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Chapter 7.1.2
Book-building

Outline

- Problem and model assumptions
- Efficient pricing
- Bidding process
- Book-building mechanism
- Summary

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Security value and signals

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- ▶ The price is lower than in efficient pricing, but as **all securities** are **sold**, the proceeds are **higher**

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- ▶ If reporting high signal **truthfully** and h other high signal have been reported, the **value** of the security is $E \left[\hat{V} | h + 1 \right]$

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- ▶ The offer price will be S_H^h
- ▶ The amount of the security allocated to this investor is Q_H
- ▶ This needs to be weighed for the **likelihood** of having h high signals, across **all possibilities**
- ▶ Profits are: $\Pi_D^{HH} = \sum_{h=0}^{N-1} Prob(h|H) \left(E \left[\hat{V} | h + 1 \right] - S_H^h \right) Q_H$

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Investor with high signal not reported truthfully

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Investor with high signal not reported truthfully

- ▶ If reporting high signal not truthfully and h other high signal have been reported, the value of the security is $E \left[\hat{V} | h + 1 \right]$, unchanged as the investor has the **same information**

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- ▶ This needs to be weighed for the **likelihood** of having h high signals, across **all possibilities**
- ▶ Profits are: $\Pi_D^{HL} = \sum_{h=0}^{N-1} \text{Prob}(h|H) \left(E \left[\hat{V} | h + 1 \right] - S_L^h \right) Q_L$

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- ▶ An investor receiving a **low** signal, would not report a high signal

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- ▶ An investor receiving a low signal, would not report a high signal as that would **increase** the expected value and hence the **price**

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- ▶ An investor receiving a low signal, would not report a high signal as that would increase the expected value and hence the price, **reducing** his **profits**

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- ▶ An investor receiving a low signal, would not report a high signal as that would increase the expected value and hence the price, reducing his profits
- ▶ An investor receiving a **high** signal would report it **truthfully** if $\Pi_D^{HH} \geq \Pi_D^{HL}$

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- ▶ An investor receiving a low signal, would not report a high signal as that would increase the expected value and hence the price, reducing his profits
- ▶ An investor receiving a high signal would report it truthfully if $\Pi_D^{HH} \geq \Pi_D^{HL}$
- ▶ If we set $S_H^h < S_L^h$, the issuers receive **less proceeds** from the issue

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- Problem and model assumptions
- Efficient pricing
- Bidding process
- Book-building mechanism
- **Summary**

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