Intermediary Market Power and Capital Constraints

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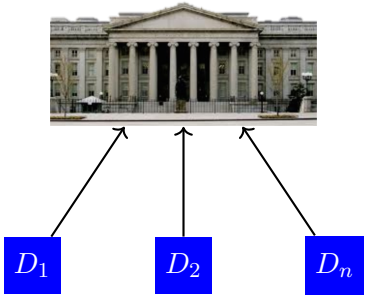
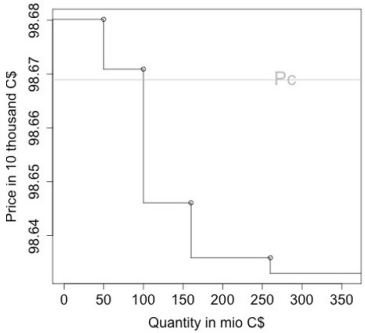
Treasury Auction

D_1 D_2 D_n

Treasury Auction

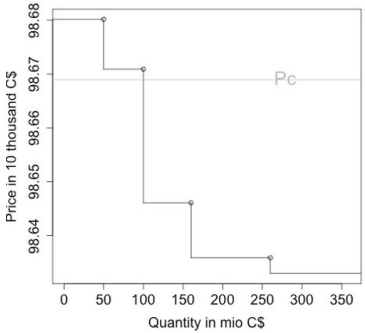




Treasury Auction

D_1 D_2 D_n

Secondary Market



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Treasury Auction

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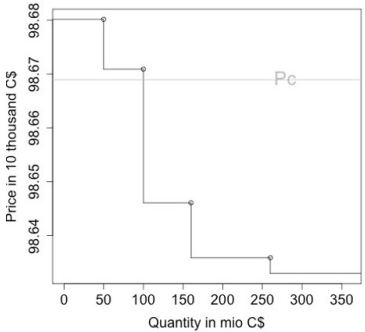

Effect of Capital Constraints on Auction

Relaxing capital constraints

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2. higher prices (theory & &)
3. higher markup (theory &)

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Model: Uniform price auction with a capital constraint

- Asset supply A, per-unit payoff $R \sim N(\mu, \sigma)$
- $N > 2$ dealers
- Initially, dealer i holds z_i units of the asset, equity capital E_i
- Each dealer submits demand schedule $a_i(p)$, s.t.

$$\kappa_i \leq \frac{E_i}{p(a_i + z_i)}$$

- Market clears at $\sum_i a_i(p^*) = A$
- CARA $\mathbb{E}[1 - e^{-\rho\omega_i(a_i,p)}]$ with $\omega_i(a_i, p) = (a_i + z_i)R - pa_i$

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- {Same when dealers are identical (Corollary 2)?
  When the shadow cost of capital $\lambda\kappa \downarrow$ by 1%, $p^*(0) \uparrow$ by $\eta = |\frac{1}{1+\lambda\kappa} - 1|\%$}

Suggestion #2: Asset allocation

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Asset allocation changes with perfect competition?

- Without capital constraints, asset allocation remains the same which is efficient
- "Markup" is a mere transfer from government to dealers, which is what the government wants during crisis
- Would introducing capital constraints change the above?

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How about dealer market power over customers (which would usually distort asset allocation)?

- Markup$^C \coloneqq$ secondary price $-$ $\underbrace{\text{primary price}}_{p^*(\Lambda)}$
- Current model says smaller Markup^C with relaxed capital constraints
- Naturally expects smaller Markup^C with lower balance sheet cost
- Can get direct evidence

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- Above effects absent/weaker in opaque secondary OTC market
- Tighter constraints reduces $\text{Markup}^C := p^{\text{secondary}} - p^{\text{primary}}$
- Relaxing constraints widens Markup^C

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- Main suggestions:
  - Examine dealer market power over customers
  - Equity issuance to rationalize larger Markup^C with relaxed capital constraints