

Discussion: “Unintended Risks of Bank Capital Regulations” by Dongkeun Choi

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Summary

Question: Can bank capital regulation lower mortgage risk when origination migrates to NBFIs?

Facts: similar applicants; higher NBFi approvals; riskier NBFi originations; higher NBFi defaults; bank-exposed MSAs shift toward NBFIs after Basel III

Mechanism: tighter capital reg. raises banks' marginal cost; banks tighten and shrink; NBFIs absorb reallocated applications with looser screening

Result: tighter capital reg. raises aggregate defaults because reallocation induced increase in defaults dominates bank risk reduction

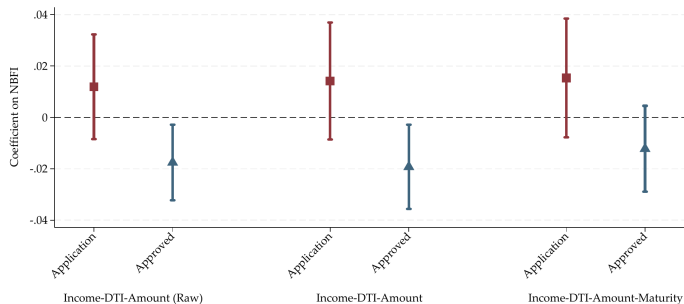
Policy: regulate the margin where risk is created, NBFi underwriting, not only bank capital

Discussion: NBFi technology; endogenous NBFi risk; welfare object

Empirics: NBFIs approve riskier borrowers more

- Application pool: bank and NBFIs applicants are similar on observed risk

FIGURE 3. Fixed-Effect-Adjusted Differences in Applicant Risk by Lender Type



Empirics: NBFIs approve riskier borrowers more

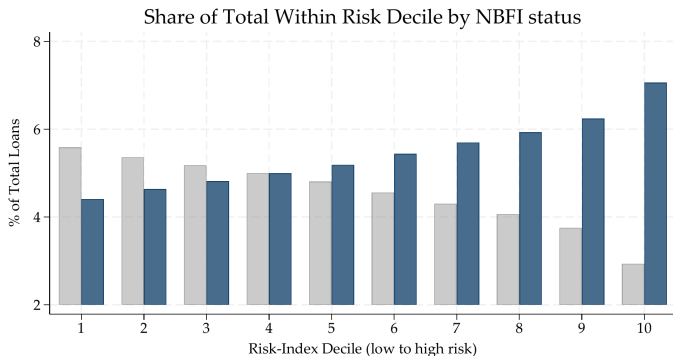
- ▶ Application pool: bank and NBFI applicants are similar on observed risk
- ▶ Approval margin: NBFIs approve more

Approval rate	Full	High-risk
Conventional conforming	10.3 pp	11.1 pp
All conforming	8.8 pp	16.8 pp

Empirics: NBFIs approve riskier borrowers more

- ▶ Application pool: bank and NBFi applicants are similar on observed risk
- ▶ Approval margin: NBFIs approve more
- ▶ Origination pool: NBFi share rises across joint FICO $\times$ LTV $\times$ DTI risk

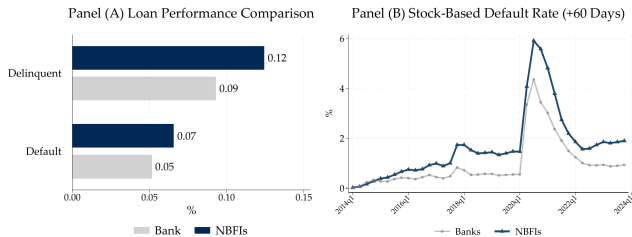
FIGURE 7. Originator Shares within Risk-Index Deciles



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- ▶ Performance: 2% higher default rate of NBFI borrowers

FIGURE 11. Default Performance by Institution Type



Key model forces in one slide

- ▶ Lender j chooses R_j^ℓ and q_j : tighter q_j lowers approvals $p_j(q_j)$, lowers defaults $d_j(q_j)$, and raises screening cost $s_j(q_j)$
 - ▶ Banks fund with deposits and face capital regulation
NBFIs fund with wholesale/MMF finance and do not
 - ▶ Calibration assigns NBFIs a higher cost of tight screening
 - ▶ Key asstpt: banks and NBFIs draw from identical applicant pool
 - ▶ Bank capital creates two opposing forces
 - ▶ Bank selection: $R_B^\ell \uparrow$, tighten q_B , originate safer loans
 - ▶ Reallocation: $R_B^\ell \uparrow \Rightarrow$ applications shift to NBFIs; $p_{NB} > p_B$, so more applications get funded; new loans default at $d_{NB} > d_B$ (≈ 1.9 pp gap, Table 5)
- $\Rightarrow$ Tighter bank capital raises aggregate default; reallocation $\approx 100\times$ bank selection (Table 5); concludes should regulate NBFI underwriting

Comment 1: NBFI tech worse or different?

Strength: clean empirical sequence: similar observed applicants, higher NBFI approvals, riskier originations, higher defaults

Premise: interpreted as weaker NBFI screening w/ $\chi_{NB}/\chi_B \approx 83$

Puzzle: prior evidence does not show NBFI loans default more

- ▶ Fuster, Plosser, Schnabl, Vickery (RFS 2019): nonbanks not riskier; faster processing, no higher defaults
- ▶ Buchak, Matvos, Piskorski, Seru (JFE 2018): NBFI–bank default gap ≈ 0.02 pp on GSE conventional, 2010–2013

Either NBFI tech not worse, or higher default rate not screening driven

Comment 1: NBFIs tech worse or different? (ctd)

Same observables do not imply same applicant pool or worse technology

- ▶ NBFIs may offer speed, convenience, and better technology, not weaker screening (Fuster et al (2019); Buchak et al (2018))
- ▶ Unobservable riskier borrowers may select into NBFI (Agarwal et al. (2024))
- ▶ Banks may exit riskier segments where they cannot compete (e.g., Wells Fargo, 2023); the remaining bank pool becomes safer, so the bank–NBFI default gap $\uparrow$ w/o NBFI behavior change

- $\Rightarrow$ Result relies on NBFI avg. risk not falling when safer borrowers switch
- $\Rightarrow$ If risky borrowers sort to NBFIs on unobservables, tighter ν sends safer borrowers to NBFIs, d_{NB} falls, sign flips

Suggestion:

- ▶ Present a sensitivity in which NBFIs have a *better* screening technology and unobservable sorting produces the observed pattern; check whether reallocation still dominates bank selection

Comment 2: Fixed NBFIs borrower risk?

Question: the counterfactual holds the NBFIs underwriting/default schedule fixed as bank capital changes

- ▶ Begenau-Landvoigt (2022): higher bank capital compresses banks' deposit-insurance funding subsidy
- ▶ This force could lower competitive pressure pushing NBFIs toward looser underwriting $\Rightarrow$ ambiguous sign $\partial d_{NB}/\partial \nu$

Data motivation: time varying NBFIs-bank default rate differences?

- ▶ Fuster et al (2019): null on default; Buchak et al (2018) ≈ 0.02 pp on GSE conventional, 2010–2013
- ▶ This paper: ≈ 2 pp

Suggestions:

- ▶ Allow for p_{NB} and d_{NB} schedules to respond to ν
- ▶ Decompose where the 2 pp diff. comes from:
period: pre-2015 Fuster window vs. post-2016, Bosshardt (2024); segment: Ginnie Mae FHA/VA vs. GSE conventional; lender type: FinTech vs. non-FinTech; joint-risk tails (Figure 6/7) vs. averages; COVID vs. non-COVID)

Comment 3: Welfare object?

Question: the policy ranking uses aggregate mortgage defaults and credit losses, but welfare depends on incidence and externalities

- ▶ Bank balance-sheet losses matter for bank equity, FDIC exposure, and fire-sale risk
 - ▶ NBFIs sold off to GSE/Ginnie: taxpayer losses
 - ▶ NBFI fragility can feed back to banks through warehouse lines, servicing advances, and guarantees (Erica Jiang, 2023)
- ▶ How to weigh GSE losses against bank losses?
- ⇒ Policy ranking needs welfare weights, not just aggregate default losses

Smaller points for author

Same borrower pool: Are Figure 2 graphs standardized within lender type or overall?
If within, level differences in applicant risk could remain

MSA DiD: exposure also proxies for large-bank footprint and local housing cycles;
paper adds controls $\times$ year, but show FE-only and sequential controls

Within-sector elasticities (Table 3): $\epsilon_B = 713$, $\epsilon_{NB} = 492$ are distinct from
cross-sector $\varphi = 4.05$; they imply near-zero markups and near-perfect substitution
across lenders

Calibration wedges: ϵ_j and χ_j are inferred jointly from loan rates and underwriting
FOCs at $\bar{q}_j$; they can absorb omitted cost, guarantee, screening, or subsidy wedges

Verification-cost wedge: $\chi_{NB}/\chi_B \approx 80$; interpret as reduced-form sector heterogeneity
and show sensitivity under smaller NBFIs wedge

Borrower sorting: baseline keeps applicant risk distribution common across sectors;
quantify how much safe-borrower sorting toward NBFIs would overturn Prop. 3

Conclusion

Very nice paper on an important question

Suggestions:

- ▶ Identify why NBFIs differ: weaker screening vs. technology and borrower sorting
- ▶ Allow NBFIs underwriting/default risk to respond to bank capital
- ▶ State the welfare object: aggregate mortgage default $\neq$ systemic risk