

Trading with informed investors



Outline

- Informed traders
- Market efficiency
- Market liquidity
- Summary

■ Informed traders

■ Market efficiency

■ Market liquidity

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Traders in the market

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- ▶ **Prices** are set such that it reflects the **value** based the information from the total demand over time demand of the **informed traders** and **noise traders**
- ▶ $P_t = E \left[V | \sum_{\tau=1}^N Q_{\tau} + \sum_{\tau=1}^M U_{\tau} \right]$

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Order determination for informed traders

- ▶ Profits from a trade arise from the difference between the **asset value** and the **price** paid, for **each asset traded**, plus any **future profits** the traders will receive
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$$\beta_t = \frac{1 - 2\gamma_t\lambda_t}{\lambda_t(1 + N(1 - \gamma_t\lambda_t))}$$

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Measuring market efficiency

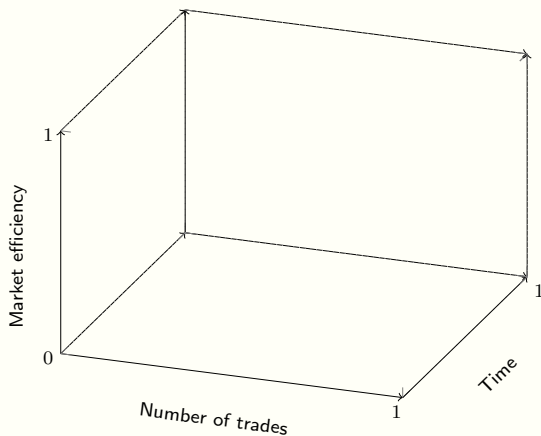
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- ▶ If the variance on observing the price does not reduce, $\sigma_t^2 = \sigma_0^2$, the market is inefficient
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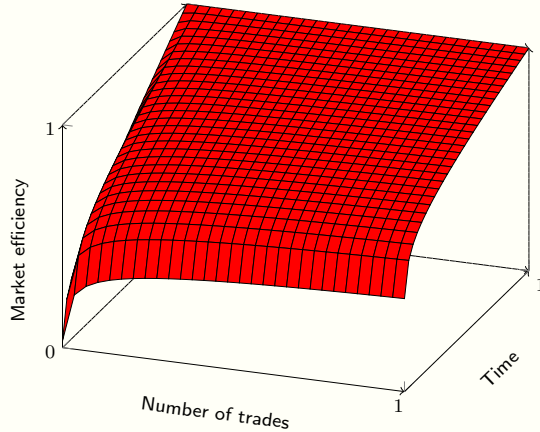
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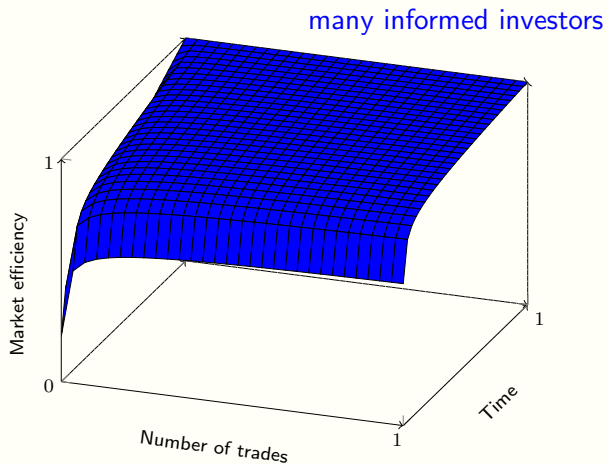


Market efficiency

Few informed investors

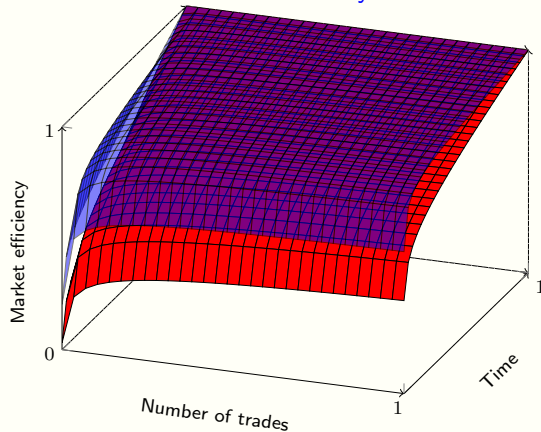


Market efficiency



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Few informed investors and many informed investors



Market efficiency develops over time

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- ▶ Markets become efficient **over time** as information is incorporated into prices

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- ▶ Markets become efficient over time as information is incorporated into prices with **each trade** informed traders conduct

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- ▶ Informed investors trade **strategically**

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- ▶ Informed investors trade strategically and **hide their trades** among the random trades of noise traders

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- If informed investors can **trade more frequently**, the market will be **more efficient** more quickly

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- ▶ With **more frequent trades**, there is **more information** available at any time

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- ▶ Informed traders obtain an **informational advantage** over noise traders

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- ▶ Informed traders obtain an informational advantage over noise traders and will exploit this advantage like an **oligopoly**

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- ▶ The **more informed traders** are in the market, the more they will **compete** with each other

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- ▶ The more informed traders are in the market, the more they will compete with each other
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- ▶ The more informed traders are in the market, the more they will compete with each other
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- ▶ If competition was perfect, markets would be **instantly efficient**

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- ▶ **More noise trading** allows informed traders to hide their orders better

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■ Informed traders

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■ Market liquidity

■ Summary

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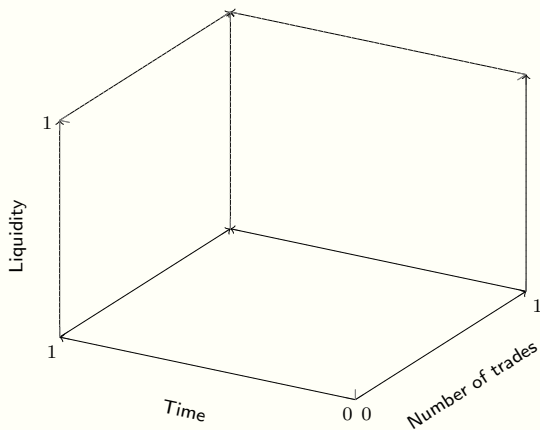
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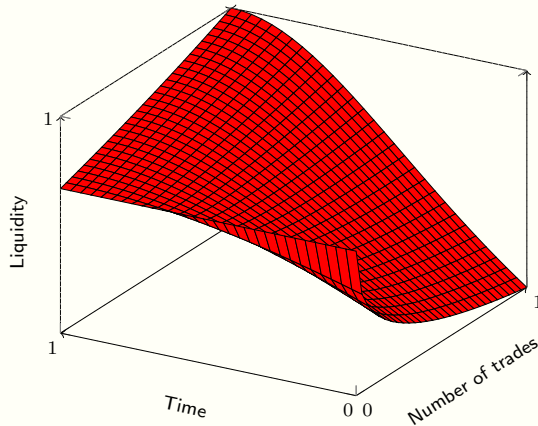
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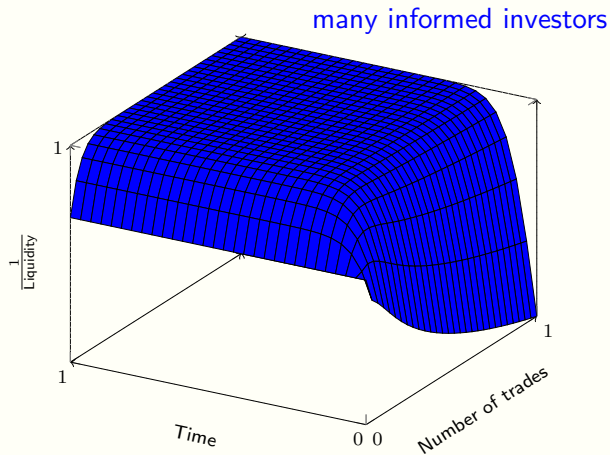


Market liquidity

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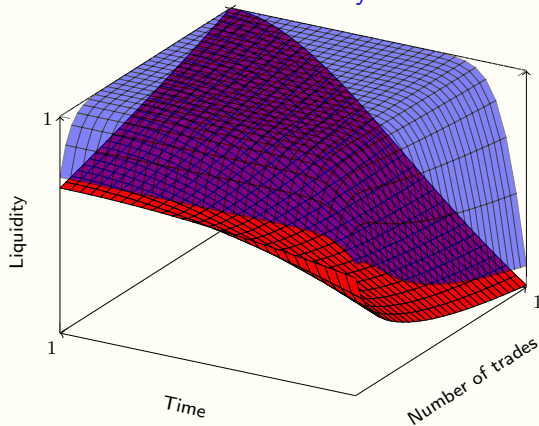


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Few informed investors and many informed investors



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