Failing Banks
by
Sergio Correia, Stephan Luck and Emil Verner

Discussion
by
Elena Carletti
Bocconi University and CEPR

Banks and Beyond

April 3-4, 2025

Università Commerciale
Luigi Bocconi

The paper in short

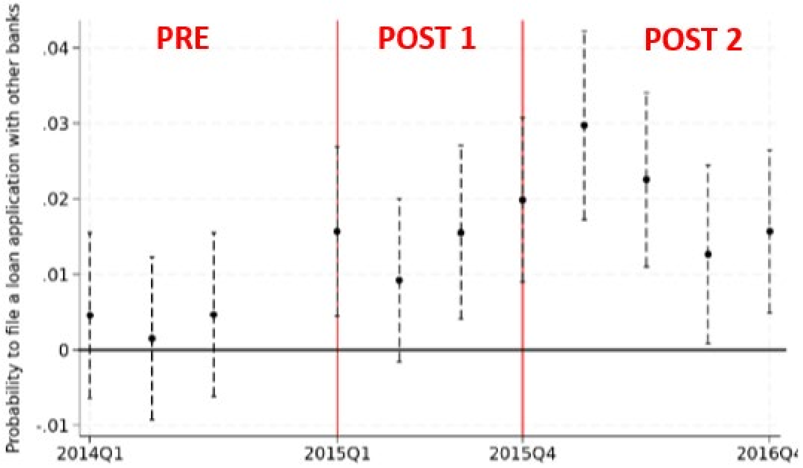
- **Why do banks fail?**
  1. **Bank runs**: depositors withdraw from otherwise solvent banks – **panic** à la Diamond and Dybvig (1983) or Goldstein and Pauzner (2005)
  2. **Poor fundamentals** (credit risk, IRR, fraud) trigger insolvency, **irrespective** of runs (e.g., Calomiris and Mason, 1997; Admati and Hellwig, 2014)
- **Main results**
  1. **Commonalities** in failing banks **prior** to failure: i) ↑ **NPLs** and ↓ **solvency**; ii) ↑ risk-sensitive **non-core** funding; iii) **boom-and-bust** in assets
  2. Bank failures are **remarkably predictable** using measures of **deteriorating fundamentals** (e.g. proxies of distance to default) or **funding vulnerabilities** (e.g. non-core funding)

→ Runs account only for less than **2%** of failures, and are **still linked** to fundamentals

A few things to keep in mind

1. **Amazing historical data set** (1865-2023) - 37000 banks, more than 5000 failures
   - Granular but "**low frequency**" (yearly or quarterly)
   - Difficult to provide **micro explanations** of the results obtained

- Example:
  - What happens to the asset side of banks in the run up of the failure?
  - Why ↑ NPLs and ↓ solvency?



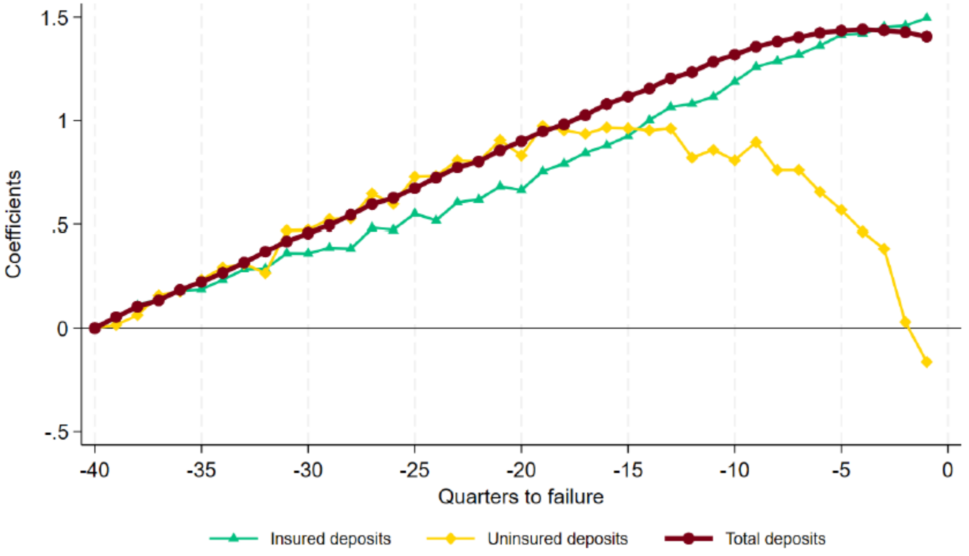
Carletti, De Marco, Ioannidou and Sette (2025):

- Clear timing & well defined shocks hitting two Italian banks
- **Better** borrowers start **applying** for loans to outside banks as "distress news" spread

→ **Endogenous deterioration** of distressed banks' portfolio

A few things to keep in mind – cont.

2. **Definition of bank failure:** whenever a **receiver** is **appointed** by the OCC
   – Failures <u>without</u> a receivership are not included – how many are these cases?
3. **Definition of runs:** deposits decline by more than **7.5%** between the **last call report** and the **failure** (i.e. FDIC Failure Transaction Database)
   – Why this threshold?
   – Why is this period zoomed in?

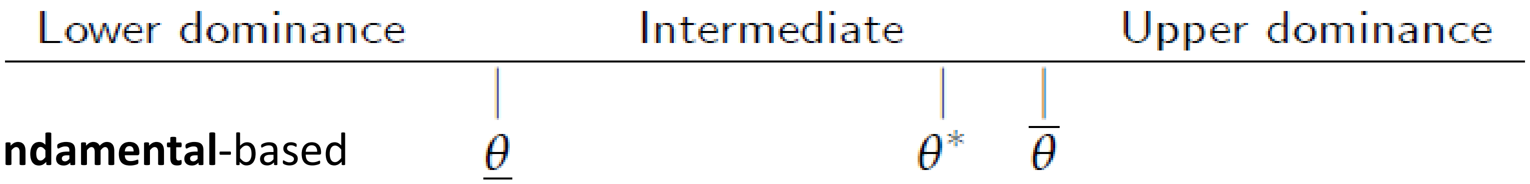


Replication study by Pietro Vacca (2025):

- Runs occur **slowly**, not just in the last run up to the failure – more significant over a longer horizon?

Relating findings with theories of bank failures

- How do I read theory?



Fundamental-based run: $R\theta < (1-k)r_2$
- Bank is **insolvent**
- **Run forces failure**

Panic-based run: $R\theta > (1-k)r_2$ **but** $L < (1-k)r_1$
- Bank is **solvent**
- **Coordination problems due to illiquid assets**
- **Run forces failure**

No runs: $R\theta > (1-k)r_2$ and $L > (1-k)r_1$
- Bank is **solvent**
- **No run occurs**

Based on Goldstein and Pauzner (2005) as readjusted in Carletti, Leonello and Marquez (2023)

Relating findings with theories of bank failures

- How do I read theory?

Lower dominance | Intermediate | Upper dominance

$\underline{\theta}$ θ^* $\bar{\theta}$

Fundamental-based run: $R\theta < (1-k)r_2$
- Bank is **insolvent**
- **Run forces failure**

Panic-based run: $R\theta > (1-k)r_2$ **but** $L < (1-k)r_1$
- Bank is **solvent**
- **Coordination problems due to illiquid assets**
- **Run forces failure**

No runs: $R\theta > (1-k)r_2$ and $L > (1-k)r_1$
- Bank is **solvent**
- **No run occurs**

How to reconcile with CLV?

Relating findings with theories of bank failures

- How do I read theory?

Lower dominance | Intermediate | Upper dominance

$\underline{\theta}$ θ^* $\overline{\theta}$

Fundamental-based run: $\boxed{R\theta < (1-k)r_2}$
- Bank is **insolvent**
- **Run forces failure**

Not considered: Bad fundamentals cause failures, with /out runs

Panic-based run: $R\theta > (1-k)r_2$ **but** $L < (1-k)r_1$
- Bank is **solvent**
- **Coordination problems due to illiquid assets**
- **Run forces failure**

No runs: $R\theta > (1-k)r_2$ and $L > (1-k)r_1$
- Bank is **solvent**
- **No run occurs**

Relating findings with theories of bank failures

- How do I read theory?

Lower dominance		Intermediate			Upper dominance
	$\underline{\theta}$		θ^*	$\overline{\theta}$	

Fundamental-based run: $R\theta < (1-k)r_2$
- Bank is **insolvent**
- **Run forces failure**

Not considered: Bad fundamentals cause failures, with /out runs

Panic-based run:
$R\theta > (1-k)r_2$ **but** $L < (1-k)r_1$
- Bank is **solvent**
- **Coordination problems due to illiquid assets**
- **Run forces failure**

Focus, but independent of fundamentals

No runs: $R\theta > (1-k)r_2$ and $L > (1-k)r_1$
- Bank is **solvent**
- **No run occurs**

Università Commerciale Luigi Bocconi

Relating findings with theories of bank failures

- How do I read theory?

Lower dominance | Intermediate | Upper dominance

$\underline{\theta}$ θ^* $\overline{\theta}$

Fundamental-based run: $\boxed{R\theta < (1-k)r_2}$
- Bank is **insolvent**
- Run forces failure

Not considered: Bad fundamentals cause failures, with /out runs

Panic-based run:
$\boxed{R\theta > (1-k)r_2 \text{ but } L < (1-k)r_1}$
- Bank is **solvent**
- **Coordination problems due to illiquid assets**
- Run forces failure

Focus, but irrespective of fundamentals

No runs: $R\theta > (1-k)r_2$ and $L > (1-k)r_1$
- Bank is **solvent**
- No run occurs

CLV: Three **testable implications** concerning **predictability**, **deposit outflows**, **asset losses**

If runs are the case of failures, they should i) be **no/little predictable**; ii) entail **large deposit outflows before** failure; iii) do **not** entail **large** asset losses

Relating findings with theories of bank failures

- How do I read theory?

Lower dominance | Intermediate | Upper dominance

$\underline{\theta}$ θ^* $\overline{\theta}$

Fundamental-based run: $R\theta < (1-k)r_2$
- Bank is **insolvent**
- **Run** forces failure

Panic-based run:
$R\theta > (1-k)r_2$ **but**
$L < (1-k)r_1$
- Bank is **solvent**
- **Coordination problems due to illiquid assets**
- **Run forces failure**

No runs: $R\theta > (1-k)r_2$ and
$L > (1-k)r_1$
- Bank is **solvent**
- **No run** occurs

Questions:
- **what kind of runs do we observe?**
- **How high is the recovery rate?**

CLV: Three **testable implications** concerning **predictability**, **deposit outflows**, **asset losses**

If runs are the cause of failures, they should i) be **not/little predictable**; ii) entail **large deposit outflows before** failure; iii) do **not** entail **large** asset losses

A few more questions on theories of bank failures

- All runs should be **linked** to **fundamentals**, also **panic** ones
  - Also in line with Chen, Goldstein, Huang and Vashishtha (2025)
- Are there **differences** in failures induced by **poor fundamentals with** and **without runs**?
  - Timing of the failure, size of the recovery rate, etc.
  - Can runs be "efficient"?
- **Liquidation value** and **recovery rate**
  - What should depositors base their decision on: final recovery rate or at the time of receivership?
  - Pretty low recovery all together

Table 1: *Asset Quality and Recovery Rates in Failure, 1865-1939*

Era	(1) No. of failures	(2) Assets at suspension: Good	(3) Doubtful	(4) Worthless	(5) Received after suspension	(6) Ultimate recovery from assets
1865-1913 (NB Era)	531	0.36	0.40	0.26	0.11	0.45
1914-1928 (Early Fed)	652	0.35	0.40	0.26	0.11	0.48
1929-1934 (Great Depression)	1710	0.36	0.52	0.13	0.08	0.53
All	2893	0.36	0.47	0.18	0.09	0.51

A few more questions on theories of bank failures

- All runs should be **linked** to **fundamentals**, also **panic** ones
  - Also in line with Chen, Goldstein, Huang and Vashishtha (2025)
- Are there **differences** in failures induced by **poor fundamentals** **with** and **without runs**?
  - Timing of the failure, size of the recovery rate, etc.
  - Can runs be "efficient"?
- **Liquidation value** and **recovery rate**
  - What should depositors base their decision on: final recovery rate or at the time of receivership?
  - Pretty low recovery all together

To conclude: a great paper, inspiring and intellectually stimulating!