Speed, Fragmentation, and Asset Prices

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Main results

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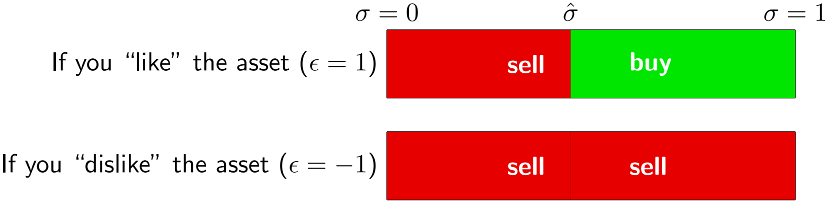
$\sigma = 0$
$\hat{\sigma}$
$\sigma = 1$
If you "like" the asset ($\epsilon = 1$)
sell
buy
If you "dislike" the asset ($\epsilon = -1$)
sell
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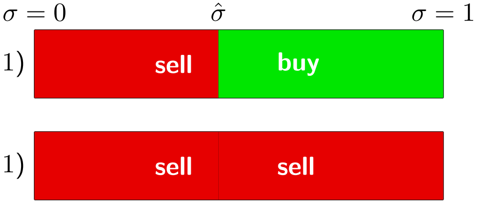
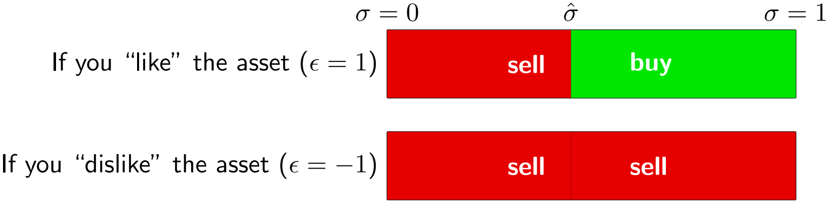


$$p^* > PV(\text{asset payoff}) = \frac{\mu}{r}$$



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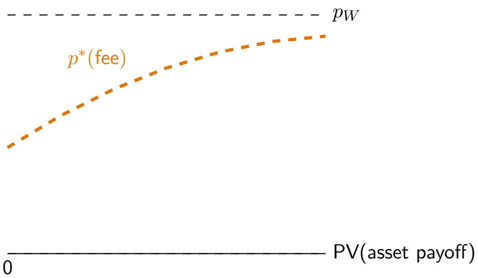

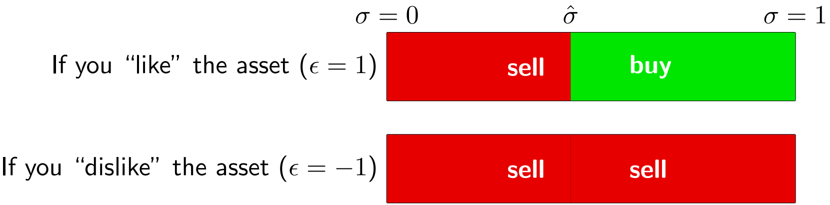

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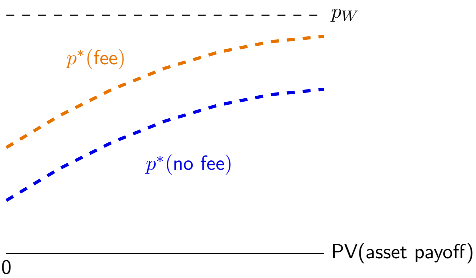

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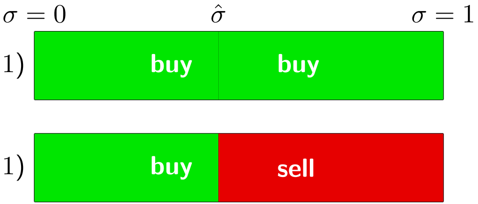

	$\sigma = 0$ to $\hat{\sigma}$	$\hat{\sigma}$ to $\sigma = 1$
If you "like" the asset ($\epsilon = 1$)	**buy**	**buy**
If you "dislike" the asset ($\epsilon = -1$)	**buy**	**sell**

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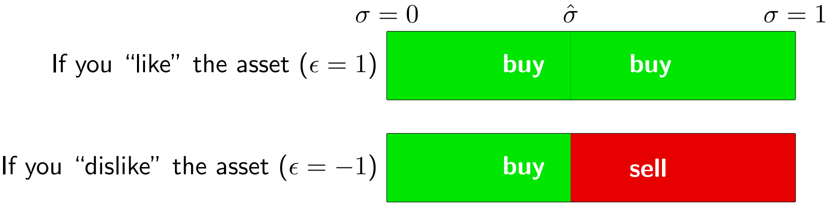

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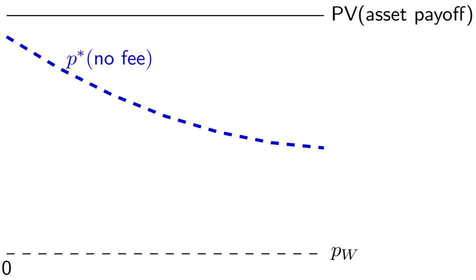

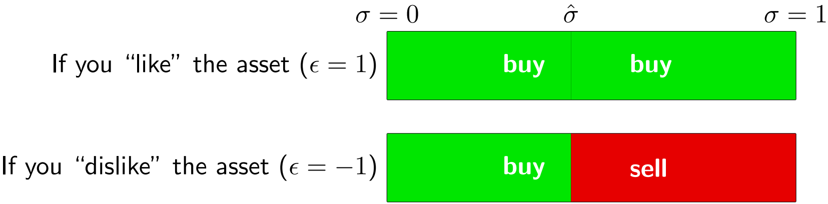

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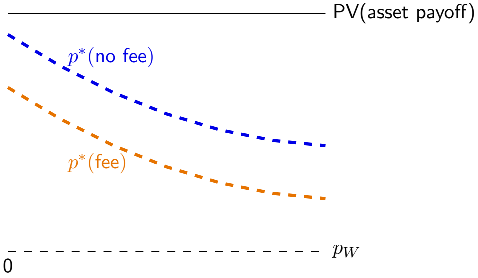

Why $\bar{a} < 1/2$?

- The case where asset supply is large $\bar{a} > 1/2$ is ruled out because

generality. Like in Duffie et al. (2005), asset indivisibility generates an equilibrium price that decreases in the contact rate ρ when asset supply is large, making such case somewhat less compelling. We know from

... in Footnote 23.

- This issue is partially addressed in Appendix B.

Case $\overline{a} \geq 1/2$. When $a > 1/2$, sellers become the short side of the market and the equilibrium price equals $p = \frac{\mu}{r} - \frac{\hat{\sigma}}{r}\left(\frac{r+\rho}{r+\gamma+\rho}\right)$. In the knife-edge case $\overline{a} = 1/2$, the equilibrium price belongs to the interval

$$\left[\frac{\mu}{r} - \frac{\hat{\sigma}}{r}\left(\frac{r+\rho}{r+\gamma+\rho}\right), \frac{\mu}{r} + \frac{\hat{\sigma}}{r}\left(\frac{r+\rho}{r+\gamma+\rho}\right)\right].$$

- Short constraint has not been relaxed (yet)?

Role of Speed and Fragmentation on Asset Prices

- Market participants have financial constraints such as short constraint $\implies$ need for financial intermediaries.
- Asset are "over-valued" or "under-valued" relative to its fundamental value, to compensate the service of financial intermediaries.
- Speed and fragmentation can make financial intermediation more/less costly, amplifying/mitigating over-valuation or under-valuation.

Summary

- Novel role of speed and fragmentation on asset prices.
- Very thought-provoking model.
- The model can be adjusted to study amplification effect of speed and fragmentation on mis-pricing due to other financial constraint.