

Discussion of “The Emergence of Market Structure”
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A Model of Financial Intermediation with Search Frictions

- A unit mass of individuals trading a single asset (net supply of $1/2$) over continuous time
- Traders obtain (heterogenous) flow utilities of holding the asset
- Asset valuations switch randomly over time, maintaining gains from trade

- **Trading friction:** trade can only occur if traders run into one another.
- Highly stylized model of trade in financial markets: **random search.**
- Traders can have heterogenous contact rates: conditional on running into someone, it is more likely to run into a faster trader.

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Trade Frictions and Random Search in OTC Markets

- Tehran's black currency market (December 2017)



Key Insights

- Key innovation: traders can invest in acquiring contact rate λ at some cost $C(\lambda)$.
- Exogenous distribution of contact rates $F(\lambda)$.
 - Faster traders “intermediate” the asset: their trading decisions are more detached from the asset’s fundamentals.
 - Purchase the asset from slower traders, even if they do not value the asset, for the option value of selling it to their future counterparties.
- Allow for endogenous choice of contact rates:
 - If $C(\lambda)$ is continuous, $F(\lambda)$ has no (intermediate) mass points.
 - Despite being ex ante identical, there will be dispersion in contact rates.
 - Some traders become intermediaries endogenously, exactly with the hope of collecting the intermediation rents. → **emergence of market structure**

Main Results

Proposition

Suppose traders can choose any contact rate in $[0, \bar{\lambda}]$ and $C(\lambda) = c\lambda$. Then,

$$\lim_{\bar{\lambda} \rightarrow \infty} \lim_{\lambda \rightarrow \bar{\lambda}} F(\lambda) < 1.$$

Furthermore, $F(\lambda)$ converges to a Pareto distribution as $\bar{\lambda} \rightarrow \infty$.

- Interpretation:
 - There are middlemen with very high contact rates.
 - These middlemen intermediate a large volume of trade.
 - Distribution of trading rates matches the trading volume in various OTC markets.
- Model's prediction: the intermediaries are the ones with the highest contact rates.

Comment: What is Speed/Contact Rate?

- The contact rate explicitly modeled as the rate at which i runs into other traders.
- What is the counterpart of this in the real world?
(aside from the black market in Tehran)
- It does not seem to correspond to the speed at which I can execute trades.

Comment: What is Speed/Contact Rate?

- Volume of trade in the FX market in 2017:

Rank	Institution	Market Share	Cumulative
1	Citibank	10.74%	
2	JP Morgan	10.34%	21.08%
3	UBS	7.56%	28.64%
4	Bank of America	6.73%	35.37%
5	Deutsche Bank	5.68%	41.05%
6	HSBC	4.99%	46.04%
7	Barclays	4.69%	50.73%
8	Goldman Sachs	4.43%	55.16%
9	Standard Chartered	4.26%	59.42%
10	BNP Paribas	3.73%	63.15%

Source: Euromoney FX Survey 2017

- The FX market is highly **intermediated** and **concentrated** → these are the middlemen!
- But they are not the institutions that trade at the highest frequencies.

Comment: What is Speed/Contact Rate?

- If λ is not the speed at which I can execute trades, then what is it?
- Put differently, how can one interpret the previous table in view of the model?
- Paper's suggestions:
 - faster communication technologies
 - better visibility through location choices or advertisement
 - relationships with more counterparties
- In other words, λ seems to be a reduced-form parameter capturing trading frictions.
- One can imagine that similar insights would hold if, instead of investing in speed, traders can invest in
 - carrying a higher inventory around
 - lowering transaction costs per trade

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Summary

- Theoretically beautiful framework of search and matching frictions in OTC markets.
- Obviously highly stylized, but with sharp insights:
 - faster traders become intermediaries.
 - heterogeneity in speed emerges endogenously.
- Comment: How should one think about λ in the real world?
 - A narrow interpretation (in the sense of the model) does not seem to match the real world.
 - But a broad interpretation (“higher λ is equivalent to having a lower opportunity cost of finding counterparties”) runs the risk of becoming a tautology.