



Discussion: RegTech

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Summary

RegTech:

- Compliance-driven investments in technology

Research question:

- Understanding firms' RegTech investments and their effects on operations and market structure.

Challenges:

- Firms' adoption of technology is endogenously driven by factors that may affect firm outcomes
 - e.g., Zhang (2019 JF) shows that firms tend to adopt automation to replace routine labor in bad times: *the opportunity cost of operation restructuring is low*

This paper

Research Design:



- Focus on RegTech adoption by Brokers and Dealers (BDs)
- Explore a regulatory shock in 2013-14 mandating stringent internal control attestation
 - *Treated: carrying brokers and dealers*
 - *Control: non-carrying brokers and dealers*

Main Findings:

1. First pass: Carry BDs significantly invest in regulation-related technologies (e.g., ERP)
2. Key mechanism: *Reg-related investments complement non-reg-related expenditures*
3. Outcome: Carry BDs exhibit reduced customer complaints and employee misconduct

Takeaway: RegTech investments boost noncompliance functions through tech adoption.

Comment: Effects of Regulation or RegTech?

- **Effects of RegTech:** RegTech Investment  Firm outcomes
- **Effects of Regulation:** Regulatory mandates  Firm outcomes
- The empirical design primarily focuses on a **regulatory shock**
 - i.e., How do BDs treated by regulation differ from BDs not treated by regulation?

Comments:

- Treated BDs may have differential responses to regulation: Some invest in RegTech, while others resort to the old compliance methods.
- Do we observe BDs invested in RegTech generate better outcomes than those resorted to old compliance methods?

Comment: Exclusion Restriction of IVs

- One way to think of the empirical design is using the regulatory shock as an IV for RegTech.
- The authors performed this IV test. Great!

Comments:

- A common hurdle is the exclusion restriction of IVs
- Does IV (regulatory treatment) reduce customer complaints and employee misconduct only through RegTech investment, or through other channels as well?
 - Many provisions of Dodd-Frank became effective in 2014. Can some provisions differentially treat brokers and dealers with custody assets?

More Broadly on Using a Single Regulatory Shock

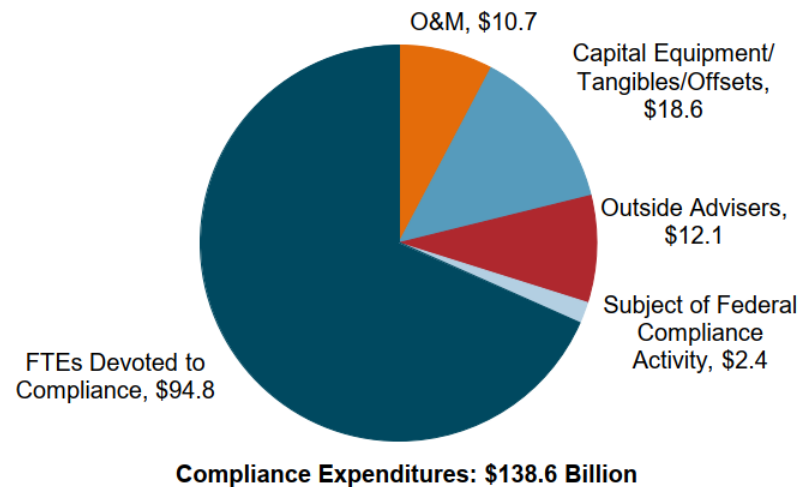
Regulatory compliance is an ultra-complicated matter:

- Firms may be subject to regulations from multiple agencies (Trebbi and Zhang (2022))
 - ❖ Mapping between firms and agencies is not 1-to-1
- Firms may face differential regulatory enforcement (Gulen and Myers (2022))
 - ❖ Regulators' enforcement may vary by location, firm size, etc.
- Firms may also respond to regulatory compliance differentially
 - Depending on firms' risk-taking behavior (Gary Becker, Stiglitz (2009))

A much bigger regulatory spending is compliance-related labor spending

Manufacturing: Labor accounts for 68%

Chart 15. Estimates of Direct Regulatory Costs on Manufacturers (in Billions of 2014 Dollars)



Finance: Labor accounts for 93%

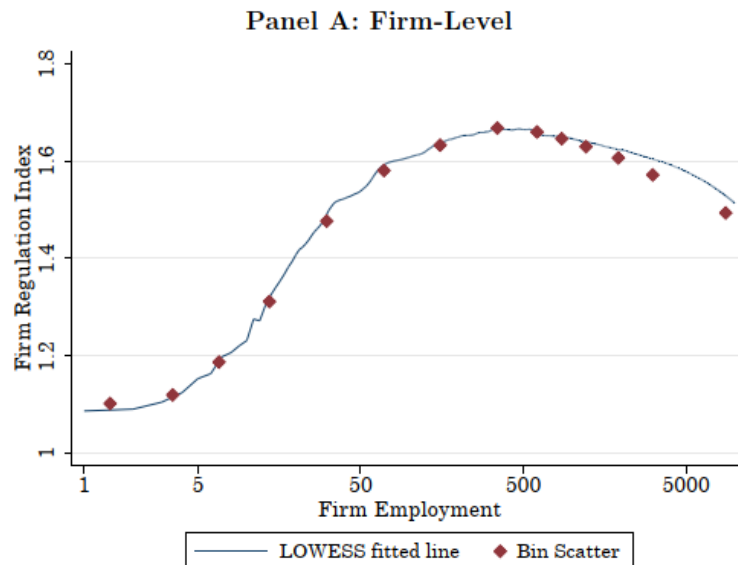
Figure 3b

Percent of Total Compliance-Related Spending				
	Staff-Related ¹	Out-of-Pocket	Capital	Total
All Firms	93.9	2.8	3.3	100.0
Large Firms	94.3	2.1	3.6	100.0
Mid-sized Firms	96.1	3.1	0.8	100.0
Small Firms	81.5	13.4	5.1	100.0

Measuring Firms' Regulatory Compliance via Labor

Trebbi and Zhang (2022)

- Measure: percentage of firms' labor spending on **regulation-related tasks**
- U.S. Bureau of Labor Statistics Microdata of 1.2 million establishments with their occupation composition
- Mid-size firms pay the highest percentage regulatory spending



Conclusion

Fascinating study

- First stab at RegTech and its effects on firms
- Many interesting findings
- More study needed to understand the overall regulatory environment that firms face

Thank you!

