diabolic Loop between Sovereign and Banking Risk", *G7 Bundesbank and BMF Panel Discussion.*
- FARHI, E. AND J. TIROLE (2018), "Deadly Embrace: Sovereign and Financial Balance Sheets Doom Loops," *Review of Economic Studies*, *85*, *3*, *1781-1823*
- 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*

Week 7 (3/26): Sovereign and Financial Sector Nexus: Bank and Regulatory Moral Hazard

Students will present the papers:

- ACHARYA, V. V. AND S. STEFFEN (2015), "The Greatest Carry Trade Ever? Understanding Eurozone Bank Risks", *Journal of Financial Economics*, 115, 215-236.
- ACHARYA, V. V., R. ENGLE, AND D. PIERRET (2014), "Testing Macro-prudential Stress Tests: The Risk of Regulatory Risk Weights", *Carnegie-Rochester Public Policy Conference Volume of the Journal of Monetary Economics*, 65, 36-53.

Recommended related literature:

- ACHARYA, V. V., D. PIERRET, AND S. STEFFEN (2018), "Lender of Last Resort versus Buyer of Last Resort – Evidence from the European Sovereign Debt Crisis", Working paper.
- KIRSCHENMANN, K., J. KORTE, AND S. STEFFEN (2017), "The Zero Risk Fallacy? Banks' Sovereign Exposure and Sovereign Risk Spillovers", ZEW - Centre for European Economic Research Discussion Paper No. 17-069

Week 8 (4/2): Real Effects of Sovereign Crises: Active and Passive Banking Channels

Students will present:

- ACHARYA, V. V., T. EISERT, C. EUFINGER, AND C. HIRSCH (2015): "Real Effects of the Sovereign Debt Crisis in Europe: Evidence from Syndicated Loans," *Review of Financial Studies*, 2018, 31(8), 2855-2896 (lead article).
- CABALLERO, R. J., T. HOSHI, AND A. K. KASHYAP (2008): "Zombie Lending and Depressed Restructuring in Japan," *American Economic Review, 98, 1943–77*

and from the Recommended related literature:

- PEEK, J. AND E. ROSENGREN (2005): "Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan," *American Economic Review*, *95*, *1144–1166*
- BOCOLA, L. (2016), "The Pass-Through of Sovereign Risk", *Journal of Political Economy*, 124, 4, 879-926
- PEREZ, D. J. (2018), "Sovereign Debt, Domestic Banks and the Provision of Public Liquidity", *Working Paper*.
- BOFONDI, M., L. CARPINELLI, AND E. SETTE (2013): "Credit Risk Supply During a Sovereign Debt Crisis," *Bank of Italy Temi di Discussione (Working Paper) No. 909*
- BECKER, B. AND V. IVASHINA (2018), "Financial Repression in the European Sovereign Debt Crisis," *Review of Finance, 22, 1, 83-115*
- POPOV, A. A. AND N. VAN HOREN (2015), "Exporting Sovereign Stress: Evidence from Syndicated Bank Lending During the Euro Area Crisis", *Review of Finance*, 19, 5, 1825-1866

Week 9 (4/9): The Impact of Central Bank Interventions During Sovereign Crises

Students will present:

- ACHARYA, V. V., T. EISERT, C. EUFINGER, AND C. HIRSCH (2015): "Whatever it Takes: The Real Effects of Unconventional Monetary Policy", *Review of Financial Studies*, 2019, 32(9): 3366-3411.
- BLATTNER, L., L. FARINHA, AND F. REBELO (2019): "When Losses Turn Into Loans: The Cost of Undercapitalized Banks," *Working Paper*

and from the Recommended related literature:

- BANERJEE, R. AND B. HOFMANN (2018): "The rise of zombie firms: causes and consequences," *Working Paper*
- BORIO, C. E. AND B. HOFMANN (2017): "Is monetary policy less effective when interest rates are persistently low?" *Working Paper*
- ACHARYA, V. V., B. IMBIEROWICZ, S. STEFFEN, AND D. TEICHMANN (2019), "Does the Lack of Financial Stability Impair the Transmission of Monetary Policy?" (forthcoming, Journal of Financial Economics).
- CROSIGNANI, M., M. FARIA-E-CASTRO, AND L. FONSECA (2015), "The (Unintended?) Consequences of the Largest Liquidity Injection Ever", (accepted at the Journal of Monetary Economics).
- ANDRADE, P., CAHN, C., FRAISSE, H., AND J. MESONNIER (2019) "Can the Provision of Long-Term Liquidity Help to Avoid Credit Crunch?" Evidence from the Eurosystem's LTROs", Journal of the European Economic Association, 17, 4, 1070-1106
- TREBESCH, C. AND J. ZETTELMEYER (2018) "ECB Interventions in Distressed Debt Markets: The Case of Greek Bonds", *IMF Economic Review*, 66, 2, 287-332

Week 10-12 (4/16, 4/23, 4/30): Unintended Consequences of Ultra-Accommodative Monetary Policy

Viral Acharya will present the papers:

- ACHARYA, V. V. AND G. PLANTIN, "Monetary Easing, Leveraged Payouts and Lack of Investment", *Working Paper*
- ACHARYA, V. V. AND G. PLANTIN, "Monetary Easing, Lack of Investment and Financial Instability", *Working Paper*
- ACHARYA, V. V., M. CROSIGNANI, T. EISERT AND C. EUFINGER, "Zombie Credit and (Dis-)Inflation: Evidence from Europe", *Working Paper*

Recommended related literature:

- BRUNNERMEIER, M. K. AND Y. KOBY (2018) "The Reversal Interest Rate," Working Paper, Princeton University
- MARTINEZ-MIERA, D. AND R. REPULLO (2017). "Search for Yield, *Econometrica*, 85, 2

Week 13 (5/7): Newer Topics, Research Frontiers, Open Questions, Student Surveys...

Required literature:

- ABADI, J. AND M. K. BRUNNERMEIER (2019) "Blockchain Economics," Working Paper
- PIAZZESI, M. AND M. SCHNEIDER (2019) "Central Bank-Issued Digital Currency: The Future of Money and Banking?," *Riksbank 5th Annual Macroprudential Conference*

Recommended related literature:

- EISENBACH, T., A. KOVNER, AND M. J. LEE (2020) "Cyber Risk and the U.S. Financial System: A Pre-Mortem Analysis," *Federal Reserve Bank of New York Staff Report No. 909*
- BOLTON, P., M. DEPRES, L. A. PEREIRA DA SILVA, F. SAMAMA, R. SVARTZMAN (2020) "The Green Swan: Central Banking and Financial Stability in the Age of Climate Change," *BIS*
- HINZEN, F., K. JOHN, AND F. SALEH (2019) "Bitcoin's Fatal Flaw: The Limited Adoption Problem," *Working Paper*
- Geneva Report 22 | <u>Banking Disrupted? Financial Intermediation in an Era of</u> <u>Transformational Technology</u>