

Discussion of Anton Korinek (2015),
“Financial Innovation for Rent Extraction”

Alessandro Dovis
Penn State and NBER

ASSA Meeting, January 5, 2016

Introduction

This paper:

- ▶ Financial innovations (derivative markets) can exacerbate distortions associated with bailout provision

Introduction

This paper:

- ▶ Financial innovations (derivative markets) can exacerbate distortions associated with bailout provision
- ▶ Banks load on risk to extract rents from bailout authority (lack commitment)

Introduction

This paper:

- ▶ Financial innovations (derivative markets) can exacerbate distortions associated with bailout provision
- ▶ Banks load on risk to extract rents from bailout authority (lack commitment)
- ▶ Absent derivative markets, bailouts (poor) substitute for such missing markets
- ▶ Creation of such markets increase bailout (and volatility)

Introduction

This paper:

- ▶ Financial innovations (derivative markets) can exacerbate distortions associated with bailout provision
- ▶ Banks load on risk to extract rents from bailout authority (lack commitment)
- ▶ Absent derivative markets, bailouts (poor) substitute for such missing markets
- ▶ Creation of such markets increase bailout (and volatility)
- ▶ Policy lesson: If bailout authority cannot commit, disincentivize derivative trading beneficial

My Discussion

- ▶ Quick review
 - ▶ Mechanism
 - ▶ Main results
- ▶ Comments/suggestions:
 - ▶ Main theme: **Individual vs systemic bailouts**
 - ▶ Importance net-worth of specific bank vs overall sector
 - ▶ Banks not aware but process mediated via prices?

Model Review: Two Key Ingredients

- ▶ Financial frictions
 - ▶ Bankers net-worth constraints investment (and so wage)
 - ▶ Justify bailouts from households perspectives

- ▶ One to one relationship b/w a bank, a worker and a firm
 - ▶ Each bank is “big”
 - ▶ Justify individual bailouts not only systemic ones

Model Review: Two Key Ingredients

- ▶ Financial frictions
 - ▶ Bankers net-worth constraints investment (and so wage)
 - ▶ Justify bailouts from households perspectives

- ▶ One to one relationship b/w a bank, a worker and a firm
 - ▶ Each bank is “big”
 - ▶ Justify individual bailouts not only systemic ones
 - ▶ Crucial but it creates some technical problems

Model Review: Timing

$t = 0$

- ▶ Bankers collectively choose to pay fixed cost to trade deriv.
- ▶ Bankers and hhs choose derivative position, $\{(x_{h,s}^j, x_{b,s}^j)\}$

Model Review: Timing

$t = 0$

- ▶ Bankers collectively choose to pay fixed cost to trade deriv.
- ▶ Bankers and hhs choose derivative position, $\{(x_{h,s}^j, x_{b,s}^j)\}$

$t = 1$, $s \in \{H, L\}$ is realized

- ▶ Settle derivative trades

Model Review: Timing

$t = 0$

- ▶ Bankers collectively choose to pay fixed cost to trade deriv.
- ▶ Bankers and hhs choose derivative position, $\{(x_{h,s}^j, x_{b,s}^j)\}$

$t = 1$, $s \in \{H, L\}$ is realized

- ▶ Settle derivative trades
 - ▶ **Perfect enforcement, financial friction?**

Model Review: Timing

$t = 0$

- ▶ Bankers collectively choose to pay fixed cost to trade deriv.
- ▶ Bankers and hhs choose derivative position, $\{(x_{h,s}^j, x_{b,s}^j)\}$

$t = 1$, $s \in \{H, L\}$ is realized

- ▶ Settle derivative trades
- ▶ Bailout authority chooses transfer t

Model Review: Timing

$t = 0$

- ▶ Bankers collectively choose to pay fixed cost to trade deriv.
- ▶ Bankers and hhs choose derivative position, $\{(x_{h,s}^j, x_{b,s}^j)\}$

$t = 1$, $s \in \{H, L\}$ is realized

- ▶ Settle derivative trades
- ▶ Bailout authority chooses transfer t
 - ▶ **What is t a function of?**

Model Review: Timing

$t = 0$

- ▶ Bankers collectively choose to pay fixed cost to trade deriv.
- ▶ Bankers and hhs choose derivative position, $\{(x_{h,s}^j, x_{b,s}^j)\}$

$t = 1$, $s \in \{H, L\}$ is realized

- ▶ Settle derivative trades
- ▶ Bailout authority chooses transfer t
- ▶ Bankers transform wealth into capital

Model Review: Timing

$t = 0$

- ▶ Bankers collectively choose to pay fixed cost to trade deriv.
- ▶ Bankers and hhs choose derivative position, $\{(x_{h,s}^j, x_{b,s}^j)\}$

$t = 1, s \in \{H, L\}$ is realized

- ▶ Settle derivative trades
- ▶ Bailout authority chooses transfer t
- ▶ Bankers transform wealth into capital

$t = 2$

- ▶ Firms hire capital and labor, production and consumption

Model Review: Timing

$t = 0$

- ▶ Bankers collectively choose to pay fixed cost to trade deriv.
- ▶ Bankers and hhs choose derivative position, $\{(x_{h,s}^j, x_{b,s}^j)\}$

$t = 1, s \in \{H, L\}$ is realized

- ▶ Settle derivative trades
- ▶ Bailout authority chooses transfer t
- ▶ Bankers transform wealth into capital

$t = 2$

- ▶ Firms hire capital and labor, production and consumption
 - ▶ **How wages and return to capital determined given factors specificity?**

How w and R determined in equilibrium?

Relevant state:

$$\Omega = \{(\omega_{h,s}^j, \omega_{b,s}^j)\}_{j \in [0,1]} = \{(x_{h,s}^j - t, x_{b,s}^j + t)\}_{j \in [0,1]}$$

- ▶ Assumption on specificity \Rightarrow continuum of K/L inputs
 - ▶ Not clear to me how this market work:
 - ▶ Input markets are one to one ...
 - ▶ Price taking vs market power
- Important since main result based on banks being big

How w and R determined in equilibrium?

Relevant state:

$$\Omega = \{(\omega_{h,s}^j, \omega_{b,s}^j)\}_{j \in [0,1]} = \{(x_{h,s}^j - t, x_{b,s}^j + t)\}_{j \in [0,1]}$$

- ▶ Assumption on specificity \Rightarrow continuum of K/L inputs
- ▶ Not clear to me how this market work:
 - ▶ Input markets are one to one ...
 - ▶ Price taking vs market power
 - Important since main result based on banks being big
- ▶ Also, if sages are MPL in $j: w_s^j = (1 - \alpha)(\omega_{b,s}^j)^\alpha \Rightarrow$ wages are different...
 - ▶ Symmetric hh trading strategy? It may be ok since households are risk neutral
- ▶ No specificity: one wage and one rental rate

Problem for Bailout Authority

Relevant state $X = \{(x_{h,s}^j, x_{b,s}^j)\}_{j \in [0,1]}$

$$\max_T \int (w^j(T) - T) dj$$

Determination of w^j important

Problem for Bailout Authority

Relevant state $X = \{(x_{h,s}^j, x_{b,s}^j)\}_{j \in [0,1]}$

$$\max_T \int ((1 - \alpha)(x_{b,s}^j + T)^\alpha - T) dj$$

Suppose MPL in j

Problem for Bailout Authority

Relevant state $X = \{(x_{h,s}^j, x_{b,s}^j)\}_{j \in [0,1]}$

$$\max_T \int ((1 - \alpha)(x_{b,s}^j + T)^\alpha - T) dj$$

Does T depends on j or not?

Problem for Bailout Authority

Relevant state $X = \{(x_{h,s}^j, x_{b,s}^j)\}_{j \in [0,1]}$

$$\max_T \int ((1 - \alpha)(x_{b,s}^j + T)^\alpha - T) dj$$

Does T depends on j or not?

- ▶ If not, optimal T :

$$\int \frac{\partial w^j}{\partial T} |_{x^j} dj = \int (1 - \alpha)\alpha (x^j + T)^{\alpha-1} dj = 1$$

- ▶ If it does, and $T > 0$

$$\frac{\partial w^j}{\partial T^j} |_{x^j} = (1 - \alpha)\alpha (x^j + T^j)^{\alpha-1} = 1$$

as in paper

Main Result: Rent Extraction Equilibrium

There exists an equilibrium of where derivatives markets are created and:

- ▶ Bankers buy hhs endowment in H state
- ▶ Obtain a bailout in the L state
- ▶ This maximizes the bailout (transfers) bankers get
- ▶ Derivatives trading increases volatility

Is this Robust to Systemic Bailout?

Not an equilibrium outcome if T does not depend on j

- ▶ Why? Banker does not (correctly) internalize that its x influences bailout authority
- ▶ Only aggregate matters, optimality requires that returns equated in two states, $R_H = R_L$, true only in knife hedge case

Crucial that T depends on j

- ▶ But then bankers cannot be big wrt bailout authority (and anticipate this) but small in rental capital market

Banks Do Not Need to Be Aware?

Intriguing quote: *“The incentives for rent extraction are mediated through market prices and do not require that the agents who engage in risk-taking are aware that they are extracting rents from public safety nets”*

- ▶ Cannot see this in paper
- ▶ Actually, to get result crucial that bankers understand

$$\frac{\partial T^j}{\partial x^j} \neq 0$$

i.e. **individual** banker's choice affects bailout he receives