#### **GLOBAL ECONOMY**

#### PROFESSOR ALEH TSYVINSKI

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# COURSE POLICIES AND INFORMATION

This course focuses on the most pressing and important issues that the global economy faces.

The teaching in this class will be structured differently from what you may be used to. You are expected to read the papers before the class and I will lead the discussion. The reading list is extensive and one of the goals of the class is to teach you to digest a large number of papers and summarize or understand what is important. Some (many) of the papers we discuss will not be on the list before the lecture and will be added as we "discover" them – you are responsible for reading them.

The class will evolve with our interests and the path it takes and we will cover many other papers and will not cover some of the topics on the syllabus.

Grading. Your grade will be based 100% on class participation.

# LECTURE 1-2 (AND MAYBE 3): CRISES

#### Can crises be predicted:

Andrew Berg, Eduardo Borensztein, and Catherine Pattillo, 2004, <u>"Assessing Early Warning Systems: How</u> <u>Have They Worked in Practice?</u>", IMF Working Paper, Research Department.

Rose, Andrew K., and Mark M. Spiegel. "Cross-country causes and consequences of the 2008 crisis: early warning." *Japan and the World Economy* 24, no. 1 (2012): 1-16.

Frankel, Jeffrey, and George Saravelos. "Can leading indicators assess country vulnerability? Evidence from the 2008–09 global financial crisis." *Journal of International Economics* 87, no. 2 (2012): 216-231.

Schoenegger, Philipp, Peter S. Park, Ezra Karger, and Philip E. Tetlock. "AI-Augmented Predictions: LLM Assistants Improve Human Forecasting Accuracy." *arXiv preprint arXiv:2402.07862* (2024).

Tetlock, Philip E., and Dan Gardner. Superforecasting: The art and science of prediction. Random House, 2016.

# **Processing and Aggregating information**

Campbell, J., 2008. The hero with a thousand faces (Vol. 17). New World Library.

Crawford, Vincent P., and Joel Sobel. "Strategic information transmission." *Econometrica: Journal of the Econometric Society* (1982): 1431-1451.

Golosov, Mikhail, Vasiliki Skreta, Aleh Tsyvinski, and Andrea Wilson. "Dynamic strategic information transmission." *Journal of Economic Theory* 151 (2014): 304-341.

Grossman, S.J. and Stiglitz, J.E., 1980. On the impossibility of informationally efficient markets. *The American economic review*, *70*(3), pp.393-408.

Halawi, Danny, Fred Zhang, Chen Yueh-Han, and Jacob Steinhardt. "Approaching Human-Level Forecasting with Language Models." *arXiv preprint arXiv:2402.18563* (2024).

Kosheleva, O. and Kreinovich, V., 2018. Why Superforecasters Change Their Estimates on Average by 3.5%: A Theoretical Explanation. In *International Mathematical Forum* (Vol. 13, No. 4, pp. 207-210).

Malmendier, Ulrike, and Jessica A. Wachter. "Memory of past experiences and economic decisions." *Available at SSRN 4013583* (2021).

Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological review*, *63*(2), 81.

Pollack, I.The information of elementary auditory displays.( J. Acoust. Soc. Amer., 1952, 24, 745—749.)

Wilson, Andrea. "Bounded memory and biases in information processing." *Econometrica* 82, no. 6 (2014): 2257-2294.

### History of crises:

Carmen Reinhardt and Ken Rogoff, <u>This Time Is Different: A Panoramic View of Eight Centuries of Financial</u> <u>Crises</u>, Princeton University Press, 2009

\* Carmen Reinhardt and Ken Rogoff "<u>The Aftermath of Financial Crises</u> (with Carmen M. Reinhart), AMERICAN ECONOMIC REVIEW 99 (May 2009) 466-472. Also available as <u>NBER Working Paper No. 14656</u>, January 2009

Robert Barro and Jose Ursua, 2008. "<u>Macroeconomic Crises since 1870</u>", NBER Working Paper No. 13940 (Some parts of these paper are quite technical, you can skip them).

Barro, Robert J., and José F. Ursúa. <u>"Stock-market crashes and depressions.</u>" No. w14760. National Bureau of Economic Research, 2009.

O.M.W. Sprague(1910) <u>*"History of crises under the national banking system".</u> (A great but quite long book; not required).</u>* 

### Some theories of crises:

Diamond, Douglas W., and Philip H. Dybvig. "Bank runs, deposit insurance, and liquidity." *Journal of political economy*91, no. 3 (1983): 401-419.

Morris, Stephen, and Hyun Song Shin. "Rethinking multiple equilibria in macroeconomic modeling." *NBER macroeconomics Annual* 15 (2000): 139-161.

Hellwig, C., Mukherji, A. and Tsyvinski, A., 2006. Self-fulfilling currency crises: The role of interest rates. *American Economic Review*, *96*(5), pp.1769-1787.

#### Other

Ramey, G. and Ramey, V.A., 1995. Cross-country evidence on the link between volatility and growth. *The American Economic Review*, pp.1138-1151.

Ranciere, Romain, Aaron Tornell, and Frank Westermann. "Systemic crises and growth." *The Quarterly Journal of Economics* 123, no. 1 (2008): 359-406.

Gabaix, Xavier. "Power laws in economics and finance." Annu. Rev. Econ. 1, no. 1 (2009): 255-294.

Barro, Robert J. "Rare disasters and asset markets in the twentieth century." *The Quarterly Journal of Economics* 121, no. 3 (2006): 823-866.

Aguiar, Mark, and Gita Gopinath. "Emerging market business cycles: The cycle is the trend." *Journal of political Economy*115, no. 1 (2007): 69-102.

### LECTURE 2: THE GREAT DEPRESSION

Harold Cole and Lee Ohanian, <u>"The Great Depression in the United States From A Neoclassical Perspective"</u>, Federal Reserve Bank of Minneapolis Quarterly Review, Winter 1999, vol. 23, no. 1, pp. 2–24.

V.V. Chari, Ellen McGrattan, and Patrick Kehoe, <u>"Accounting for the Great Depression"</u>, Federal Reserve Bank of Minneapolis Quarterly Review, Spring 2003, Vol. 27, No. 2, pp. 2–8.

Cole, Harold L., and Lee E. Ohanian. "New Deal policies and the persistence of the Great Depression: A general equilibrium analysis." *Journal of political Economy* 112, no. 4 (2004): 779-816.

Timothy Kehoe and Edward Prescott, 2007, "Great Depressions of the XXth century".

Eichengreen, Barry. *Hall of mirrors: The great depression, the great recession, and the uses-and misuses-of history*. Oxford University Press, 2014.

Field, Alexander J. "The most technologically progressive decade of the century." *American Economic Review* 93, no. 4 (2003): 1399-1413.

#### **LECTURE 4: SOVIET UNION**

Gerschenkron, Alexander. "Economic Backwardness in Historical Perspective (1962)." *The Political Economy Reader: Markets as Institutions* (1962): 211-228.

Allen, Robert C. *Farm to factory: A reinterpretation of the Soviet industrial revolution*. Vol. 11. Princeton University Press, 2003.

Davies, Robert William, R. W. Davies, Mark Harrison, and Stephen G. Wheatcroft, eds. *The economic transformation of the Soviet Union*, *1913-1945*. Cambridge University Press, 1994.

Cheremukhin, Anton, Mikhail Golosov, Sergei Guriev, and Aleh Tsyvinski. "The industrialization and economic development of Russia through the lens of a neoclassical growth model." *The Review of Economic Studies* 84, no. 2 (2017): 613-649.

Acemoglu, D., Golosov, M. and Tsyvinski, A., 2008. Markets versus governments. *Journal of Monetary Economics*, *55*(1), pp.159-189.

#### LECTURE 5: GREAT RECESSION AND THE BUSINESS CYCLE

Chari, Varadarajan V., Patrick J. Kehoe, and Ellen R. McGrattan. "Business cycle accounting." *Econometrica* 75, no. 3 (2007): 781-836.

Brinca, Pedro, Varadarajan V. Chari, Patrick J. Kehoe, and Ellen McGrattan. "Accounting for business cycles." In *Handbook of Macroeconomics*, vol. 2, pp. 1013-1063. Elsevier, 2016.

Kehoe, Patrick J., Virgiliu Midrigan, and Elena Pastorino. "Evolution of modern business cycle models: Accounting for the great recession." *Journal of Economic Perspectives* 32, no. 3 (2018): 141-66.

Lee Ohanian, <u>"The Economic Crisis from a Neoclassical Perspective"</u>, Journal of Economic Perspectives, Fall 2010. Also

Ohanian, Lee E. "The Great Recession in the Shadow of the Great Depression: A Review Essay on Hall of Mirrors: The Great Depression, the Great Recession, and the Uses and Misuses of History, by Barry Eichengreen." *Journal of Economic Literature* 55, no. 4 (2017): 1583-1601.

Mian, A. and Sufi, A., 2014. What explains the 2007–2009 drop in employment?. *Econometrica*, 82(6), pp.2197-2223.

Perri, Fabrizio, and Vincenzo Quadrini. "International recessions." American Economic Review 108.4-5 (2018)

Robert Hall, 2014, "<u>Quantifying the Lasting Harm to the U.S. Economy from the Financial Crisis</u>, NBER Working Paper 20183, May 2014, NBER Macro Annual 2014, forthcoming.

G Gorton, A Metrick, 2012 "<u>Getting Up to Speed on the Financial Crisis: A One-Weekend-Reader's Guide</u>", Journal of Economic Literature

Levchenko, Andrei A., Logan T. Lewis, and Linda L. Tesar. "The collapse of international trade during the 2008–09 crisis: in search of the smoking gun." *IMF Economic review* 58, no. 2 (2010): 214-253. Eaton, Jonathan, Samuel Kortum, Brent Neiman, and John Romalis. "Trade and the global recession." *American Economic Review* 106, no. 11 (2016): 3401-38.

Fernald, John G. "Productivity and Potential Output before, during, and after the Great Recession." *NBER macroeconomics annual* 29, no. 1 (2015): 1-51.

Fernald, John G., and Charles I. Jones. "The future of US economic growth." *American economic review* 104, no. 5 (2014): 44-49.

Gordon, Robert J. *The rise and fall of American growth: The US standard of living since the civil war.* Princeton University Press, 2017.

#### LECTURE 7: JAPAN: ZOMBIES, "LOST DECADE" AND BEYOND

\* Fumio Hayashi and Edward Prescott, "The 1990s in Japan: A Lost Decade"

Ricardo J. Caballero, Takeo Hoshi and Anil K. Kashyap, <u>"Zombie Lending and Depressed Restructuring in Japan"</u> American Economic Review, Vol. 98, No. 5, December 2008

Takeo Hoshi and Anil K Kashyap , "Japan's Financial Crisis and Economic Stagnation", Journal of Economic Perspectives—Volume 18, Number 1—Winter 2004

Barseghyan, Levon. "Non-performing loans, prospective bailouts, and Japan's slowdown." *Journal of Monetary economics* 57, no. 7 (2010): 873-890.

Kobayashi, K., & Inaba, M. (2006). Business cycle accounting for the Japanese economy. Japan and the World Economy, 18(4), 418-440.

Fukuda and Nakamura (2013), <u>"Why did zombie firms recover in Japan"</u>, The World Economy.

Ulriche Schaede, "Show Me the Money: Japan's Most Profitable Companies of the 2000s".

Christian Broda, David E. Weinstein <u>"Happy News from the Dismal Science: Reassessing the Japanese Fiscal</u> Policy and Sustainability"

Aoki, Masahiko, Alan Garber, and Paul Romer. "Why the Japanese Economy is not Growing: micro barriers to productivity growth." *McKinsey Global Institute, Washington*(2000).

Betts, Caroline. "How many (more) lost decades? The great productivity slowdown in Japan." (2021).

### LECTURE 8: CHINA

Pomeranz, Kenneth. *The great divergence: China, Europe, and the making of the modern world economy*. Princeton University Press, 2000.

Broadberry, S., Guan, H., & Li, D. D. (2018). China, Europe, and the great divergence: a study in historical national accounting, 980–1850. *The Journal of Economic History*, *78*(4), 955-1000.

Rosenthal, Jean-Laurent, and Roy Bin Wong. *Before and beyond divergence*. Harvard University Press, 2011.

Brandt, L., Ma, D., & Rawski, T. G. (2014). From divergence to convergence: reevaluating the history behind China's economic boom. *Journal of Economic Literature*, *5*2(1), 45-123.

Brandt, L., Hsieh, C. T., & Zhu, X. (2008). Growth and structural transformation in China. China's great economic transformation, 683-728. And Brandt, Loren, and Thomas G. Rawski, eds. *China's great economic transformation*. Cambridge university press, 2008.

Song, Z., Storesletten, K., & Zilibotti, F. (2011). Growing like china. *American economic review*, 101(1), 196-233.

A. Cheremukhin, M. Golosov, S. Guriev, A. Tsyvinski, "The Economy of the People's Republic of China from 1953," Review of Economic Studies.

Chang-Tai Hsieh and Pete Klenow, <u>"Misallocation and Manufacturing TFP in China and India"</u> *Quarterly Journal of Economics* 124, November 2009, 1403-1448.

Lorenzo Caliendo, Fernando Parro, Aleh Tsyvinski "Misallocation in a Global Economy", AEJ: Macro forthcoming

## LECTURE 9: CLIMATE CHANGE

Jones, Charles I., and Peter J. Klenow. "Beyond GDP? Welfare across countries and time." *American Economic Review* 106, no. 9 (2016): 2426-57.

Nordhaus, William D., and Joseph Boyer. Warming the world: economic models of global warming. MIT press, 2000.

Nordhaus, William D. "A review of the Stern review on the economics of climate change." *Journal of economic literature*45, no. 3 (2007): 686-702.

Golosov, Mikhail, John Hassler, Per Krusell, and Aleh Tsyvinski. "Optimal taxes on fossil fuel in general equilibrium." *Econometrica* 82, no. 1 (2014): 41-88.

Hassler, John, Per Krusell, and Anthony A. Smith Jr. "Environmental macroeconomics." In *Handbook of macroeconomics*, vol. 2, pp. 1893-2008. Elsevier, 2016.

Hassler, J., Krusell, P. and Olovsson, C., 2018. The consequences of uncertainty: climate sensitivity and economic sensitivity to the climate. *Annual Review of Economics*, *10*, pp.189-205.

#### **LECTURE 10: FISCAL POLICY**

Valerie Ramey, 2011 <u>"Identifying Government Spending Shocks: It's All in the Timing</u>", Quarterly Journal of Economics February 2011.

Ramey, Valerie A., and Sarah Zubairy. "Government spending multipliers in good times and in bad: evidence from US historical data." *Journal of Political Economy* 126, no. 2 (2018): 850-901.

Valerie A. Ramey, 2012, <u>"Government Spending and Private Activity"</u>

Valerie A. Ramey, <u>"Can Government Purchases Stimulate the Economy?"</u>, Journal of Economic Literature, September 2011.

Ramey, Valerie A. "Ten years after the financial crisis: What have we learned from the renaissance in fiscal research?." *Journal of Economic Perspectives* 33, no. 2 (2019): 89-114.

Barro, Robert J., Redlick, Charles J., February 2010, <u>"Macroeconomic Effects from Government Purchases and Taxes"</u>, <u>Quarterly Journal of Economics</u>.

Christina Romer and David Romer <u>The Macroeconomic Effects of Tax Changes: Estimates Based on a New</u> <u>Measure of Fiscal Shocks</u>, American Economic Review, June 2010.

Ramey, Valerie A. *The macroeconomic consequences of infrastructure investment*. No. w27625. National Bureau of Economic Research, 2020.

### **LECTURE 11-12: TAXATION**

Chari, Varadarajan V., and Patrick J. Kehoe. "Optimal fiscal and monetary policy." *Handbook of macroeconomics* 1 (1999): 1671-1745.

Mirrlees, James A., and Stuart Adam. Dimensions of tax design: the Mirrlees review. Oxford University Press, 2010.

Saez, Emmanuel. "Using elasticities to derive optimal income tax rates." *The review of economic studies* 68, no. 1 (2001): 205-229.

Golosov, Mikhail, Narayana Kocherlakota, and Aleh Tsyvinski. "Optimal indirect and capital taxation." *The Review of Economic Studies* 70, no. 3 (2003): 569-587.

Golosov, Mikhail, and Aleh Tsyvinski. "Designing optimal disability insurance: A case for asset testing." *Journal of political Economy* 114, no. 2 (2006): 257-279.

Golosov, Mikhail, and Aleh Tsyvinski. "Policy Implications of Dynamic Public Finance." *Annual Review of Economics* 7, no. 1 (2015): 147-171.

## **LECTURE 13: DEBT**

Carmen Reinhardt and Ken Rogoff "<u>From Financial Crash to Debt Crisis</u>" (with Carmen M. Reinhart), AMERICAN ECONOMIC REVIEW. Also available as <u>NBER working paper 15795</u>, March 2010.

Carmen Reinhardt and Ken Rogoff, "<u>Growth in a Time of Debt</u>" (with Carmen M. Reinhart), <u>American</u> <u>Economic Review</u> 100 (2), May 2010, 573-578. Also available as <u>NBER working paper 15639</u>, January 2010.

Carmen M. Reinhart and Kenneth S. Rogoff (2013) Errata: "Growth in A Time of Debt".

T Herndon, M Ash, R Pollin <u>"Does high public debt consistently stifle economic growth? A critique of Reinhart and</u> Rogoff" Cambridge journal of economics, 2014

Alesina, Alberto, and Silvia Ardagna. "Large changes in fiscal policy: taxes versus spending." *Tax policy and the economy*24, no. 1 (2010): 35-68.

Guajardo, Jaime, Daniel Leigh, and Andrea Pescatori. "Expansionary austerity? International evidence." *Journal of the European Economic Association* 12, no. 4 (2014): 949-968.

## **LECTURE 14: CRYPTOCURRENCIES**

Kocherlakota, Narayana R. "Money is memory." journal of economic theory 81, no. 2 (1998): 232-251.

Liu, Yukun, and Aleh Tsyvinski. *Risks and returns of cryptocurrency*. No. w24877. National Bureau of Economic Research, 2018. Forthcoming Review of Financial Studies

Liu, Yukun, Aleh Tsyvinski, and Xi Wu. *Common risk factors in cryptocurrency*. No. w25882. National Bureau of Economic Research, 2019. Forthcoming Journal of Finance

Borri, Nicola, and Kirill Shakhnov. "The cross-section of cryptocurrency returns." *Available at SSRN 3241485* (2019).

Cong, L.W., Li, Y. and Wang, N., 2021. Tokenomics: Dynamic adoption and valuation. *The Review of Financial Studies*, *34*(3), pp.1105-1155.

Sockin, Michael, and Wei Xiong. A model of cryptocurrencies. No. w26816. National Bureau of Economic Research, 2020.

Biais, Bruno, Christophe Bisiere, Matthieu Bouvard, Catherine Casamatta, and Albert J. Menkveld. "Equilibrium bitcoin pricing." *Available at SSRN 3261063* (2020).