

UAP 5784
Money and Metropolis
Dimensions of Financial and Fiscal Resilience

David Bieri

Fall 2017

Lectures:	M 12:30pm–3:15pm
Location:	107 AA
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Course description

In the wake of the recent financial crisis, the notion of “resilience” has become firmly established in a wide range of academic and political discourses as well as in contemporary practice. “Resilience thinking” has emerged as a palatable vignette that is readily accessible to a broad variety of urban scholars, promising to open up a truly pluralistic discourse among otherwise deeply fragmented social science disciplines and sub-disciplines. In this research seminar, we explore the concept of “financial resilience” within the larger context of the theme of “money and the metropolis”. Ranging from monetary disequilibrium and financial instability to (vertical) fiscal imbalances, this seminar traces the outlines of a theory of resilience that is relevant for a *financially sophisticated capitalist economy*, exploring why the concurrent processes of *urbanisation* and *financialisation* render such an economy at once resilient and unstable. By engaging with both theoretical arguments and empirical evidence, students will develop an understanding of how the notion of financial resilience can advance in important ways our understanding of the processes of globalised urbanisation in an era of financialised capitalism. The position outlined in this course envisions establishing “financial and fiscal resilience” as an analytical concept that captures the systemic behaviour of capitalist development in terms of the historical and institutional co-evolution of the process of urbanisation and the monetary-financial system as a whole. Students will learn how to operationalise empirical work that explores difference instances of financial resilience as part of major project work for this seminar.

Prerequisites

Students should ideally be comfortable with basic, undergraduate-level treatment of micro- and macroeconomics. Experience with urban and regional analysis is useful, but not indispensable.

Course Readings

Assigned readings will be posted on VT Canvas, see reading list below.

Course Policies

Assignments and Grading

This course will *not* be graded on a curve. This means that the number of top grades is not limited and—by symmetry—the same is also true for low grades. Students are expected to complete all the required readings before the scheduled class time, actively participate in class discussions and presentations, and prepare several written assignments over the semester. Evaluation of your work will be based on substantive content, analytical rigor, and writing quality. Be sure to follow appropriate citation guidelines in all your work. Late assignments will result in point reductions.

The course-specific grading scheme is as follows:

- *Class participation*: Presentation of reading and course materials. Students will take a lead role in presenting course materials and readings to the class and lead the ensuing discussion—**25%**.
- *Applied exercises*: Students will be given several empirical applications and discussion questions—**50%**.
- *Final paper*: Students will prepare and present a final paper that draws on and extends the applied exercises—**25%**.

Late or missed assignments

All work must be submitted by the due date. Late work will be accepted with a penalty of *50% per lecture* past the due date. Exceptions to these rules are not granted without a note from the Dean of Students Office detailing why an excuse should be warranted.

Policy on plagiarism and academic honesty

The Virginia Tech's Graduate Honor Code is in effect for this course. Please take the time to read [this document](#) and make sure that you understand your responsibilities as a student. I assume that everything you turn in during the semester conforms to the Honor Code and to the usual academic standards governing appropriate student conduct. It is your responsibility to find out what constitutes plagiarism and cheating; a plea of ignorance is not acceptable as a defense. Be advised that plagiarism or other forms of violations of the VT Honor Code will not be tolerated. I will not hesitate to forward cases of academic dishonesty to the Dean.

Canvas

The [Canvas](#) site for UAP 5784 is an important component of this course. You are responsible for any announcement or assignment posted on Canvas, regardless of whether the announcement or assignment was discussed in class. I recommend checking Canvas on a regular basis.

Important dates during the semester

Please take note of the following dates over the course of the semester:¹

M	4 Sep 17	Labor Day (No classes; university offices closed).
M	2 Oct 17	Assignment 1 due.
F	13 Oct 17	Fall Break Begins (No classes; university offices open).
M	16 Oct 17	Nobel Prize in Economics announced.
M	23 Oct 17	Assignment 2 due.
M	13 Nov 17	Assignment 3 due.
S	18 Nov 17	Thanksgiving recess begins.
M	27 Nov 17	Classes resume.
M	4 Dec 17	Final presentations.
W	13 Dec 17	Classes end.
T	19 Dec 17	Final reports due (4pm).

Tentative Course Calendar

<i>Topic</i>	<i>Seminars</i>
I. INTRODUCTION AND CONCEPTS	week 1–3
(i) Syllabus review	
(ii) Resilient capitalism: Accounting perspectives	
(iii) Macro-accounting and economy theory	
II. DIMENSIONS OF ECONOMIC RESILIENCE	week 4–5
(i) Conceptualising resilience	
(ii) Regional resilience	

¹Dates are subject to change.

III. FINANCIAL INSTABILITY AND FRAGILITY	week 6–7
(i) The financial instability hypothesis	
(ii) Quantifying financial fragility and stress	
IV. FISCAL SUSTAINABILITY	week 8–9
(i) Fiscal sustainability	
(ii) Fiscal stress	
V. URBAN FISCAL HEALTH	week 10–14
(i) Anatomy of the urban crisis	
(ii) Urban fiscal stress	
(iii) Fiscal federalism	
VI. FINAL RESEARCH PRESENTATIONS	week 15

Reading List

Optional readings are marked by an asterisk (*) and intended for those interested in pursuing particular topics in more depth. The rest of the reading is compulsory, and I encourage you to do as much of the reading as possible. Please familiarise yourself with the material before the lectures, which should enable us to engage in interesting and informed class discussions.

I. Overview and concepts

Seminar 1: 28 August 2017 (M)

Introduction, syllabus review and key concepts.

Seminar 2: 4 September 2017 (M)

Resilient capitalism: Accounting perspectives (**Labor Day, no class**).

BEZEMER, D. J. (2016): "Towards an 'Accounting View' on Money, Banking and the Macroeconomy: History, Empirics, Theory," *Cambridge Journal of Economics*, 40(5), 1275–1295.

BURCHELL, S., C. CLUBB, A. G. HOPWOOD, AND J. HUGHES (1980): "The Roles of Accounting in Organizations and Society," *Accounting, Organizations and Society*, 5(1).

HOPWOOD, A. G. (1987): "The Archeology of Accounting Systems," *Accounting, Organizations and Society*, 12(3), 207–234.

MILLER, P., AND C. J. NAPIER (1993): "Genealogies of Accounting," *Accounting, Organizations and Society*, 18(7–8), 631–647.

THOMPSON, G. F. (1998): "Encountering Economics and Accounting: Some Skirmishes and Engagements," *Accounting, Organizations and Society*, 23(3), 283–323.

YAMEY, B. S. (1949): "Scientific Bookkeeping and the Rise of Capitalism," *Economic History Review*, 1(2/3), 99–113.

——— (1964): "Accounting and the Rise of Capitalism: Further Notes on a Theme by Sombart," *Journal of Accounting Research*, 2(2), 117–136.

Seminar 3: 11 September 2017 (M)

Macro-accounting and economy theory.

BEZEMER, D. J. (2010): "Understanding Financial Crisis through Accounting Models," *Accounting, Organizations and Society*, 35(7), 676–688.

HODGSON, G. M. (1996): "Varieties of Capitalism and Varieties of Economic Theory," *Review of International Political Economy*, 3(3), 380–433.

PERRY, J., AND A. NÖLK (2006): "The Political Economy of International Accounting Standards," *Review of International Political Economy*, 13(4), 559–586.

SUZUKI, T. (2003): "The Epistemology of Macroeconomic Reality: The Keynesian Revolution from an Accounting Point of View," *Accounting, Organizations and Society*, 28(5), 471–517.

VERONESE PASSARELLA, M. (2014): "Financialization and the Monetary Circuit: A Macro-accounting Approach," *Review of Political Economy*, 26(1), 128–148.

II. Dimensions of economic resilience

Seminar 4: 18 September 2017 (M)

Conceptualising resilience.

BIERI, D. S. (2017): *The Resilience Challenge: Looking at Resilience through Multiple Lenses*, chap. Conceptualizing Financial Resilience: The Challenge for Urban Theory. Charles Thomas Publishers, Springfield, IL.

BOSCHMA, R. A. (2014): "Towards an Evolutionary Perspective on Regional Resilience," *Regional Studies*, 49(5), 733–751.

DAVOUDI, S. (2012): "Resilience: A Bridging Concept or a Dead End?," *Planning Theory and Practice*, 13(2), 299–333.

DUBÉ, J., AND M. POLÈSE (2015): "Resilience Revisited: Assessing the Impact of the 2007–09 Recession on 83 Canadian Regions with Accompanying Thoughts on an Elusive Concept," *Regional Studies*, 50(4), 615–628.

FAINSTEIN, S. S. (2015): "Resilience and Justice," *International Journal of Urban and Regional Research*, 39(1), 157–167.

HASSINK, R. (2010): "Regional Resilience: A Promising Concept to Explain Differences in Regional Economic Adaptability?," *Cambridge Journal of Regions, Economics and Society*, 3(1), 45–58.

MARTIN, R. L., AND P. J. SUNLEY (2015): "On the Notion of Regional Economic Resilience: Conceptualization and Explanation," *Journal of Economic Geography*, 15(1), 1–42.

ORMEROD, P. (2010): "Risk, Recessions and the Resilience of the Capitalist Economies," *Risk Management*, 12(1), 83–99.

Seminar 5: 25 September 2017 (M)

Regional resilience (**no class**).

*AGNEW, J. A. (2013): "Arguing with Regions," *Regional Studies*, 47(1), 6–17.

BRAKMAN, S., H. GARRETSEN, AND C. VAN MARREWIK (2015): "Regional Resilience across Europe: On Urbanisation and the Initial Impact of the Great Recession," *Cambridge Journal of Regions, Economics and Society*, forthcoming.

COURVISANOS, J., A. JAIN, AND K. K. MARDANEH (2015): "Economic Resilience of Regions under Crises: A Study of the Australian Economy," *Regional Studies*.

MARTIN, R. L. (2012): "Regional Economic Resilience, Hysteresis and Recessionary Shocks," *Journal of Economic Geography*, 12(1), 1–32.

SIMMIE, J. (2014): "Regional Economic Resilience: A Schumpeterian Perspective," *Raumforschung und Raumordnung*, 72(2), 103–116.

———, AND R. L. MARTIN (2010): "The Economic Resilience of Regions: Towards an Evolutionary Approach," *Cambridge Journal of Regions, Economy and Society*, 3(1), 27–43.

OVERMAN, H. G., P. RICE, AND A. J. VENABLES (2010): "Economic Linkages across Space," *Regional Studies*, 44(1), 17–33.

III. Financial instability and fragility

Seminar 6: 2 October 2017 (M)

The financial instability hypothesis: [Student presentations: Assignment 1.](#)

BEZEMER, D. J., AND M. GRYDAKI (2014): “Financial Fragility in the Great Moderation,” *Journal of Banking and Finance*, 49(2), 169–177.

DYMSKI, G. A. (2010): “Why the Subprime Crisis is Different: A Minskyian Approach,” *Cambridge Journal of Economics*, 34(2), 239–255.

——— (2017): *Money and Finance After the Crisis: Critical Thinking for Uncertain Times* chap. Making Financial Instability Visible in Space as Well as Time: Towards a More Keynesian Geography, pp. 91–116. Wiley, London and New York.

DYMSKI, G. A., AND J. M. VEITCH (1996): “Financial Transformation and the Metropolis: Booms, Busts, and Banking in Los Angeles,” *Environment and Planning A*, 28(7), 1233–1260.

HARVEY, D. (1989): “From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism,” *Geografiska Annaler Series B, Human Geography*, 71(1), 3–17.

MINSKY, H. P. (1977a): “Banking and a Fragile Financial Environment,” *Journal of Portfolio Management*, 3(4), 16–22.

——— (1977b): “The Financial Instability Hypothesis: An Interpretation of Keynes and an Alternative to “Standard” Theory,” *Challenge*, 20(1), 20–27.

TYMOIGNE, E. (2014): “Measuring Macroprudential Risk Through Financial Fragility: A Minskian Approach,” *Journal of Post Keynesian Economics*, 36(4), 719–744.

Seminar 7: 9 October 2017 (M)

Quantifying financial fragility and stress.

BARNES, P. (1987): “The Analysis and Use of Financial Ratios: A Review Article,” *Journal of Business Finance, and Accounting*, 14(4), 449–461.

BROWN, K. W. (1993): “The 10-Point Test of Financial Condition: Toward an Easy-to-Use Assessment Tool for Small Cities,” *Government Finance Review*, 9(12), 21–26.

HORRIGAN, J. O. (1968): “A Short History of Financial Ratio Analysis,” *Accounting Review*, 43(2), 284–294.

MACMANUS, S. A. (1984): “Introduction: Intergovernmental Dimensions of Urban Fiscal Stress,” *Publius: The Journal of Federalism*, 14(2), 1–6.

MAHER, C. S., AND S. C. DELLER (2011): “Measuring Municipal Fiscal Condition: Do Objective Measures of Fiscal Health Relate to Subjective Measures?,” *Journal of Public Budgeting, Accounting, and Financial Management*, 23(3), 455–478.

MAHER, C. S., AND K. NOLLENBERGER (2009): “Revisiting Kenneth Brown’s “10-Point Test”,” *Government Finance Review*, 25(11), 61–66.

STONE, S. B., A. SINGLA, J. COMEAUX, AND C. KIRSCHNER (2015): “A Comparison of Financial Indicators: The Case of Detroit,” *Public Budgeting and Finance*, 35(4), 90–111.

WANG, X., L. DENNIS, AND Y. S. J. TU (2007): “Measuring Financial Condition: A Study of U.S. States,” *Public Budgeting and Finance*, 27(2), 1–21.

IV. Fiscal sustainability

Seminar 8: 16 October 2017 (M)

Fiscal sustainability.

BAJO-RUBIO, O., C. DÍAZ-ROLDÁN, AND V. ESTEVE (2008): “U.S. Deficit Sustainability Revisited: A Multiple Structural Change Approach,” *Applied Economics*, 40(12), 1609–1613.

BOHN, H. (2008): “The Behavior of U.S. Public Debt and Deficits,” *Quarterly Journal of Economics*, 113(3), 949–963.

BORIO, C. E. V., M. J. LOMBARDI, AND F. ZAMPOLLI (2016): “Fiscal Sustainability and the Financial Cycle,” BIS Working Papers No. 552, Bank for International Settlements, Basel, Switzerland.

BUETTNER, T., AND D. E. WILDASIN (2006): “The Dynamics of Municipal Fiscal Adjustment,” *Journal of Public Economics*, 90(6–7), 1115–1132.

CHAPMAN, J. I. (2008): “State and Local Fiscal Sustainability: The Challenges,” *Public Administration Review*, 68(8), S115–S131.

CHEN, P.-F. (2016): “U.S. Fiscal Sustainability and the Causality Relationship between Government Expenditures and Revenues: A New Approach Based on Quantile Cointegration,” *Fiscal Studies*, 37(2), 301–320.

JI, H., J. AHN, AND J. I. CHAPMAN (2015): “The Role of Intergovernmental Aid in Defining Fiscal Sustainability at the Sub-national Level,” *Urban Studies*, 53(14), 3063–3081.

POTRAFKE, N., AND M. REISCHMANN (2015): “Fiscal Transfers and Fiscal Sustainability,” *Journal of Money, Credit and Banking*, 47(5), 975–1005.

WARD, R. B., AND L. DADAYAN (2009): “State and Local Finance: Increasing Focus on Fiscal Sustainability,” *Publius: The Journal of Federalism*, 39(3), 455–475.

ZHAO, B., AND D. COYNE (2013): “Walking a Tightrope: Are U.S. State and Local Governments on a Fiscally Sustainable Path?,” Working Paper No. 13–18, Federal Reserve Bank of Boston, Boston, MA.

Seminar 9: 23 October 2017 (M)

Fiscal stress: [Student presentations](#): [Assignment 2](#).

BAICKER, K., J. CLEMENS, AND M. SINGHAL (2012): “The Rise of the States: U.S. Fiscal Decentralization in the Postwar Period,” *Journal of Public Economics*, 96(11), 1079–1091.

CHERNICK, H., A. LANGLEY, AND A. RESCHOVSKYZ (2012): “Predicting the Impact of the U.S. Housing Crisis and “Great Recession” on Central City Revenues,” *Publius: The Journal of Federalism*, 42(3), 467–493.

DOVE, J. A. (2014): “Financial Markets, Fiscal Constraints, and Municipal Debt: Lessons and Evidence from the Panic of 1873,” *Journal of Institutional Economics*, 10(1), 74–106.

MAHDAVI, S., AND J. WESTERLUND (2011): “Fiscal Stringency and Fiscal Sustainability: Panel Evidence from the American State and Local Governments,” *Journal of Policy Modeling*, 33(6), 953–969.

RODRÍGUEZ-TEJEDO, I., AND J. J. WALLIS (2014): *When States Go Broke: The Origins, Context, and Solutions for the American States in Fiscal Crisis* chap. Fiscal Institutions and Fiscal Crises, pp. 9–39. Cambridge University Press, New York.

SKIDMORE, M., AND E. SCORSONE (2011): “Causes and Consequences of Fiscal Stress in Michigan Cities,” *Regional Science and Urban Economics*, 41(4), 360–371.

V. Urban fiscal health

Seminar 10: 30 October 2017 (M)

Anatomy of the urban crisis.

BAUMOL, W. J. (1967): “Macroeconomics of Unbalanced Growth: The Anatomy of Urban Crisis,” *American Economic Review*, 57(3), 415–426.

CHERNICK, H., A. LANGLEY, AND A. RESCHOVSKY (2011): “Revenue Diversification and the Finance of Large American Central Cities,” *Public Finance and Management*, 11(2), 138–159.

——— (2015): “Comparing Central City Finances Using Fiscally Standardized Cities,” *Journal of Comparative Policy Analysis*, 17(4), 430–440.

CHERNICK, H., AND A. RESCHOVSKY (2013): “The Fiscal Health of U.S. Cities,” Mimeograph, Hunter College, City University of New York and University of Wisconsin-Madison, New York and Madison, WI.

GRAMLICH, E. M. (1976): “New York: Ripple or Tidal Wave? The New York City Fiscal Crisis: What Happened and What is to be Done?,” *American Economic Review*, 66(2), 415–429.

——— (1979): “Stimulating the Macro Economy Through State and Local Governments,” *American Economic Review*, 69(2), 180–185.

HINKLEY, S. (2016): “Structurally Adjusting: Narratives of Fiscal Crisis in Four US Cities,” *Urban Studies*.

PECK, J. A. (2012): “Austerity Urbanism,” *City: analysis of urban trends, culture, theory, policy, action*, 16(6), 626–655.

SAWERS, L. (1979): “Fragmented Government and the US Urban Fiscal Crisis,” *International Journal of Urban and Regional Research*, 3(1–4), 565–570.

SCHWARTZ, T. R. (1987): “A New Urban Crisis in the Making,” *Challenge*, 30, 34–41.

Seminar 11: 6 November 2017 (M)

Urban fiscal stress—I.

URAHN, S. K., AND M. ETTLINGER (2013a): “Americas Big Cities in Volatile Times: Meeting Fiscal Challenges and Preparing for the Future,” White paper, Pew Charitable Trusts, Washington, DC.

——— (2013b): “The State Role in Local Government Financial Distress,” Research paper, Pew Charitable Trusts, Washington, DC.

Seminar 12: 13 November 2017 (M)

Urban fiscal stress—II.

BOHN, H., AND R. P. INMAN (1996): “Balanced-budget Rules and Public Deficits: Evidence from the U.S. States,” *Carnegie-Rochester Conference Series on Public Policy*, 45, 13–76.

EYRAUD, L., AND L. LUSINYAN (2013): “Vertical Fiscal Imbalances and Fiscal Performance in Advanced Economies,” *Journal of Monetary Economics*, 60(5), 571–587.

LUTZ, B., R. MOLLOY, AND H. SHAN (2011): “The Housing Crisis and State and Local Government Tax Revenue: Five Channels,” *Regional Science and Urban Economics*, 41(4), 306–319.

QUINTOS, C. (1995): “Sustainability of the Deficit Process with Structural Shifts,” *Journal of Business and Economic Statistics*, 13(4), 409–417.

Seminar 13: 27 November 2017 (M)

Fiscal federalism—I.

BLOCK, C. D. (2008): “Budget Gimmicks,” in *Fiscal Challenges: An Interdisciplinary Approach to Budget Policy*, ed. by E. Garrett, E. A. Graddy, and H. E. Jackson. Cambridge University Press, New York and Cambridge, UK.

KRANE, D., C. EBDON, AND J. BARTLE (2004): “Devolution, Fiscal Federalism, and Changing Patterns of Municipal Revenues: The Mismatch between Theory and Reality,” *Journal of Public Administration Research and Theory*, 14(4), 513–533.

MIESZKOWSKI, P., AND R. A. MUSGRAVE (1999): “Federalism, Grants, and Fiscal Equalization,” *National Tax Journal*, 52(3), 239–260.

OATES, W. E. (2006): *The Tiebout Model at Fifty* chap. The Many Faces of the Tiebout Model, pp. 21–45. Lincoln Institute of Land Policy, Cambridge, MA.

——— (2008): “On The Evolution of Fiscal Federalism: Theory and Institutions,” *National Tax Journal*, 61(2), 313–334.

WEINGAST, B. R. (2009): “Second Generation Fiscal Federalism: The Implications of Fiscal Incentives,” *Journal of Urban Economics*, 65(3), 279–293.

Seminar 14: 4 December 2017 (M)

Fiscal federalism—II.

BIERI, D. S., M. A. PAGANO, D. SIMUNDZA, AND M. L. ZELLNER (2017): “Urban Financial Resilience and the Fiscal Policy Space for Cities: Theory, Measurement, and Application,” GFURR white paper, Virginia Tech and University of Illinois at Chicago, Blacksburg, VA and Chicago, IL.

HENDRICK, R. M. (2011): *Managing the Fiscal Metropolis: The Financial Policies, Practices, and Health of Suburban Municipalities*, American Governance and Public Policy Series. Georgetown University Press, Washington, DC.

*MARKUSEN, A. R. (1999): “Fuzzy Concepts, Scanty Evidence, Policy Distance: The Case for Rigor and Policy Relevance in Critical Regional Studies,” *Regional Studies*, 33(9), 869–884.

PAGANO, M. A. (ed.) (2014): *Metropolitan Resilience in a Time of Economic Turmoil*, The Urban Agenda. University of Illinois Press, Urbana, Chicago and Springfield, IL.

——— (2015): “Fiscal Policy Space: Changing the Discourse from City Fiscal Condition to City Fiscal Behavior,” University of Michigan Center for Local, State and Urban Policy Lecture, University of Illinois at Chicago, Ann Arbor, MI.

PAGANO, M. A., AND C. W. HOENE (2010): *The Property Tax and Local Autonomy* chap. States and the Fiscal Policy Space of Cities, pp. 243–277. Lincoln Institute of Land Policy.

VI. Final research presentations**Seminar 15:** 11 December 2017 (M)

Final presentations.

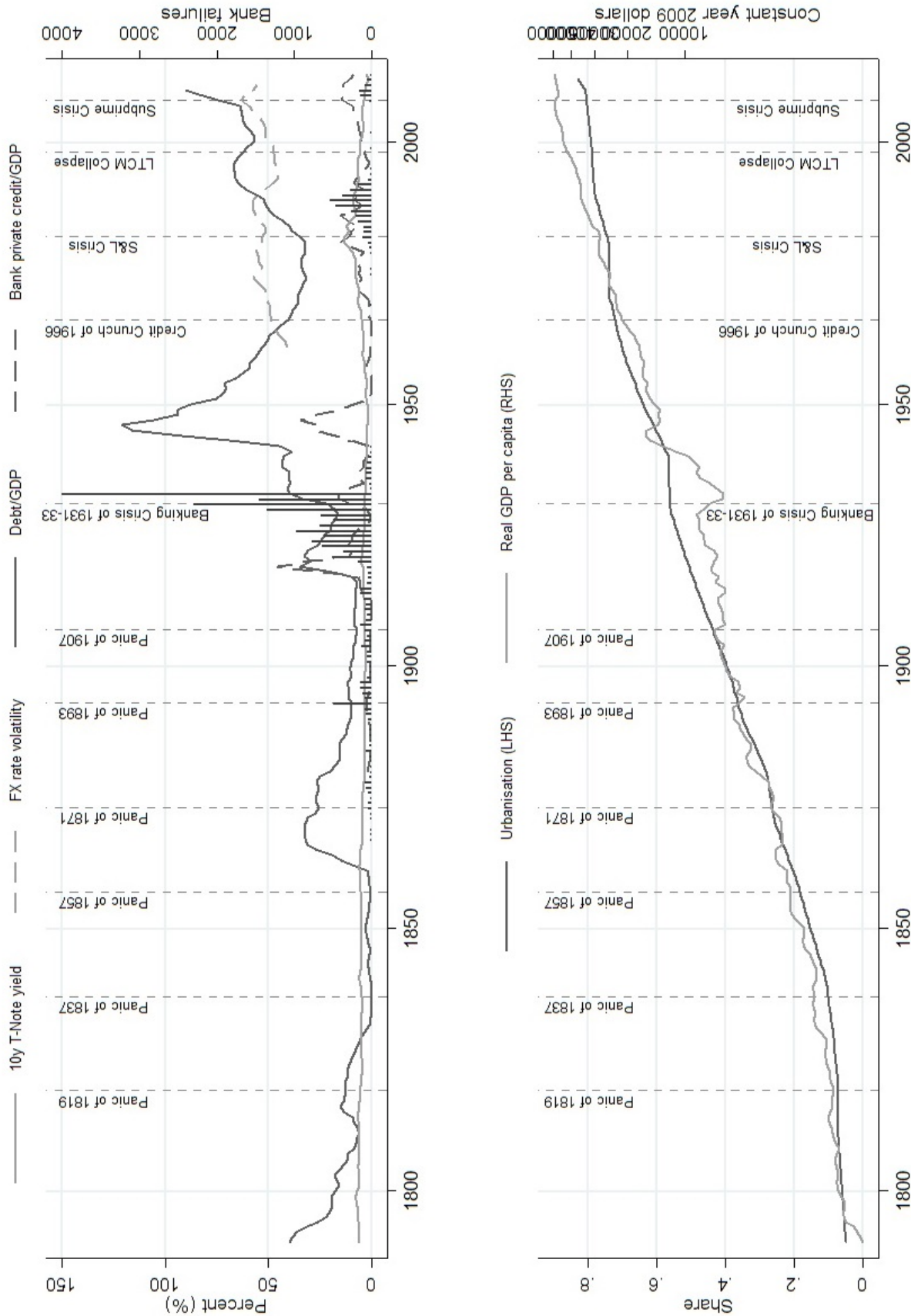
FENGE, R., AND V. MEIER (2002): “Why Cities Should Not Be Subsidised,” *Journal of Urban Economics*, 52(3), 433–447.

Table I: Money matters across different schools of economic thought

<i>Paradigm</i>	Origin of fluctuations	Real-monetary sector link	Nature of crises	Spatial effects
<i>Classics</i>	Real sector	Neutral	Resources	Not modelled
<i>Marrism</i>	Real sector	Neutral	Over-accumulation	Urbanization
<i>(Post) Keynesianism</i>	Both sectors	Non-neutral	Investment bubble, effective demand, financial instability	Not modelled
<i>Neoclassical (RBC)*</i>	Real sector	(Super)neutral [†]	Exogenous shocks (technology)	Not considered
<i>Monetarism</i>	Monetary sector	Non-neutral	Inflation	Not modelled
<i>Urban economics</i> (NUUE-NEG) [‡]	Real sector	Neutral	Cumulative causation	Agglomeration

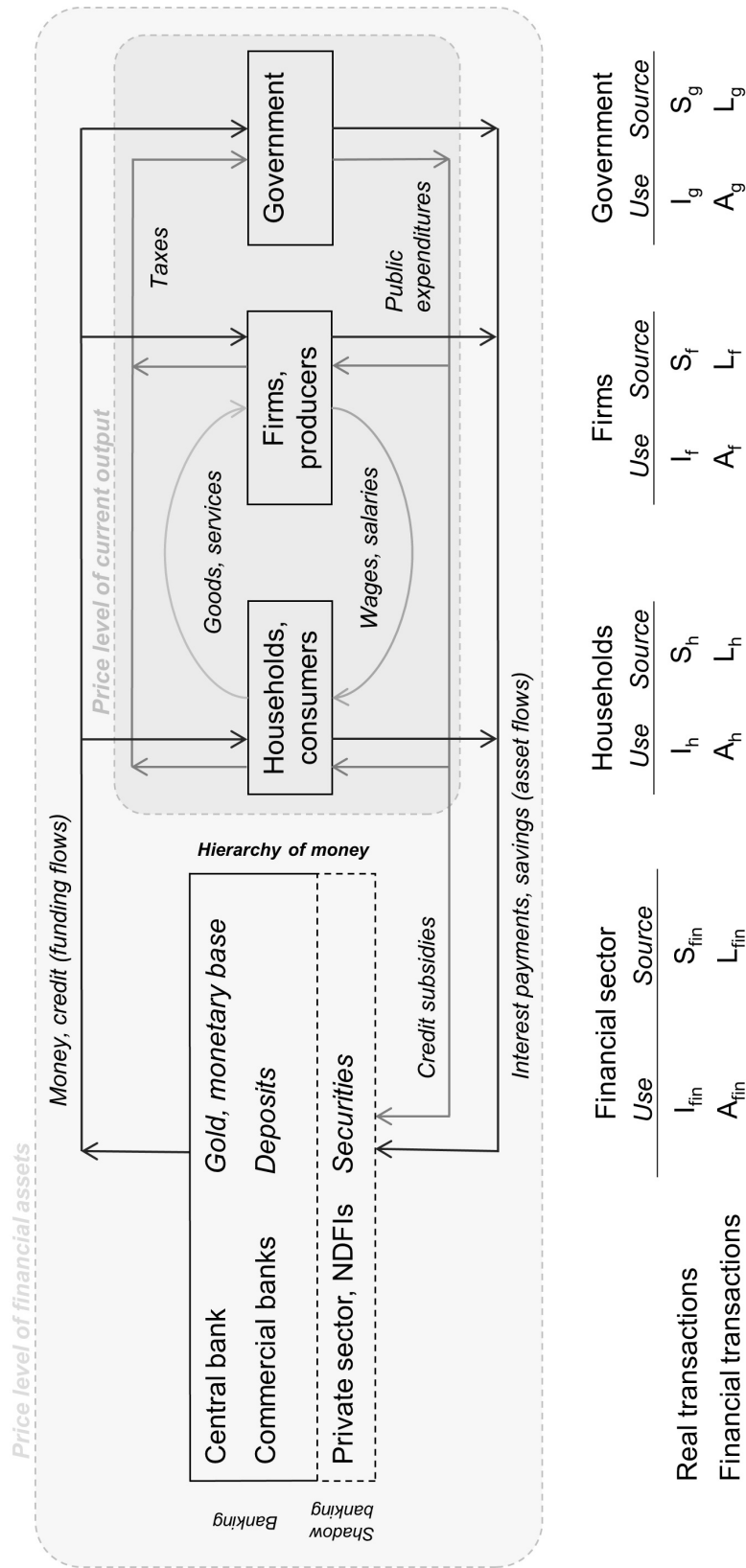
Notes: * Real business cycle theory in the tradition of new classical macroeconomics. [†] Superneutrality of money is a stronger version of monetary neutrality in that real variables are not only unaffected by the level of the money supply, but also by the rate of money supply growth. [‡] “New neoclassical urban economics” (NNUE) and new economic geography (NEG)/geographical economics.

Figure 1: 200 years of financial resilience in the U.S.



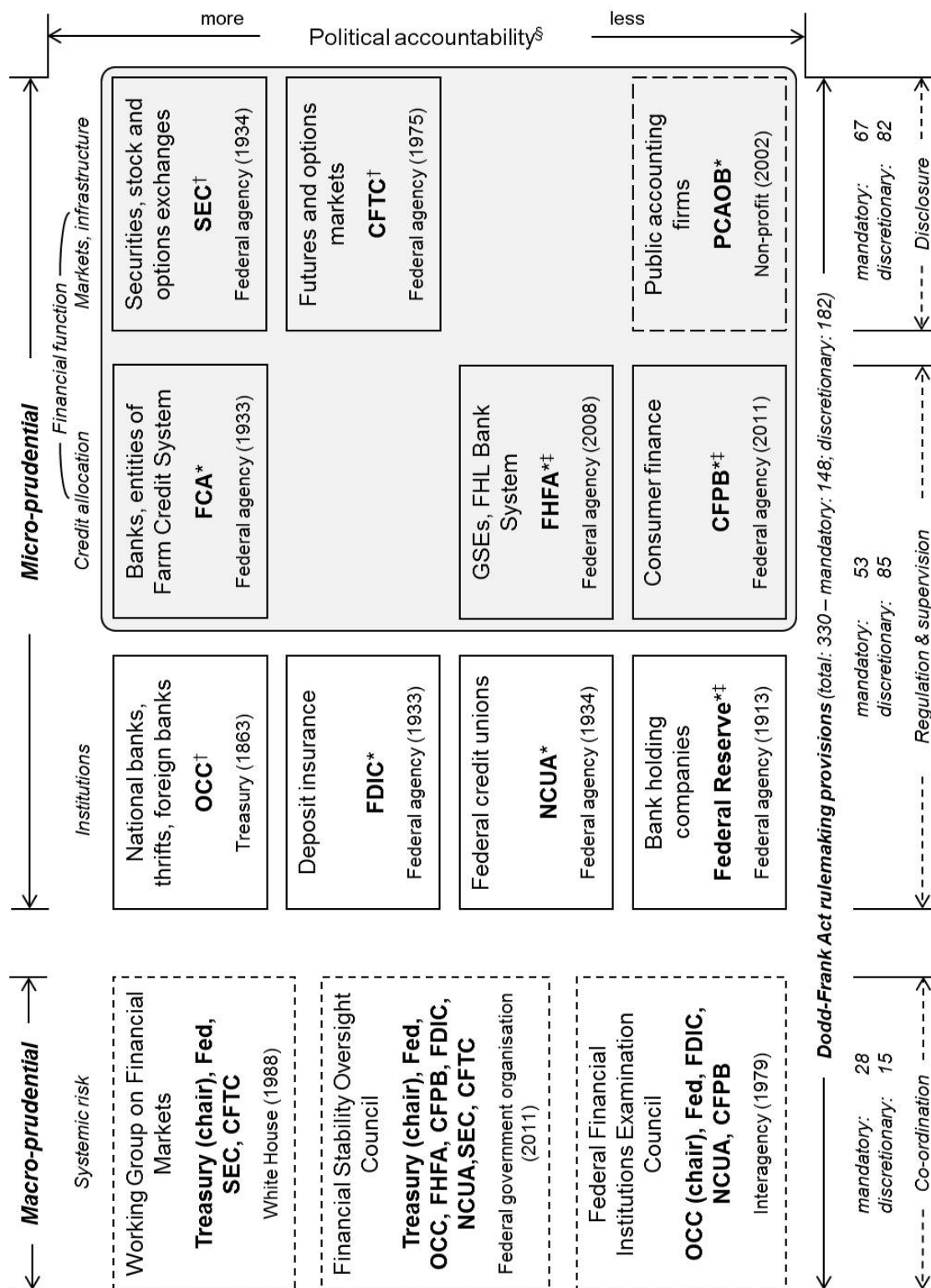
Notes: The top panel shows how two centuries in the evolution of the U.S. monetary-financial system are shaped by the dialectical tension between the inherent instability and resilience of monetary phenomena. The bottom panel illustrates the cumulative process of urbanisation and economic development advance irreversibly at the same time. Source: BIERI, D. S. (2015b): "Financial Resilience and the Urbanisation of Capital," *CITY: Analysis of Urban Trends, Culture, Theory, Policy, Action*, forthcoming.

Figure 2: Money flows across the space-economy



Notes: The Flow-of-funds and the hierarchy of money are combined in a schematic representation of the flow of funds across different sectors of the economy, paying particular attention on the hierarchical relationships between different forms of money and credit. The lower portion of the panel presents a sectoral flow-of-funds table that is consistent with the moneyflow accounting pioneered by Copeland (1947, 1952). Source: BIERI, D. S. (forthcoming): "Regulatory Space and the Flow of Funds across the Hierarchy of Money," in *Handbook of the Geographies of Money and Finance*, ed. by R. L. Martin, and J. Pollard, chap. 8. Edward Elgar, Cheltenham, UK.

Figure 3: The institutional arrangements of U.S. financial regulation



Notes: * Independent federal agency with self-funding. Funding source is not only independent of Congress, but authority to use funds is not conditioned on congressional budgetary approval. [†] Independent federal agency without self-funding. Accountability via budgetary appropriations process. [‡] “For-cause” removal protection of director, commonly used to distinguish between independent and executive branch agencies. [§] Degree of political accountability is determined using a number of criteria, including the degree of self-funding, for-cause protection of the director, multi-member boards and the requirement for partisan balance on the board. Source: Bieri, D. S. (2015a): *Building Responsive and Responsible Regulators in the Aftermath of the Financial Crisis* chap. Financial Stability Rearticulated: Institutional Reform, Post-Crisis Governance, and the New Regulatory Landscape in the United States, pp. 215–232. Intersentia Publishers, Cambridge, UK.