

Discussion of “Can A liquid Market Save Your Life?”

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Important Agenda

- Identifying the effect of K-market inefficiencies on R&D investment
- ...in a setting where we think there is a (complicated) relationship between investment and health outcomes
- Early stage research!
- Could turn into a very nice companion to Guedj and Stein (2005)

Hypothesis, Lever, Result

- Hypothesis: There are real effects of market liquidity and financial constraints on R&D investment
- Lever: KZ index to measure firm-specific financial constraints
- Result: Large effects, unevenly distributed across phases of investment

What I liked

- Attempt to distinguish aggregate liquidity constraints from firm-specific circumstances
- Goes beyond Gompers and Lerner's classification of "hot" or "cold" K-markets
- Anecdotes from biotech CEOs

Most interesting (and convincing) result

- Interaction between KZ and PS indexes:
“one interpretation of this result is that managers consider financial constraints to be more severe when they occur in a liquid market”
- I would give this result more prominence than it currently gets
- CEO Anecdotes: could one test their implications in a more direct way?

What I liked Less

- Given empirical strategy, could run same models on X-section of industries (in fact, should probably do this)
 - Could instead exploit “experiments” due to idiosyncratic features of the industry (Finkelstein 2004)
 - Or more direct measures of financial constraints
- Fixed effects as universal solvents of endogeneity problems
 - What drives changes in KZ index? Partly changes in Tobin’s q...
- This story should be very different for “big pharma” (who have ICMs) and for biotech firms
 - In fact, one would expect all these results to be much stronger for biotech firms
 - The authors know this, all their anecdotes pertain to biotech
 - No exploration (yet) of how different dimensions of heterogeneity impact the effects

Where to look for exogenous variation in financial constraints?

- Find some drug classes/diseases that experience some sort of shock
- Withdrawals: Vioxx is withdrawn, what happens to firms with cox-2 inhibitors in development?
- Vaccine shocks of Finkelstein (2004)
- Political pressures:
 - Expropriation of cipro patents in 2001 and impact on antibiotic drug development
 - Johannesburg AIDS conference in 2000
- ...then can ask how aggregate liquidity moderates the investment response

Quibbles

- Cute but inaccurate title
- Year effects needed in all the panel regressions (will absorb PS index but that's life)
- NegBin model not very robust...cheap alternatives exist
- Don't jump straight to the fixed effects results
- Can the pharmaprojects data really enable you to run event history analyses...probably not

More minor comments

- Verbal confusion about level of analysis (drug vs. trial), e.g. Figure 1
- Bizarre to look at the outcomes of go/no-go decision as indicators of drug quality
- How do you deal with Int'l Firms listed on other public markets?
- Phase I trials are VERY heterogeneous. Not surprising you do not get a clear effect (look at cancer vs. other)
- Disclosure of preclinical R&D is endogenous...again, important differences between biotech and pharma firms