Keynote: Financing Innovation

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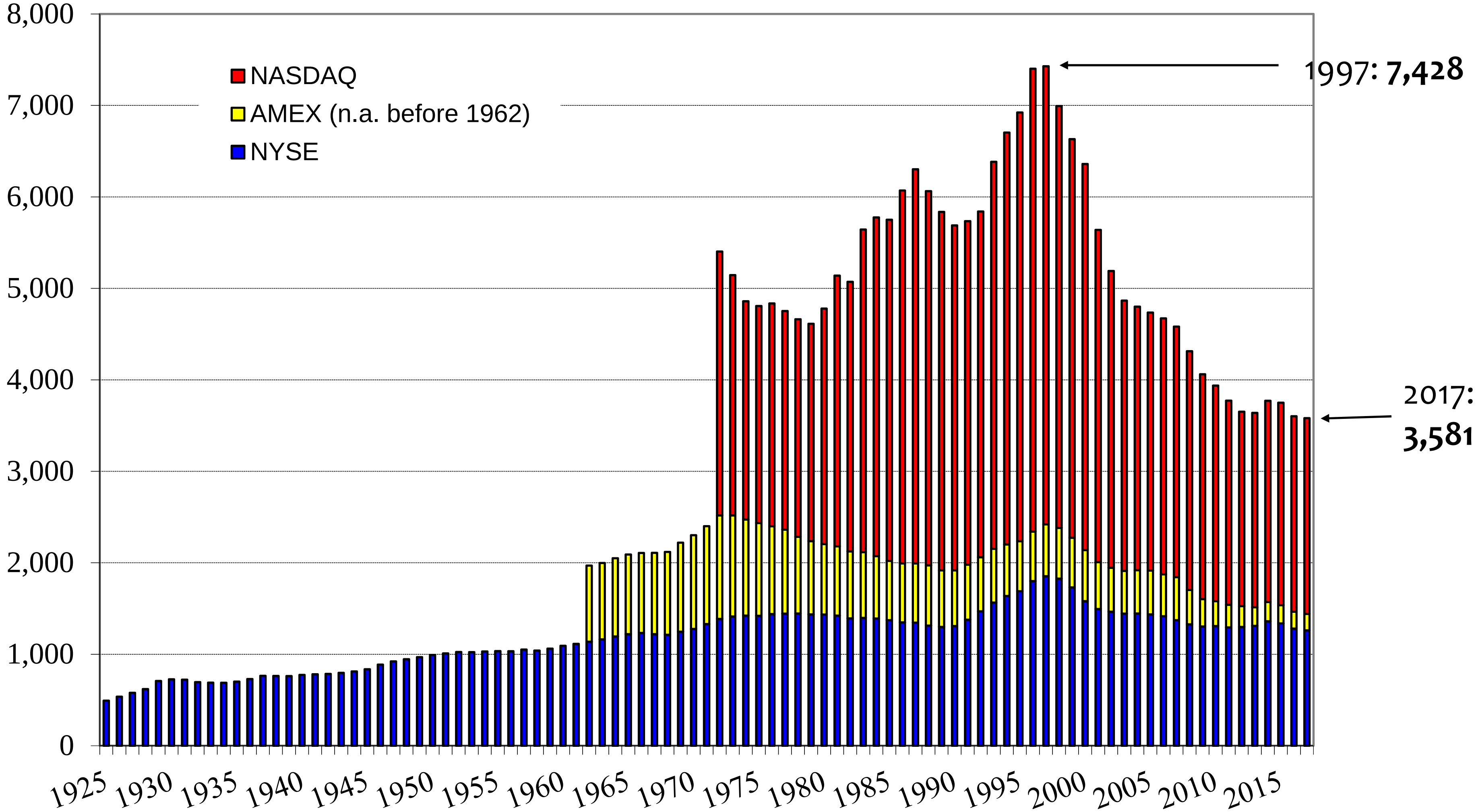
Financing innovation

Stylized macro facts

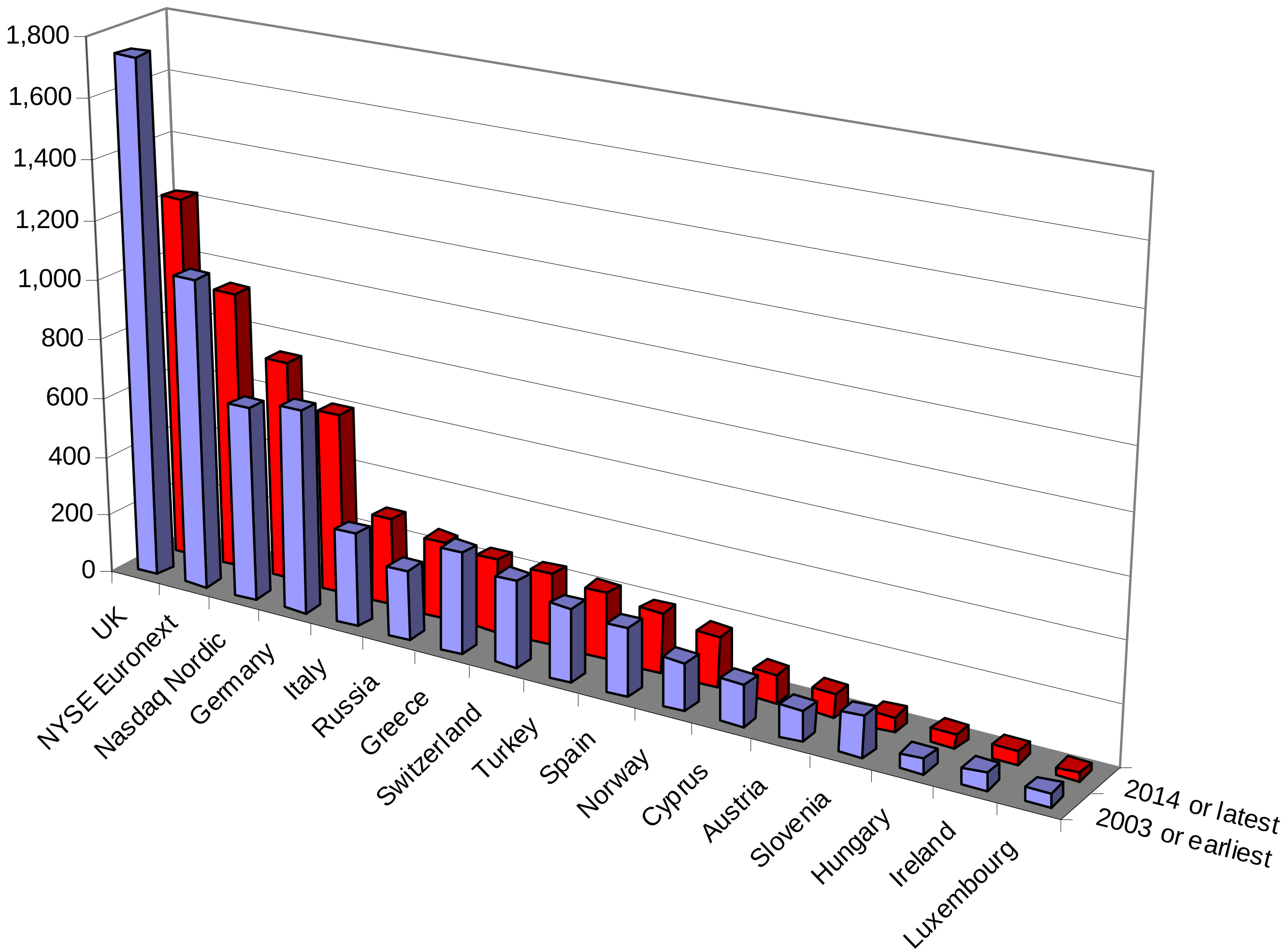
- Most U.S. firms are not stock market listed
  - Of the 5.7 million U.S. firms in 2010, 3,948 (=0.06%) were public
- This is true even for large U.S. firms
  - Among firms with >500 employees, only 13.6% are public
- Privately held firms account for a large part of economic activity
  - 2/3 of jobs, 60% of sales, 50% of investment and profits
- U.S. stock market listed firms rarely raise equity
  - Most listed firms never do; those that do, do so every 3-5 years
  - Listed firms raise more equity capital from employee option exercises than from the stock market
  - At macro level, the stock market is a net use (not source) of capital
- Stock market listings (and IPOs) have fallen out of favor in many countries – dramatically so in the U.S.

Number of listed U.S. firms



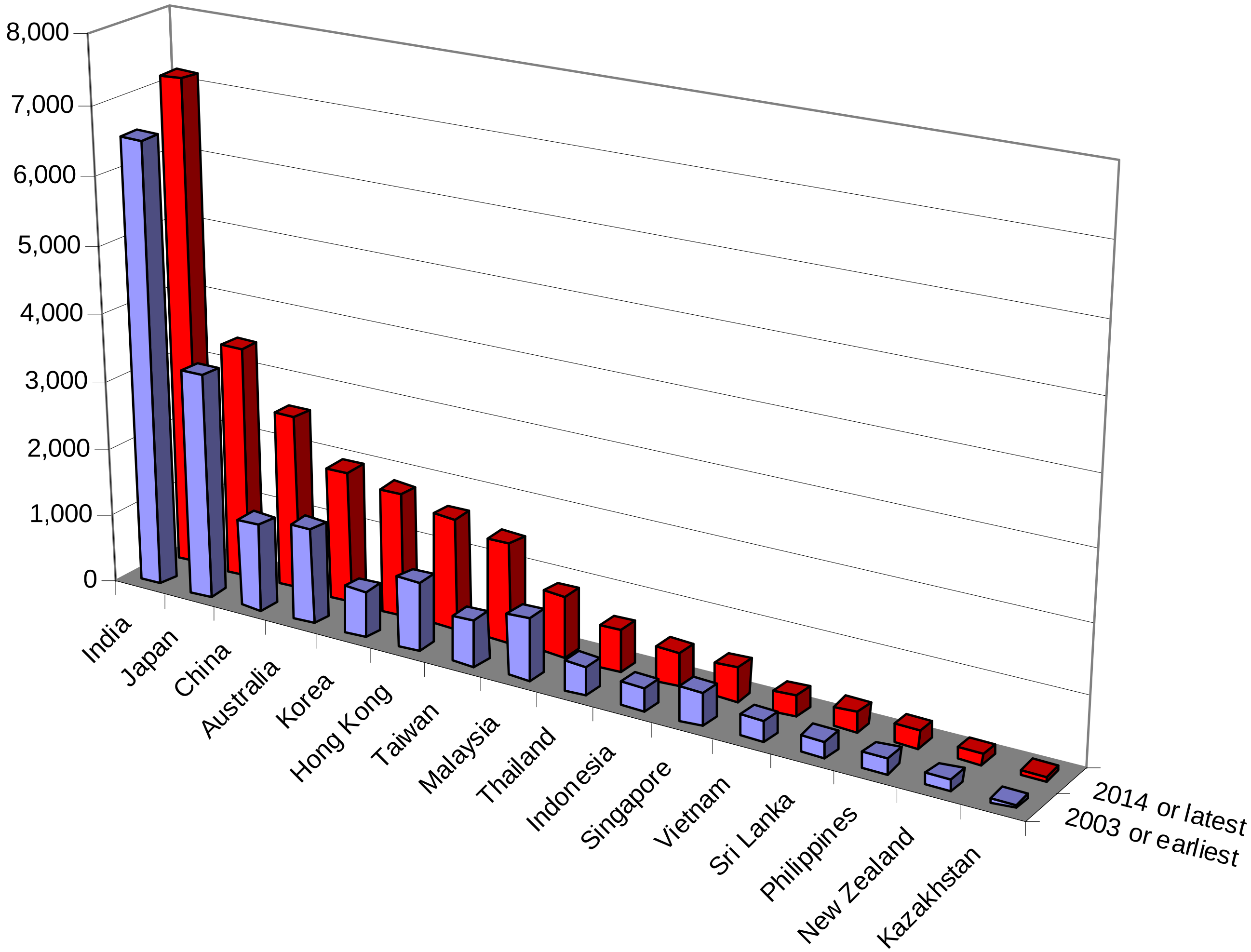
Source: Ljungqvist, Persson, and Tåg (2018)

Is this a “first world problem”?



Source: Author’s calculations using data from the World Federation of Exchanges and from national exchanges

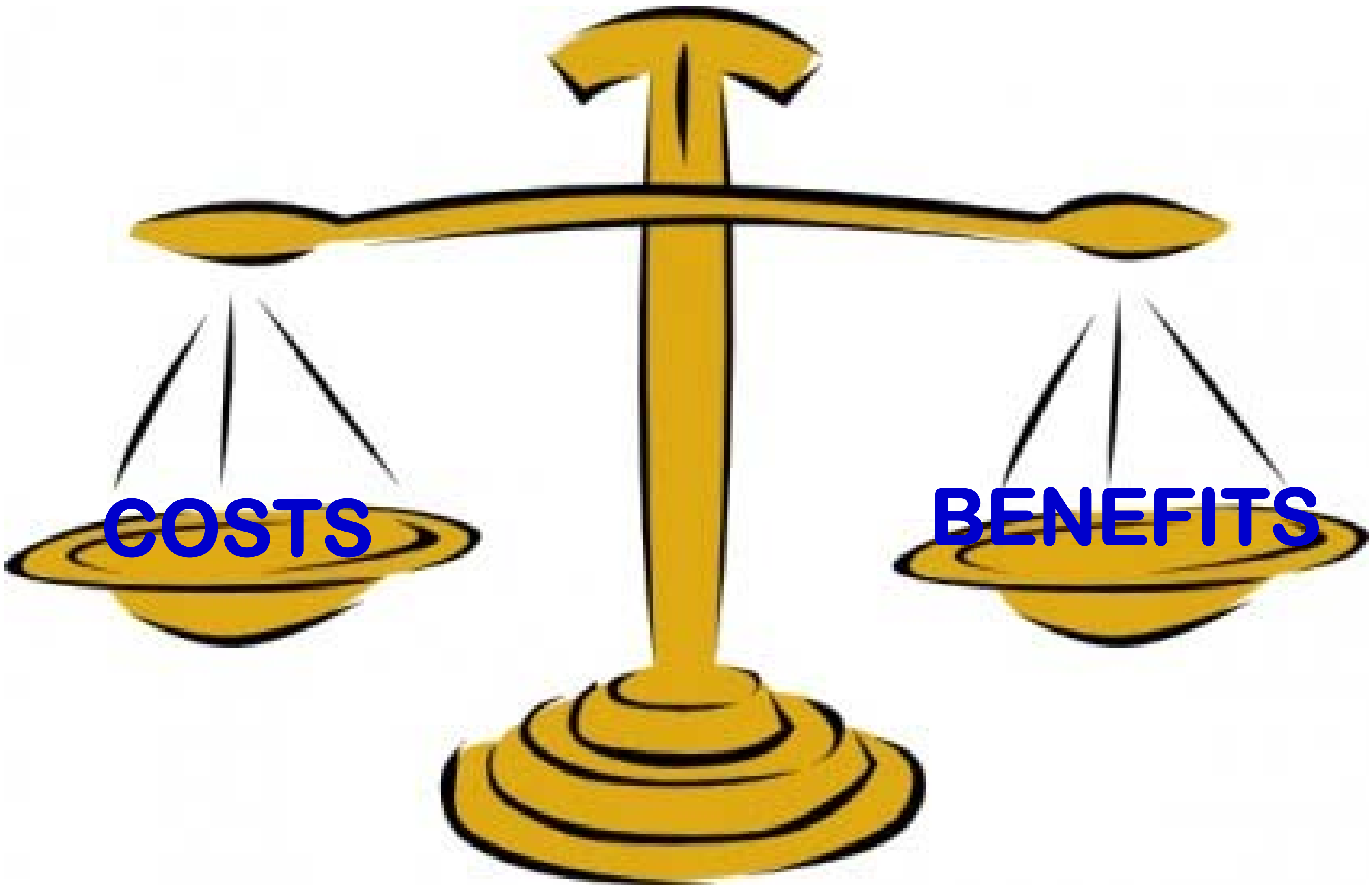
Asia looks healthier



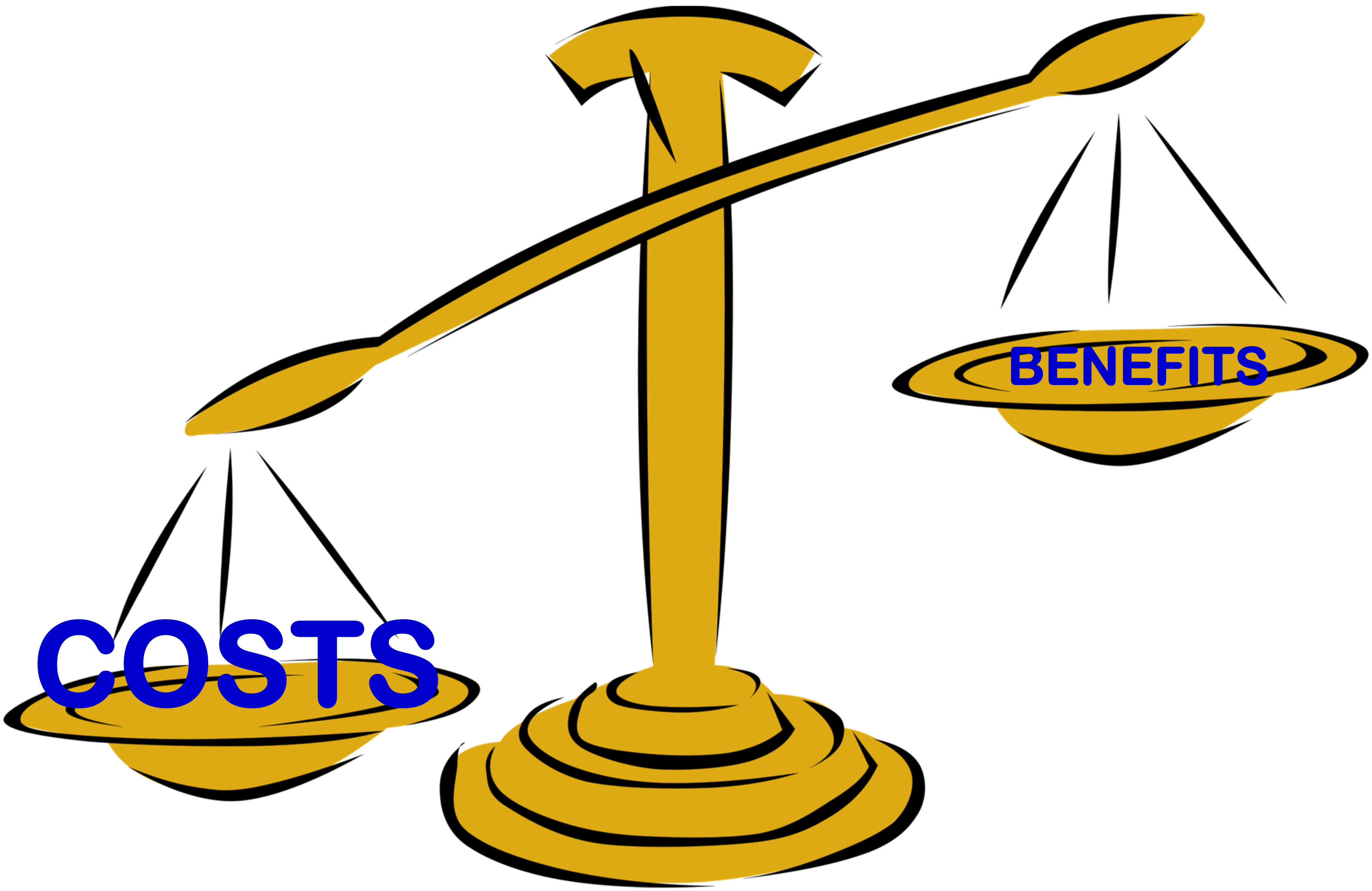
Source: Author's calculations using data from the World Federation of Exchanges and from national exchanges

Causes

A shifting cost-benefit trade-off



A shifting cost-benefit trade-off



A shifting cost-benefit trade-off

Increased costs?

- Regulatory burdens
  - US: Sarbanes-Oxley, Dodd-Frank
- "Onerous" governance rules
  - say on pay, pay ratios, …
- "Expensive distractions" (Ed Knight, NASDAQ)
  - proxy battles with activist investors
  - short-sellers
  - ⇒ short-termism

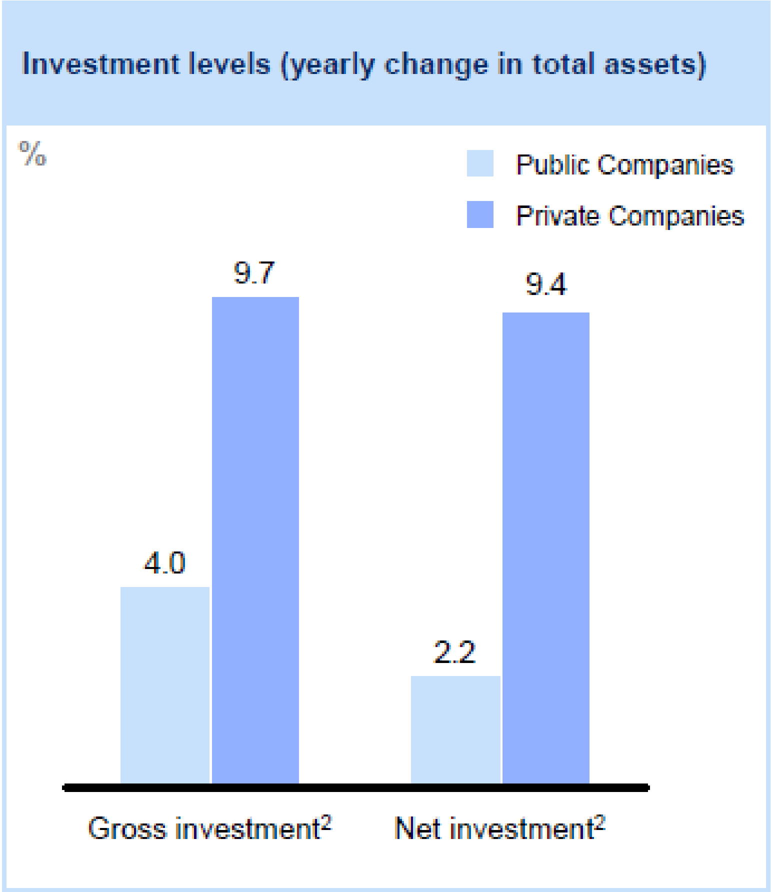
Reduced benefits?

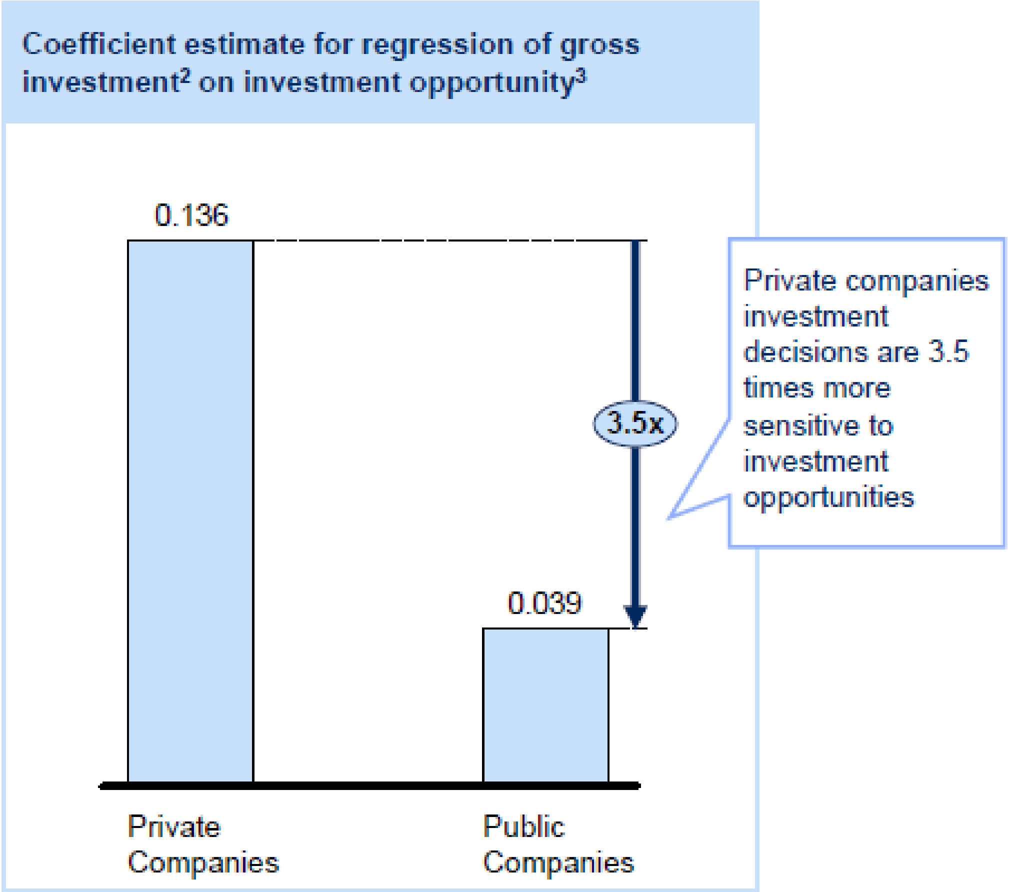
- Less trading liquidity for small-caps
  - less analyst research (⇒ MIFID II?)
  - less institutional interest
- Increased competition from other sources of capital and trading venues
  - crowdfunding (?), superangels, glut of venture capital and growth equity, mutual funds, hedge funds…
  - alternative liquidity platforms

Short-termism

Public companies invest less and are less sensitive to investment opportunities than matched private companies

For matched private and public companies[1]





1 Using NAICS 4 matched on size and industry (North American Industry Classification System)
2 Gross investment defined as annual increase in gross fixed assets scaled by beginning of year total assets; net investment defined as annual increase in net fixed assets
3 Investment opportunities considered using sales growth

SOURCE: "Stock market listing and corporate investment: A puzzle?", Asker, Farre-Mensa & Ljungqvist, Review of Financial Studies 2015

Short-termism and investment

Reporting frequency

- Increased reporting frequency $\Rightarrow$ reduced corporate investment (Kraft et al. 2018)

Managerial incentives

- Managerial incentives become more short-term $\Rightarrow$ cut long-term investment (Ladika & Sautner 2018)
- Long-term incentives $\Rightarrow$ increase in firms' investments in long-term strategies such as innovation and stakeholder relationships (Flammer & Bansal 2017)
- Faster equity vesting $\Rightarrow$ reduced R&D and CAPEX (Edmans et al. 2017)

Shareholder pressure

- Inflow of short-term institutional investors $\Rightarrow$ firms cut R&D to report higher earnings (Cremers et al. 2018)
- But: Activist hedge fund campaigns $\Rightarrow$ firms improve productivity, investment, and innovation (Brav et al. 2018, Bebchuck et al. 2015)

Take-aways

The stock market is retreating from funding innovation

- Innovative companies are staying private longer or not going public at all
- Funding innovation through other means may be more expensive (?) but may be beneficial if it avoids distortions due to short-termism
- How will that change as interest rates normalize and investors stop “reaching for yield”?