Game Theory

EE311

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Maximin Strategy

Playing Nash strategy against an irrational rival may be risky.

- Nash Equilibrium:
  - Firm 1: invest
  - Firm 2: Invest
- This assumes firm 2 understands the game and is rational
- If Firm 2 does not invest, Firm 1 incurs significant losses

		Firm 2	
		Don't invest	**Invest**
Firm 1	**Don't invest**	**0, 0**	**-10, 10**
	Invest	**-100, 0**	**20, 10**

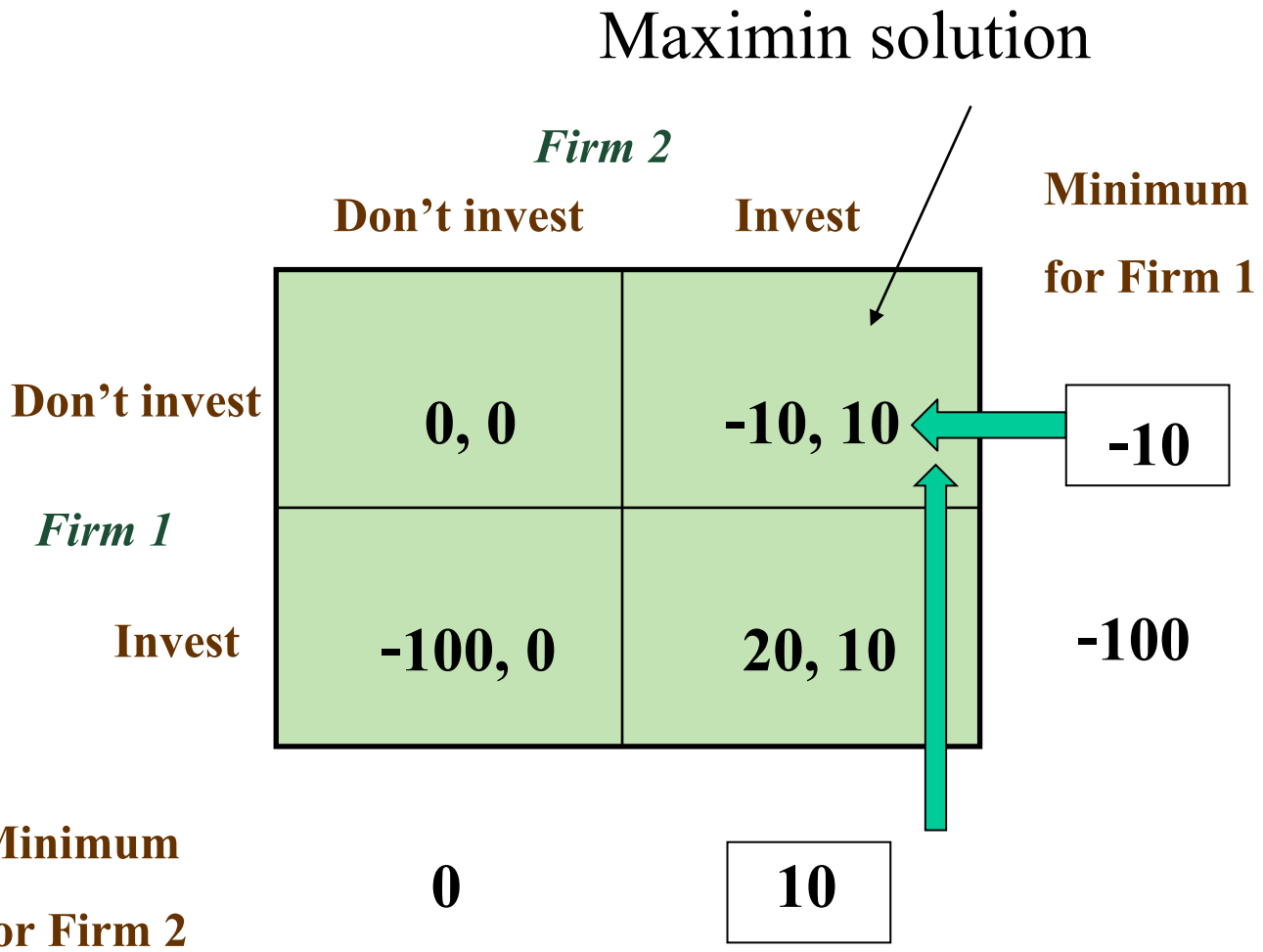
Maximin Strategy

Maximin =

Maximize

the minimum

payoffs



Maximin Strategy

- If both are rational, both firms will invest. This is the NE.
- If both are risk-averse, both firms will use maximin strategy.

  Firm 1: Not Invest Firm 2: Invest Payoff: - 10, 10
- If Firm 2 is risk-averse while Firm 1 is rational, then

  Firm 2 will use maximin strategy and Invest.

  Knowing Firm 2, Firm 1 will play his best response and Invest.

  Payoff: 20, 10