

A man wearing a red baseball helmet, a light blue button-down shirt, dark shorts, and brown loafers is captured in the middle of a powerful baseball swing. He is on a baseball field, with a chain-link fence in the foreground and background. The scene is set during the day with bright sunlight casting long shadows. In the background, another person is visible near a white car, and a blue utility box is mounted on the fence.

TRIBUTE
EMMANUEL

FARHI

BY IVAN WERNING
AEA 2021 MEETING

EMMANUEL FARHI

EMMANUEL FARHI

- One of the best economist ever, giant of his generation and prove to be a giant and inspiration for generations to come

EMMANUEL FARHI

- One of the best economist ever, giant of his generation and prove to be a giant and inspiration for generations to come
- many unique traits...

EMMANUEL FARHI

- One of the best economist ever, giant of his generation and prove to be a giant and inspiration for generations to come
- many unique traits...
 - brilliant and ambitious, but kind generous and humble

EMMANUEL FARHI

- One of the best economist ever, giant of his generation and prove to be a giant and inspiration for generations to come
- many unique traits...
 - brilliant and ambitious, but kind generous and humble
 - broad and eclectic, but deep looking to build foundations

EMMANUEL FARHI

- One of the best economist ever, giant of his generation and prove to be a giant and inspiration for generations to come
- many unique traits...
 - brilliant and ambitious, but kind generous and humble
 - broad and eclectic, but deep looking to build foundations
 - theorist at heart, but applied and policy motivated

EMMANUEL FARHI

- One of the best economist ever, giant of his generation and prove to be a giant and inspiration for generations to come
- many unique traits...
 - brilliant and ambitious, but kind generous and humble
 - broad and eclectic, but deep looking to build foundations
 - theorist at heart, but applied and policy motivated
 - elegant with his math, but focused on Economics and reader past writers, institutions etc. (Keynes, Friedman, Mundell, McKinnon, Kinnan, Minsky Triffin, Kindelberg etc.)

EMMANUEL FARHI

- One of the best economist ever, giant of his generation and prove to be a giant and inspiration for generations to come
- many unique traits...
 - brilliant and ambitious, but kind generous and humble
 - broad and eclectic, but deep looking to build foundations
 - theorist at heart, but applied and policy motivated
 - elegant with his math, but focused on Economics and reader past writers, institutions etc. (Keynes, Friedman, Mundell, McKinnon, Kinnan, Minsky Triffin, Kindelberg etc.)
 - respectful of other fields and approaches

EMMANUEL FARHI

- One of the best economist ever, giant of his generation and prove to be a giant and inspiration for generations to come
- many unique traits...
 - brilliant and ambitious, but kind generous and humble
 - broad and eclectic, but deep looking to build foundations
 - theorist at heart, but applied and policy motivated
 - elegant with his math, but focused on Economics and reader past writers, institutions etc. (Keynes, Friedman, Mundell, McKinnon, Kinnan, Minsky Triffin, Kindelberg etc.)
 - respectful of other fields and approaches

EMMANUEL FARHI

- One of the best economist ever, giant of his generation and prove to be a giant and inspiration for generations to come
- many unique traits...
 - brilliant and ambitious, but kind generous and humble
 - broad and eclectic, but deep looking to build foundations
 - theorist at heart, but applied and policy motivated
 - elegant with his math, but focused on Economics and reader past writers, institutions etc. (Keynes, Friedman, Mundell, McKinnon, Kinnan, Minsky Triffin, Kindelberg etc.)
 - respectful of other fields and approaches
- fearless and open minded, driven by true passion for economics (late father was an economist)







FARAHAT

1993

M.S.

Mgt

FARHI

FARIA NETO

2006

Ph.D.

Econ

FARRIS

1994

M.S.

Mgt

FARRELLY

1998

S.M.

Mgt

FARZANFAR

1992

Ph.D.

Pol.Sci

V.1

FEARS
Laura

2006

S.M.M.O.T.

Mgt

V.2

FEDD

1994

M.S.

E.E.

FELDER

2001

Ph.D.

Mgt

FELCH

1997

M.S.

Pol.Sci.

V.2

FELBAB BROWN

2007

Ph.D.

Pol.Sci.

V.1

FELBAB BROWN

2007

Ph.D.

Mgt

FEEB

1993

M.S.

Mgt

FEDD

1998

S.M.M.O.T.

Mgt

FEARS

2006

S.M.

C.E.

FEARING

2000

S.M.M.O.T.

Mgt

FARZANFAR

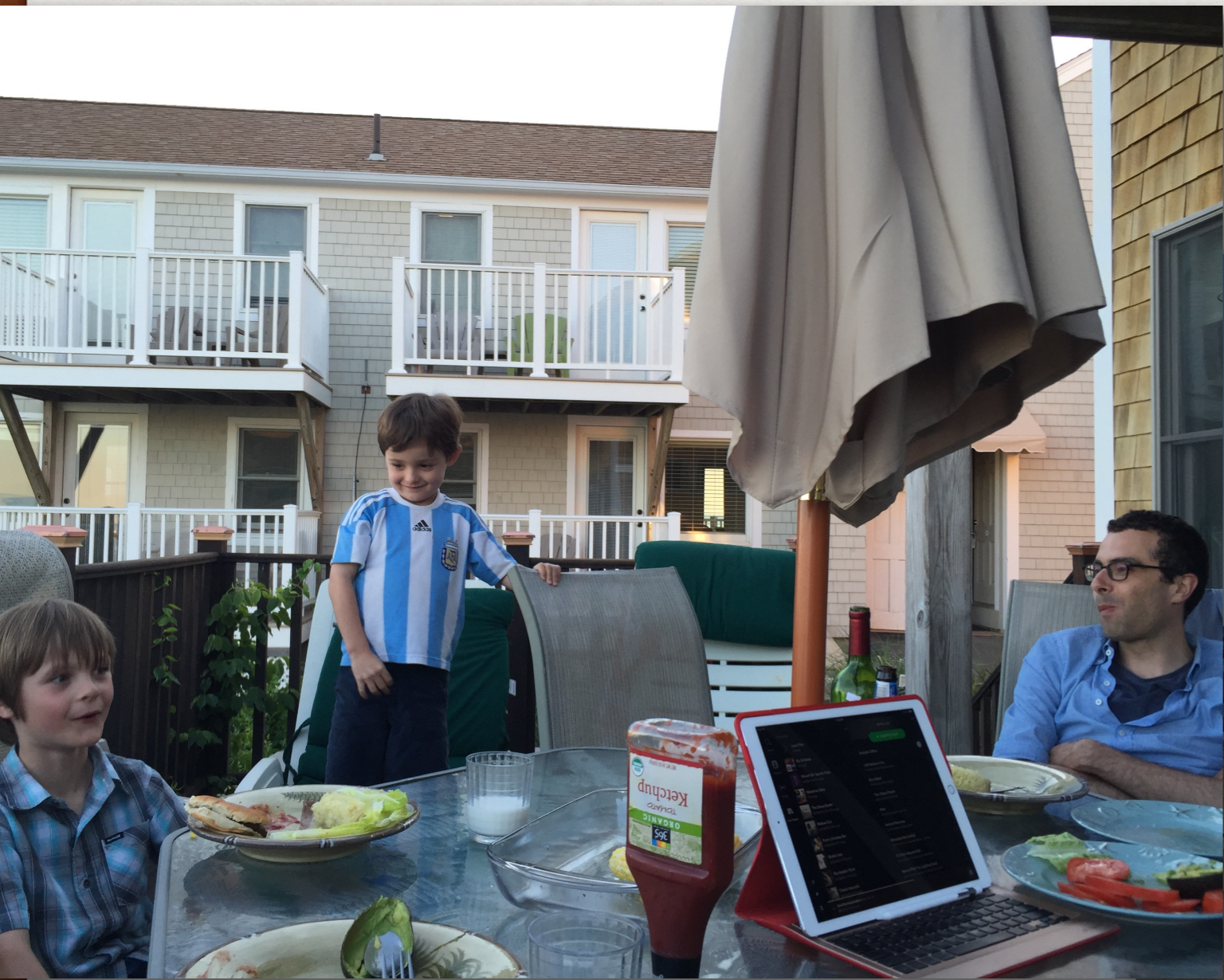
1992

Ph.D.

Pol.Sci

V.1







Productivity and Misallocation in General Equilibrium

David Rezza Baqaee
UCLA

Emmanuel Farhi*
Harvard

March 10, 2020

Abstract

This paper develops a general theory of aggregation in inefficient economies. We provide non-parametric formulas for aggregating microeconomic shocks in economies with distortions such as taxes, markups, frictions to resource reallocation, financial frictions, and nominal rigidities. We allow for arbitrary elasticities of substitution, returns to scale, factor mobility, and input-output network linkages. We show how to separately measure changes in technical and allocative efficiency. We also show how to compute the social cost of distortions. We pursue applications focusing on firm-level markups in the U.S. We find that improvement in allocative efficiency, due to the reallocation over time of market share to high-markup firms, accounts for about half of aggregate TFP growth over the period 1997-2015. We also find that eliminating the misallocation resulting from the large and dispersed markups estimated in the data would raise aggregate TFP by about 15%, increasing the economy-wide cost of monopoly distortions by two orders of magnitude compared to the famous 0.1% estimate by Harberger (1954). These exact numbers should be interpreted with care since the data is imperfect and requires substantial imputation.

*Emails: baqaee@econ.ucla.edu, efarhi@harvard.edu. We thank Philippe Aghion, Pol Antras, Andrew Atkeson, Susanto Basu, John Geanakoplos, Ben Golub, Gita Gopinath, Dale Jorgenson, Marc Melitz, Ben Moll, Matthew Shapiro, Dan Trefler, Venky Venkateswaran and Jaume Ventura for their valuable comments. We are especially grateful to Natalie Bau for detailed conversations. We thank German Gutierrez, Thomas Philippon, Jan De Loecker, and Jan Eeckhout for sharing their data. We thank Thomas Brzustowski and Maria Voronina for excellent research assistance.

A MODEL OF THE INTERNATIONAL MONETARY SYSTEM*

EMMANUEL FARHI AND MATTEO MAGGIORI

We propose a simple model of the international monetary system. We study the world supply and demand for reserve assets denominated in different currencies under a variety of scenarios: a hegemon versus a multipolar world; abundant versus scarce reserve assets; and a gold exchange standard versus a floating rate system. We rationalize the Triffin dilemma, which posits the fundamental instability of the system, as well as the common prediction regarding the natural and beneficial emergence of a multipolar world, the Nurkse warning that a multipolar world is more unstable than a hegemon world, and the Keynesian argument that a scarcity of reserve assets under a gold standard or at the zero lower bound is recessionary. Our analysis is both positive and normative. *JEL Codes:* D42, E12, E42, E44, F3, F55, G15, G28.

I. INTRODUCTION

We propose a formal model of the the International Monetary System (IMS). We consider the IMS as the collection of three key attributes: (i) the supply of and demand for reserve assets; (ii) the exchange rate regime; and (iii) international monetary institutions. We show how modern theories developed to analyze sovereign debt crises, oligopolistic competition, and Keynesian

*We thank Pol Antràs, Julien Bengui, Guillermo Calvo, Dick Cooper, Ana Fostel, Jeffrey Frieden, Mark Gertler, Gita Gopinath, Pierre-Olivier Gourinchas, Veronica Guerrieri, Guido Lorenzoni, Arnaud Mehl, Brent Neiman, Jaromir Nosal, Maurice Obstfeld, Jonathan Ostry, Hélène Rey, Kenneth Rogoff, Jesse Schreger, Andrei Shleifer, Jeremy Stein, and seminar participants at the NBER (IFM, MEFM, EFMB), University of California Berkeley, University of Chicago Booth, Yale University, Boston College, Boston University, Stanford (GSB, Econ Dept.), MIT Sloan, LSE, LBS, Oxford University, Imperial College, PSE Conference of Sovereign Risk, Harvard University, CREI-Pompeu Fabra, Brown University, Yale Cowles Conference on General Equilibrium Theory, Einaudi Institute, Toulouse School of Economics, University of Virginia, University of Lausanne, IEES, IMF, ECB, BIS, Boston Fed, ECB-Fed biennial joint conference, Minnesota workshop in macroeconomic theory, Wharton conference on liquidity, Bank of Italy, Boston Fed, Bank of Canada annual conference, Hydra conference, SED, Econometric Society, Chicago Booth junior conference in international macro-finance, CSEF-IGIER Symposium on Economics and Institutions. We thank Michael Reher for excellent research assistance. Maggiori gratefully acknowledges the financial support of the NSF (1424690), and Weatherhead Center for International Affairs at Harvard University.

*En

Atkeson
Moll, M
We are
Philipp
Maria V

COORDINATION AND CRISIS IN MONETARY UNIONS*

MARK AGUIAR
MANUEL AMADOR
EMMANUEL FARHI
GITA GOPINATH

We study fiscal and monetary policy in a monetary union with the potential for rollover crises in sovereign debt markets. Member-country fiscal authorities lack commitment to repay their debt and choose fiscal policy independently. A common monetary authority chooses inflation for the union, also without commitment. We first describe the existence of a fiscal externality that arises in the presence of limited commitment and leads countries to overborrow; this externality rationalizes the imposition of debt ceilings in a monetary union. We then investigate the impact of the composition of debt in a monetary union, that is the fraction of high-debt versus low-debt members, on the occurrence of self-fulfilling debt crises. We demonstrate that a high-debt country may be less vulnerable to crises and have higher welfare when it belongs to a union with an intermediate mix of high- and low-debt members, than one where all other members are low-debt. This contrasts with the conventional wisdom that all countries should prefer a union with low-debt members, as such a union can credibly deliver low inflation. These findings shed new light on the criteria for an optimal currency area in the presence of rollover crises. *JEL* Codes: E4, E5, F3, F4.

I. INTRODUCTION

Monetary unions are characterized by centralized monetary policy and decentralized fiscal policy. The problems associated with stabilizing the impact on welfare of asymmetric shocks across countries with a common monetary policy have been studied in depth starting with the seminal work of Mundell (1961) on optimal currency areas. The ongoing euro crisis has, however, brought to the forefront a novel set of issues regarding welfare of countries in a monetary union with asymmetric debt levels that are subject to rollover risk in sovereign debt markets. To study these issues we provide a framework that describes the impact of centralized monetary policy and decentralized fiscal policy on

*En

Atkeson
Moll, M
We are
Philipp
Maria V

Unconventional Fiscal Policy at the Zero Bound[†]

By ISABEL CORREIA, EMMANUEL FARHI,
JUAN PABLO NICOLINI, AND PEDRO TELES*

When the zero lower bound on nominal interest rates binds, monetary policy cannot provide appropriate stimulus. We show that, in the standard New Keynesian model, tax policy can deliver such stimulus at no cost and in a time-consistent manner. There is no need to use inefficient policies such as wasteful public spending or future commitments to low interest rates. (JEL E12, E43, E52, E62, H20)

Arbitrage between money and bonds requires nominal interest to be positive. This “zero bound” constraint gives rise to a macroeconomic situation known as a liquidity trap. It presents a difficult challenge for stabilization policy.

There is a well-developed Keynesian view on the subject. In a liquidity trap, monetary policy is ineffective—increasing the money supply is like “pushing on a string.” The standard Keynesian prescription is to use fiscal policy in order to stimulate the economy, in the form of tax cuts or government spending increases. Expansionary fiscal policy is presumed to be especially effective in a liquidity trap due to the lack of eviction effects through higher interest rates. This recommendation has been very influential in shaping policy. Yet its validity can be questioned and refined. Indeed, the absence of microfoundations, lack of dynamics, and neglect of expectations formation in the basic IS-LM model creates difficulties for normative analysis (how to think about welfare), as well as for positive analysis (how to think about the adjustment of prices, about the effects of different taxes versus government expenditures, or about the effects of future policy commitments).

Recently, a literature has emerged that revisits the Keynesian analysis in the context of explicitly microfounded, dynamic, rational expectations models with nominal rigidities that do not suffer from these shortcomings. There is now an emerging New Keynesian view of liquidity traps. Krugman (1998) and Eggertsson and Woodford (2003), and more recently Werning (2012) have characterized optimal

*En

Atkeson
Moll, M
We are
Philipp
Maria V



Available online at www.sciencedirect.com



Journal of Financial Economics 83 (2007) 87–121

JOURNAL OF
Financial
ECONOMICS

www.elsevier.com/locate/jfec

Saving and investing for early retirement: A theoretical analysis [☆]

Emmanuel Farhi^a, Stavros Panageas^{b,*}

^aDepartment of Economics, Massachusetts Institute of Technology, Cambridge, MA 02142, USA

^bFinance Department, The Wharton School, University of Pennsylvania, Philadelphia, PA 19104, USA

Received 4 February 2005; received in revised form 31 August 2005; accepted 3 October 2005

Available online 5 September 2006

Abstract

We study optimal consumption and portfolio choice in a framework where investors adjust their labor supply through an irreversible choice of their retirement time. We show that investing for early retirement tends to increase savings and reduce an agent's effective relative risk aversion, thus increasing her stock market exposure. Contrary to common intuition, an investor might find it optimal to increase the proportion of financial wealth held in stocks as she ages and accumulates assets, even when her income and the investment opportunity set are constant. The model predicts a decrease in risk aversion following strong market gains like those observed in the nineties.

© 2006 Elsevier B.V. All rights reserved.

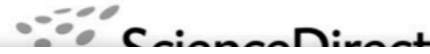
JEL classification: E21; G11; G12; J23

Keywords: Continuous time; Optimal stopping; Retirement; Portfolio choice; Savings; Marginal propensity to consume; Indivisible labor

New Keynesian view of liquidity traps. Krugman (1998) and Eggertsson and Woodford (2003), and more recently Werning (2012) have characterized optimal

*En

Atkeson
Moll, M
We are
Philipp
Maria V



Fiscal Devaluations

EMMANUEL FARHI

Harvard University

GITA GOPINATH

Harvard University

and

OLEG ITSKHOKI

Princeton University

First version received June 2012; final version accepted August 2013 (Eds.)

Abstr

We show that even when the exchange rate cannot be devalued, a *small set of conventional* fiscal instruments can robustly replicate the real allocations attained under a nominal exchange rate devaluation in a dynamic New Keynesian open economy environment. We perform the analysis under alternative pricing assumptions—producer or local currency pricing, along with nominal wage stickiness; under arbitrary degrees of asset market completeness and for general stochastic sequences of devaluations. There are two types of fiscal policies equivalent to an exchange rate devaluation—one, a uniform increase in import tariff and export subsidy, and two, a value-added tax increase and a uniform payroll tax reduction. When the devaluations are anticipated, these policies need to be supplemented with a consumption tax reduction and an income tax increase. These policies are revenue neutral. In certain cases equivalence requires, in addition, a partial default on foreign bond holders. We discuss the issues of implementation of these policies, in particular, under the circumstances of a currency union.

© 20

JEL c

Key words: Devaluation, Fiscal, VAT, Payroll Tax

Keyw

JEL Codes: E32, E60, F30

consu

1. INTRODUCTION

Exchange rate devaluations have long been proposed as a desirable policy response to macroeconomic shocks that impair a country's competitiveness in the presence of price and wage rigidities. Milton Friedman famously argued for flexible exchange rates on these grounds. Yet countries that wish to or have to maintain a fixed exchange rate cannot resort to exchange rate devaluations. In this article, we show how a country can use unilateral fiscal policy to generate the same real outcomes as those following a nominal exchange rate devaluation, while keeping the nominal exchange rate fixed.

New Keyn
Woodford (



Optimal Taxation with Behavioral Agents

By EMMANUEL FARHI AND XAVIER GABAIX*

This paper develops a theory of optimal taxation with behavioral agents. We use a general framework that encompasses a wide range of biases such as misperceptions and externalities. We revisit the three pillars of optimal taxation: Ramsey (linear commodity taxation to raise revenues and redistribute), Pigou (linear commodity taxation to correct externalities) and Mirrlees (nonlinear income taxation). We show how the canonical optimal tax formulas are modified and lead to novel economic insights. We also show how to incorporate nudges in the optimal taxation framework, and jointly characterize optimal taxes and nudges.

JEL: D03, H21

This paper develops a systematic theory of optimal taxation with behavioral agents. Our framework allows for a wide range of behavioral biases (for example, misperception of taxes or externalities), structures of demand, externalities, and population heterogeneity, as well as tax instruments. We derive a behavioral version of the three pillars of optimal taxation: Ramsey (1927) (linear commodity taxation to raise revenues and redistribute), Pigou (1920) (linear commodity taxation to correct for externalities) and Mirrlees (1971) (nonlinear income tax

Abstr

We labor retire incre optim assets decre © 20

JEL c

Keyw consu

New Keym Woodford (

Exch macr wage Yet c deval the s the n

for lac com mit pre nal inv the ful vul an me cou cre an F3,

po wi ac ied op br of ar th ce

“z ity

mo a s sti Ex du tio an of tiv thi err

tex na

New Keym Woodford (

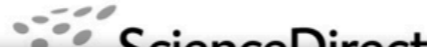
*En

Atkeson Moll, M We are Philipp Maria V

American Economic Review 2013, 103(4): 1172–1211
http://dx.doi.org/10.1257/aer.103.4.1172



Available online at www.sciencedirect.com



Review of Economic Studies (2014) 81, 725–760

doi:10.1093/restud/rdt036

© The Author 2013. Published by Oxford University Press on behalf of The Review of Economic Studies Limited.

Advance access publication 16 November 2013

Crash Risk in Currency Markets *

Emmanuel Farhi

Samuel P. Fraiberger

Harvard University and NBER

NYU

Xavier Gabaix

Romain Ranciere

Adrien Verdelhan

NYU Stern and NBER

IMF, PSE and CEPR

MIT Sloan and NBER

March 12, 2015

Abstract

Since the Fall of 2008, out-of-the money puts on high interest rate currencies have become significantly more expensive than out-of-the-money calls, suggesting a large crash risk of those currencies. To evaluate crash risk precisely, we propose a parsimonious structural model that includes both Gaussian and disaster risks and can be estimated even in samples that do not contain disasters. Estimating the model for the 1996 to 2014 sample period using monthly exchange rate spot, forward, and option data, we obtain a real-time index of the compensation for global disaster risk exposure. We find that disaster risk accounts for more than a third of the carry trade risk premium in advanced countries over the period examined. The measure of

Abstract

We study the impact of labor market conditions on retirement savings. We find that higher unemployment rates lead to higher retirement savings, while higher labor market tightness leads to lower retirement savings. This is true for both men and women, and for both young and old workers. The effect of unemployment is particularly strong for young workers. Our findings suggest that labor market conditions play an important role in determining retirement savings. © 2013 The Author. Journal compilation © 2013 Blackwell Publishing Ltd

JEL classification

Keywords

New Keynesian

Exchange rate
wage
Yet
deval
the s
the n

ag
ple
an
vel
ity
to

*En

Atkeson
Moll, M
We are
Philipp
Maria V

OUR WORK TOGETHER

- Topics...
 - **Optimal Taxation**
Long run inequality, wealth and estate taxation, political economy, taxation and insurance over life cycle...
 - **Macro Stabilization**
Macroprudential Policy, Fiscal Unions, Capital Controls, Fiscal Multipliers ...
 - **Behavioral Macro**
non-rational expectations, level-k, extrapolative
- Methodologically connected...
 - normative focus with simple models
 - Public Finance  Macro
 - goal: qualitative insights and quantitative explorations

$C(s|Y_1) = \frac{1}{1+\beta} \left[\beta Y_1 + (1-s)Y_2 + \frac{s}{R_1} Y_2 \right]$
 $C_t = \frac{1}{1+\beta} \left[Y_t + (1-s)Y_{t+1} + \frac{s}{R_1} Y_{t+1} \right]$
 $\hat{Y}_1 = \frac{1}{\beta} \frac{Y_2}{R_1} \quad \left| \quad \frac{1}{R_0} = \beta E \left[\frac{Y_0}{s Y_1 + \frac{Y_2}{R_1}} \right] \right.$
 $\hat{Y}_1 \rightarrow (Y_0, Y_1)$

$\frac{Y_0}{Y_0} = \frac{E \left[\frac{1}{s Y_1 + \frac{Y_2}{R_1}} \right]}{E \left[\frac{1}{s Y_1 + \frac{Y_2}{R_1}} \right]} = \frac{E f(s+\Delta)}{E f(s)}$
 $= -\frac{R_1}{Y_0} \frac{\partial Y_0}{\partial R_1}$

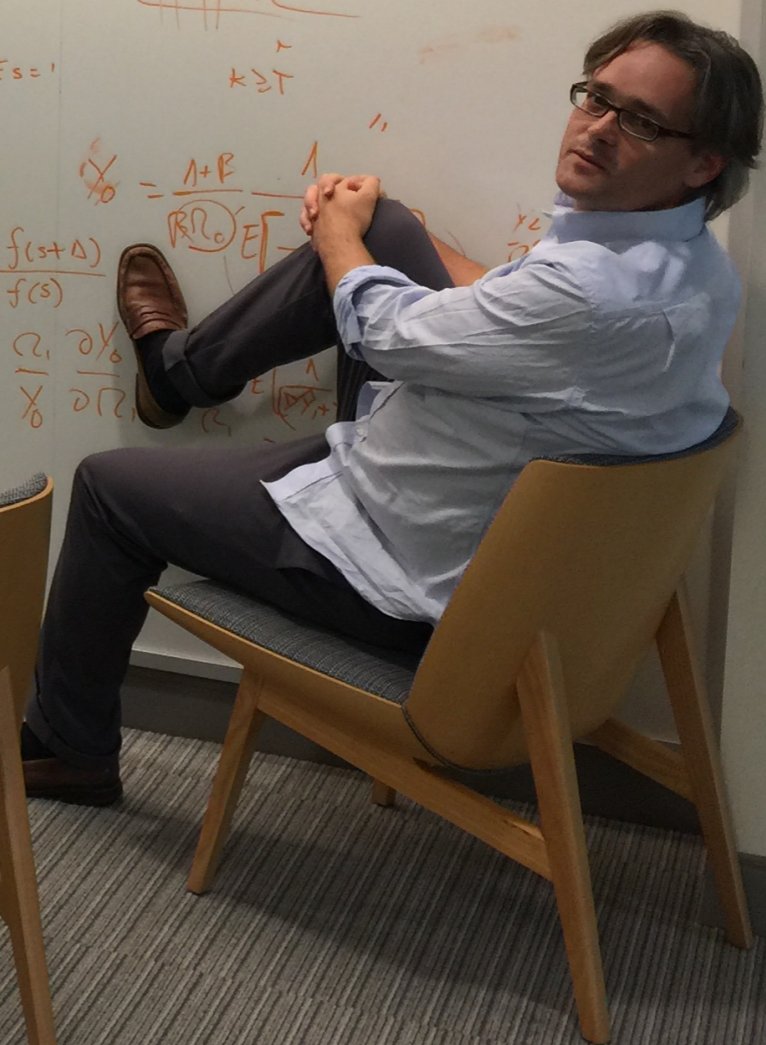
$\frac{Y_0}{Y_0} = \frac{1+\beta}{R_0} \frac{1}{E f(s)}$

$\frac{Y_0}{Y_0} = \beta R_0 E \left[\frac{1}{C_t(s, Y_1)} \right]$
 $C_0 = Y_0$

$E s = 1$
 $k \geq T$

$(D, \delta) - (c, A)$

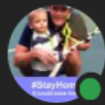
Low	A	B
High	C	D



$$\{N, \gamma, \{R, t\}\}$$

matrices constraints.



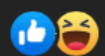
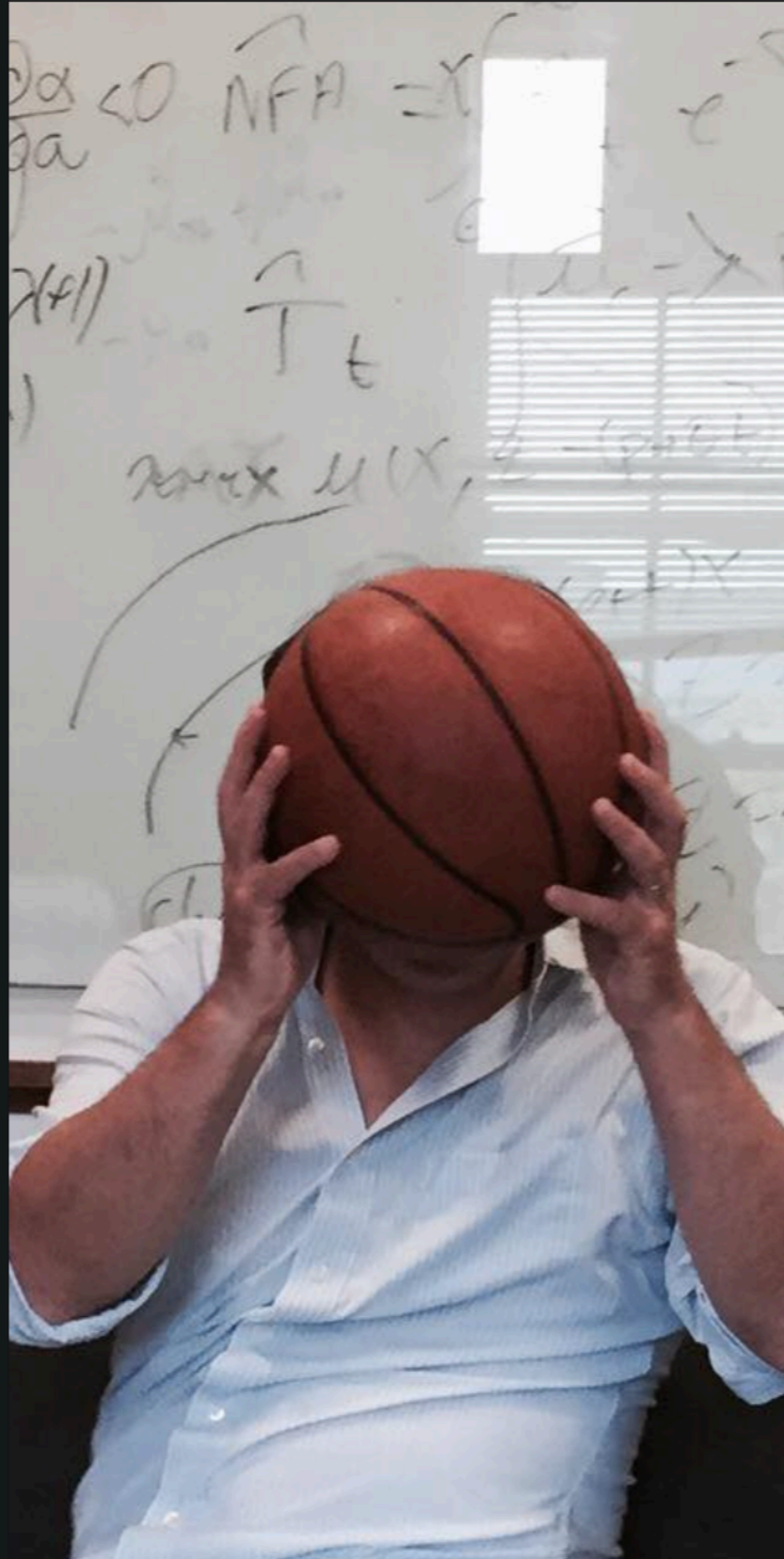


Ivan Werning

May 26, 2016 · Cambridge, MA · 👤



Working with [Emmanuel Farhi](#) can make my head hurt and want to scream.



Joleen Weissert, Veronica Guerrieri and 34 others

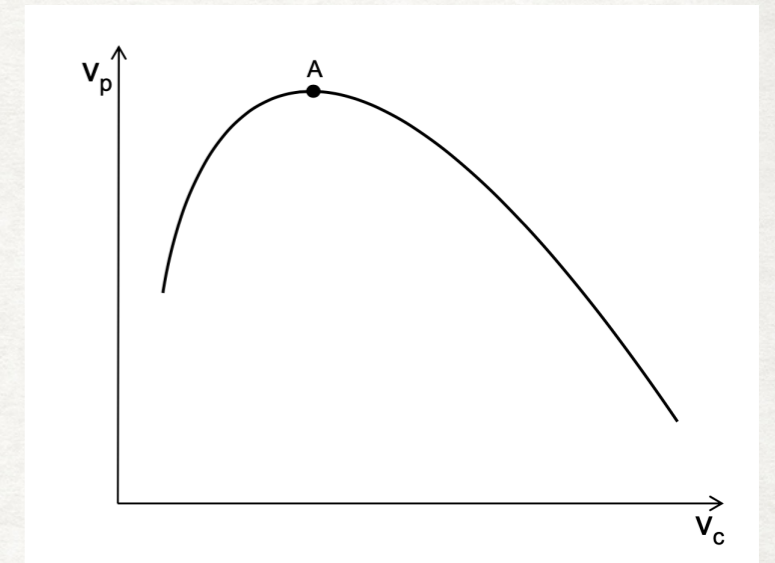
4 Comments

LONG-RUN INEQUALITY

- What is optimal long-run distribution and social mobility in society?
- Surprising result (Atkeson-Lucas, 1993)
 - Barro altruistic dynasties
 - each period shock to productivity
 - private information
 - look for optimal dynamic insurance mechanism
- Result:
 - consumption a (geometric) random walk
 - inequality grows without bound
 - no long run distribution exists

LONG-RUN INEQUALITY

- Farhi-Werning “Inequality and social discounting” (JPE)
- explored extra Pareto weight on future generations...
lower discounting



- Whenever planner was more patient...
 - consumption has mean reversion...
 - ...long-run distribution exists with bounded inequality
- Implications for wealth/bequest taxation?

BEQUEST TAXATION

- Farhi-Werning “Progressive Estate Taxation”
 - ▶ **Results...**
 - ▶ **progressive** = creates more equality for kids
 - ▶ **subsidy = negative tax...**
 - ▶ plausible at bottom!
 - ▶ sign may overturned (Farhi-Werning 2013)

BEQUEST TAXATION

- Farhi-Werning “Progressive Estate Taxation”
 - ▶ **Results...**
 - ▶ **progressive** = creates more equality for kids
 - ▶ **subsidy = negative tax...**
 - ▶ plausible at bottom!
 - ▶ sign may overturned (Farhi-Werning 2013)
- What if future gets weight because they will vote?
Farhi-Werning, Farhi-Sleet-Werning-Yeltekin
- **Limited commitment:**
not taxing future wealth may not be credible if inequality grows
discontent may lead to drastic reforms
- Q: What policies ex ante?

POLITICAL ECONOMY

- Two periods, no direct extra weight on future
- Political Economy: credibility constraint;
ex post: reform unless...

$$\int u(c_1) \geq u \left((1 - \kappa) \int c_1 \right)$$

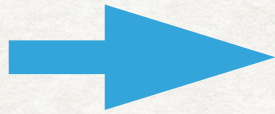
Bound on Inequality

POLITICAL ECONOMY

- Two periods, no direct extra weight on future
- Political Economy: credibility constraint;
ex post: reform unless...

$$\int u(c_1) \geq u \left((1 - \kappa) \int c_1 \right)$$

Bound on Inequality

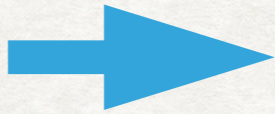
- ▶ **Again:** progressive tax on saving
- ▶ **New:** wealth at the top has negative value, hurts credibility
constraint:  **positive tax**

POLITICAL ECONOMY

- Two periods, no direct extra weight on future
- Political Economy: credibility constraint;
ex post: reform unless...

$$\int u(c_1) \geq u \left((1 - \kappa) \int c_1 \right)$$

Bound on Inequality

- ▶ **Again:** progressive tax on saving
- ▶ **New:** wealth at the top has negative value, hurts credibility
constraint:  **positive tax**
- ▶ **Extension:** remove exogenous κ , add dynamic game,
reputational concerns (Abreu-Pearce-Stachetti)

OTHER WITH OPTIMAL TAX PERSPECTIVE

- **Job Market Paper:**
Capital Taxation and Ownership when Markets are Incomplete
- **Gabaix-Farhi:**
Optimal Taxation with Behavioral Agents
- **Farhi-Gopinath-Iztkhoki:**
Fiscal Devaluations
- **Correia-Farhi-Nicolini-Teles:**
Unconventional Fiscal Policy at the Zero Lower Bound

OUR WORK TOGETHER

- Topics...
- **Optimal Taxation**
Long run inequality, wealth and estate taxation, political economy...
- **Macro Stabilization**
Macroprudential Policy, Fiscal Unions, Capital Controls, Fiscal Multipliers ...
- **Behavioral Macro**
non-rational expectations, level-k, extrapolative

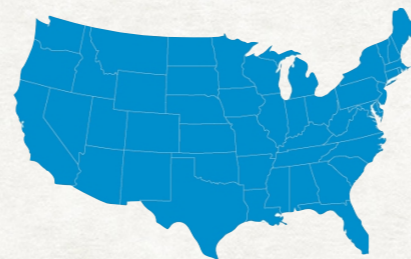
MACROECONOMIC STABILITY

- Open Economy, motivated by European Crisis

- Capital Controls

- **Fiscal Unions**

- Labor Mobility



OCA: Mundell, McKinnon, Kennan

- **Macroprudential Policy**

- Fiscal Policy

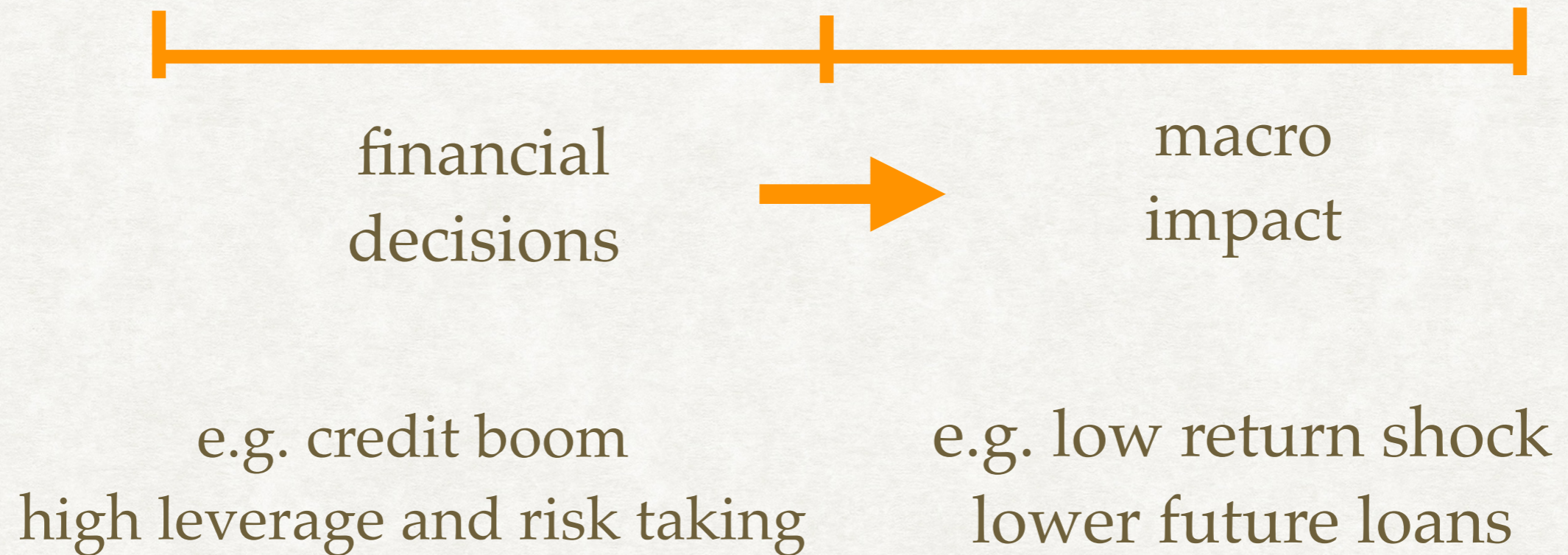
FISCAL UNIONS

- **Our approach:** set up the planning problem for optimal transfers given currency union
- Social Marginal Utility \neq Private Marginal Utility
- Aggregate Demand Externality
- Key equation...

$$\frac{U_{C_T}^i(s) \left(1 + \frac{\alpha^i(s)}{p^i(s)} \tau^i(s)\right)}{U_{C_T}^{i'}(s) \left(1 + \frac{\alpha^{i'}(s)}{p^{i'}(s)} \tau^{i'}(s)\right)} = \frac{U_{C_T}^i(s') \left(1 + \frac{\alpha^i(s')}{p^i(s')} \tau^i(s')\right)}{U_{C_T}^{i'}(s') \left(1 + \frac{\alpha^{i'}(s')}{p^{i'}(s')} \tau^{i'}(s')\right)}$$

- Insurance equals Social Marginal Utility which internalizes aggregate demand externality
- Result #1: private insurance not optimal; intervention needed
- Result #2: insurance not just different, but more valuable socially than privately

MACROPRUDENTIAL



MACROPRUDENTIAL

macropru regulation



financial
decisions



macro
impact

e.g. credit boom
high leverage and risk taking

e.g. low return shock
lower future loans

MACROPRUDENTIAL

macropru regulation



financial
decisions



macro
impact

e.g. credit boom
high leverage and risk taking

e.g. low return shock
lower future loans

Is there a market failure?

Not necessarily.

Externality needed.

MACROPRUDENTIAL

monetary policy?

macropru regulation



financial
decisions



macro
impact

e.g. credit boom
high leverage and risk taking

e.g. low return shock
lower future loans

Is there a market failure?

Not necessarily.

Externality needed.

MACROPRUDENTIAL

monetary policy?
macropru regulation



monetary policy?



financial
decisions



macro
impact

e.g. credit boom
high leverage and risk taking

e.g. low return shock
lower future loans

Is there a market failure?

Not necessarily.

Externality needed.



Emmanuel Farhi
Conference on Monetary Economics



MACROPRUDENTIAL POLICY

- Main result...
 - connect distortions in spot markets
 - other sufficient statistic: MPCs
 - to necessary interventions (shadow taxes) in financial markets
- Key equation...

$$\frac{\tau_{D,s}^i}{1 + \tau_{D,s}^i} = \sum_{j \in J_s} P_{j,s} X_{I,j,s}^i \tau_{j,s}$$

shadow finance tax = sum of MPCs times wedges in spot markets

BEHAVIORAL MACRO

- In a series of papers, explore departures from rational expectations
- Combined with financial market imperfections...
 - Positive:
 - “Monetary Policy, Bounded Rationality and Incomplete Markets”
 - “The Fiscal Multiplier Puzzle: Liquidity Traps, Bounded Rationality, and Incomplete Markets” (with Petri)
 - Incomplete Markets and Behavioral are Complements
Help Resolve Forward Guidance Puzzle**
 - Normative “Taming a Minsky Cycle”
 - Extrapolative Expectations: departures from Inflation Targeting
through effects on Asset Prices**

EMMANUEL FARHI

- Broad work on crucial topics of our time
- Testament that much to be explored in macroeconomics
- Theory needed: explore new ideas, drawing out implications of old
- Inspirational for future generations

EMMANUEL FARHI

- Broad work on crucial topics of our time
- Testament that much to be explored in macroeconomics
- Theory needed: explore new ideas, drawing out implications of old
- Inspirational for future generations

