Discussion of "Is the Financial Sector Too Big?"

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Question

- is the financial sector too big (or too small)?
- very important question, few precedents (Philippon)
- here in the context of: financial sector as producer of information
- result: the financial sector is too big

Model pieces 1: good side of financial sector

- entrepreneurs have project
- can choose effort level $a \in A$, the cost of effort is $\psi(a)$
- effort level $=$ probability of success
- success: output $\gamma > 1$
- otherwise output 1

- timing:

  0. put in effort

  1. sell project

  2. output realized

- suppose project sold to uninformed risk neutral agents

$$p = a^* \gamma + 1 - a^*$$

where a^* expected effort in the economy

- entrepreneur's problem is

$$p - \psi(a)$$

- not much incentive to put in effort...

- suppose project sold to *informed* risk neutral agents, then

$$p^d = \begin{cases} \gamma \text{ if success} \\ 1 \text{ otherwise} \end{cases}$$

  then

$$\max_a a\gamma + 1 - a - \psi(a)$$

- first best level of effort is chosen

Model pieces 2: the bad side

- suppose no choice of a
- entry decision: some agents can choose to become informed "dealers" and learn output of project in advance
- suppose $m < 1$ is probability of meeting a dealer

- at time 1:
  - entrepreneur tries to meet a dealer
  - if he meets one and offered $p^d > p$ accepts
  - if not sells to uninformed agents at

$$p = \frac{a^* (1 - m) \gamma + 1 - a^*}{1 - m a^*}$$

- p^d determined in bilateral bargaining

- surplus

$$\gamma - p$$

- Nash, κ =bargaining power of entrepreneur

$$p^d = p + \kappa (\gamma - p)$$

- dealer gets profits

$$(1 - \kappa) (\gamma - p)$$

- line of potential dealers with entry cost $\phi(d)$
- d determined by

$$(1-\kappa)(\gamma-p)=\phi(d)$$

- dealers play no useful social role: excessive entry
- they discover information that nobody acts on
- higher price they pay compensated by lower price paid by uninformed (cream skimming)

Question

Combine the two pieces:

do we get too much or too little incentive to become a dealer?

- the paper: too much
- here: variant of the model where both can happen

General equilibrium

- fixed mass 1 of entrepreneurs
- $d < 1$ mass of dealers, determined by entry choice
- matching: entrepreneurs meet a dealer with probability

$$m = d$$

Equilibrium

- effort choice

$$a^* = \arg\max_{a \in A} adp^d + (1 - ad)\, p - \psi(a)$$

- prices

$$p^d = p + \kappa(\gamma - p) \text{ bargained price}$$

$$p = \frac{a^*(1-d)\gamma + 1 - a^*}{1 - da^*} \text{ on walrasian uninformed mkt}$$

- entry

$$(1 - \kappa)(\gamma - p) = \phi(d)$$

- Total welfare

  (of entrepreneurs+dealers, uninformed buyers make zero profits)

$$a\gamma + 1 - a - \psi(a) - \int_0^d \phi(x)\, dx$$

- From best response of agents + prices

$$a = \mathcal{A}(d)$$

  (fixed point)

- Planner

$$\max_{d} \mathcal{A}(d)(\gamma - 1) - \psi(\mathcal{A}(d)) - \int_0^d \phi(x)\, dx$$

- Will the planner choose d greater or smaller than competitive equilibrium?

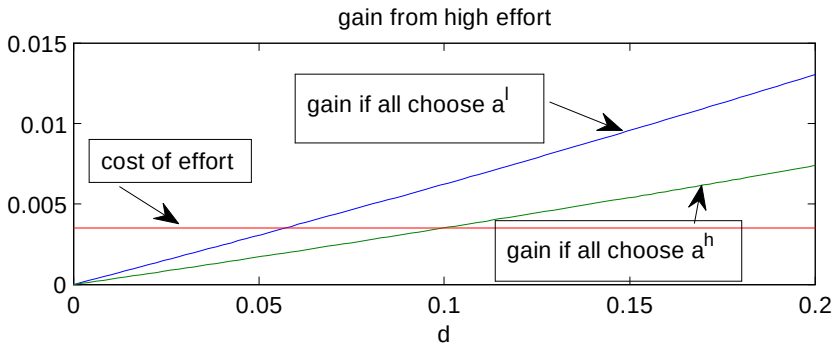
- Answer: it depends

- "Hosios" condition (if first-order approach ok): if

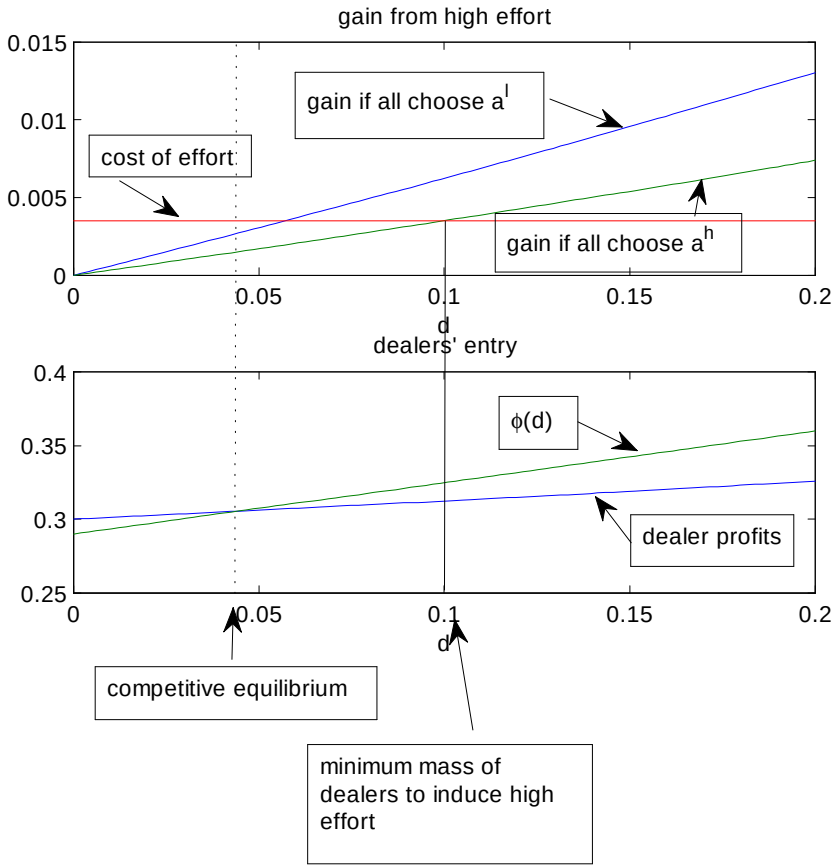
$$\left[(\gamma - 1) - \psi'\left(a^{CE}\right)\right] \mathcal{A}'\left(d^{CE}\right) = (1 - \kappa)\left(\gamma - p^{CE}\right)$$

then d^{CE} socially optimal

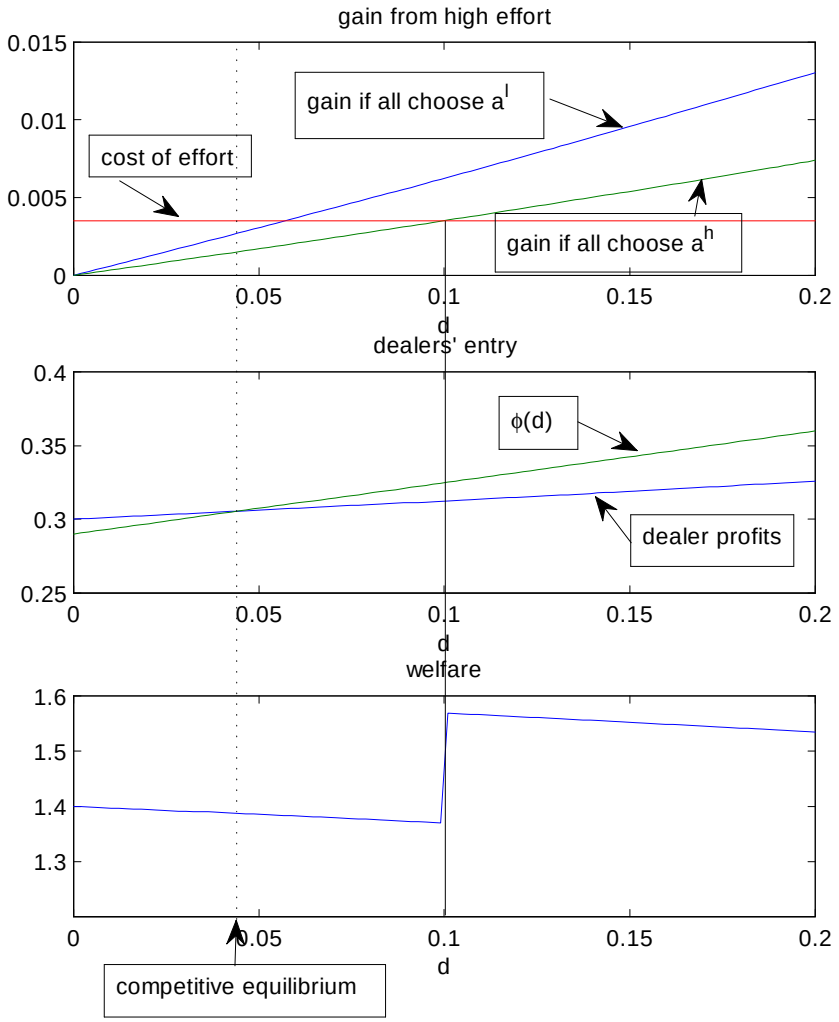
- A numerical example
- two effort levels a^h, a^l
- "cost of effort" $= \psi\left(a^h\right) - \psi\left(a^l\right)$



effort level and d



(unique) equilibrium with low effort



financial sector is too small

Concluding

- Grossman-Stiglitz: no incentives to acquire information...but information is socially useless

- No welfare theorem for information acquisition in markets where social value of information is positive

- Where do the large rents of financial sector come from? M&A, arbitrage...

- Positive side: how disappearance of financial sector as information provider can affect real economy (alternative to Bernanke-Gertler)