Financing Efficiency of Securities-Based Crowdfunding

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- How efficient is financing from securities-based crowdfunding?

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- More investors $\rightarrow$ crowd collectively possesses better information about underlying project

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- A large crowd acts collectively uninformed!

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- Investment process is a simultaneous move game

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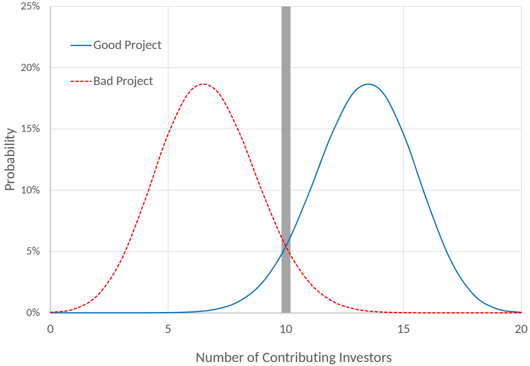
- Relevant benchmark is a monopolist controlling all capital and signals

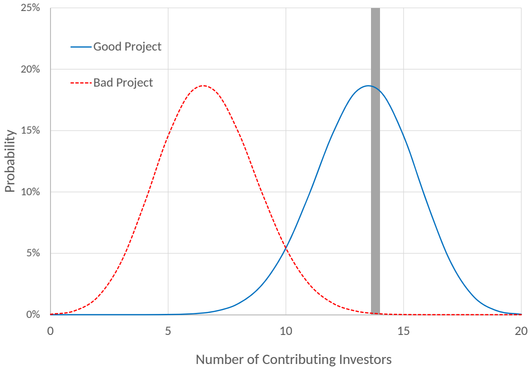
First-Best Benchmark

- $\pi_G = 1$, $\pi_B = 0$
- Projects Financed: 96% of Good, 9% of Bad
- Value Add $=$ \$8,705 $(= 0.96\delta - 0.09c)$



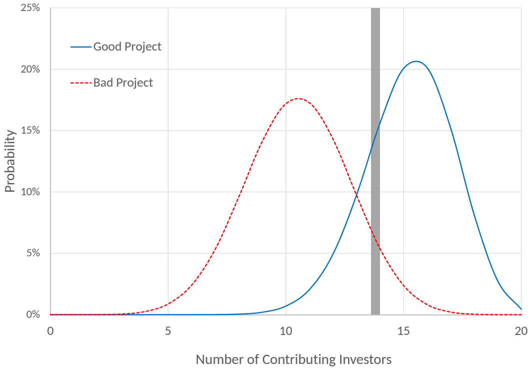
If Everyone Followed Their Signal...

- $\pi_G = 1$, $\pi_B = 0$
- Projects Financed: 48% of Good, 0% of Bad
- Value Add = \$4,786



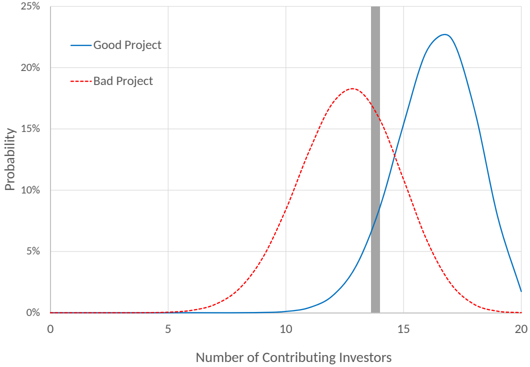
Second-Best Solution

- $\pi_G = 1$, $\pi_B = 0.2875$
- Projects Financed: 82% of Good, 9% of Bad
- Value Add = \$7,350



Competitive Equilibrium

- $\pi_G = 1$, $\pi_B = 0.4543$
- Projects Financed: 94% of Good, 37% of Bad
- Value Add $= \$5,768$



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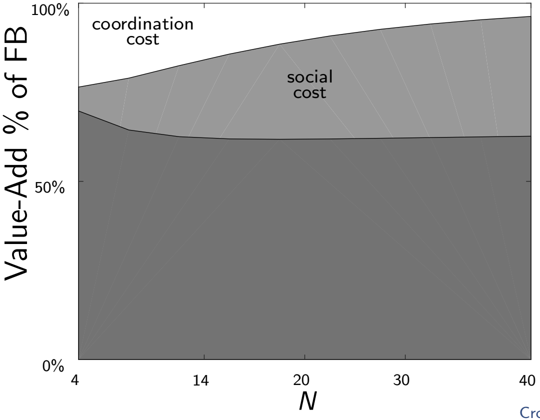
  - Investors cannot share their private signals and exploit their collective information $\rightarrow$ **Coordination Cost** ($\$8,705 - \$7,350$)
  - Investors cannot commit to participation strategies that maximize joint-surplus $\rightarrow$ **Social Cost** ($\$7,350 - \$5,768$)

Social Costs Increase as Crowd Grows

- Financing efficiency hampered by coordination and social costs
- Social costs dominate as N grows large



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- Crowdfunding outcomes reflect **no information**

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- In equilibrium, either **all** projects or **no** projects are financed – regardless of project type!

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  - Less-severe decreasing-returns-to-scale mitigate winner's curse

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- However, securities-based campaigns differ from reward-based and donation-based campaigns
  - Securities-based campaigns involve **common value goods** while reward-based and donation-based campaigns involve **private value goods**!
- Our analysis shows that this difference is first-order $\Rightarrow$ non-cooperative behavior erodes the wisdom of the crowd