

# Discussion of San Millan "Sectoral Credit Allocation, Capital Requirements and Financial Stability"

Pedro Gete

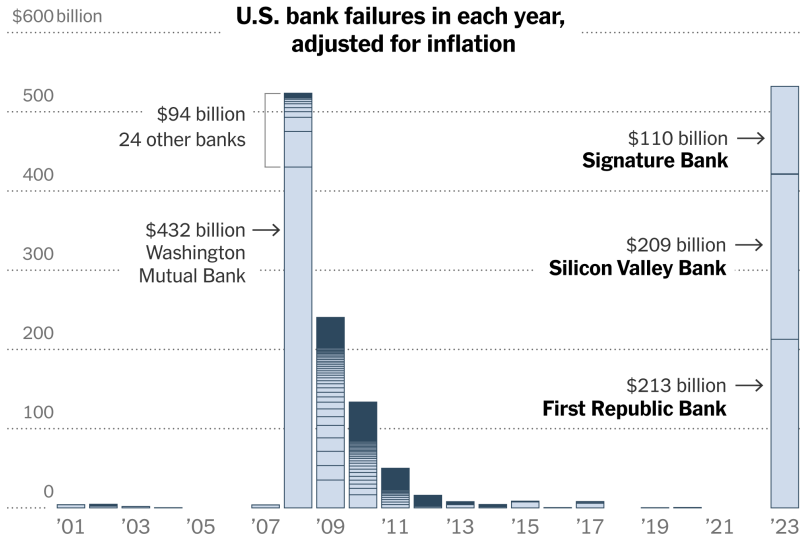
IE University

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# Great topic

- ▶ **Micro-** vs **Macroprudential** regulation

# Microprudential is classical banking regulation



Source: New York Times

# What drives default in a bank?

- ▶ Probability of default (PD)
- ▶ Loss-given-default (LGD)

# Basel framework

$$\text{Capital requirement} = K = \left[ \text{LGD} \cdot N \left[ \frac{G(PD)}{\sqrt{(1-R)}} + \sqrt{\frac{R}{1-R}} \cdot G(0.999) \right] - PD \cdot \text{LGD} \right] \cdot \frac{(1 + (M - 2.5) \cdot b)}{(1 - 1.5 \cdot b)}$$

$N(x)$  denotes the CDF for a standard normal

$G(z)$  denotes the inverse CDF for a standard normal

$R$  is the correlation across assets

$M$  is effective maturity

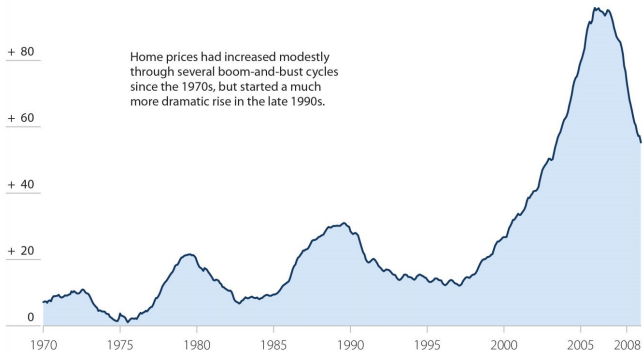
$b$  is a maturity adjustment

[https://www.bis.org/basel\\_framework/chapter/CRE/31.htm](https://www.bis.org/basel_framework/chapter/CRE/31.htm)

# Macprudential

## Percentage Change in Real Home Price Index

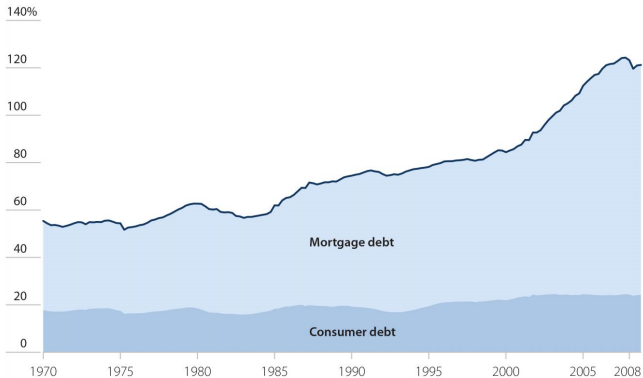
+100% since 1890



Source: Based on Figure 3.1, U.S. home price and related data, Robert J. Shiller, *Irrational Exuberance*, 3rd ed. (Princeton, NJ: Princeton University Press, 2015), as updated by the author, [www.econ.yale.edu/~shiller/data.htm](http://www.econ.yale.edu/~shiller/data.htm)

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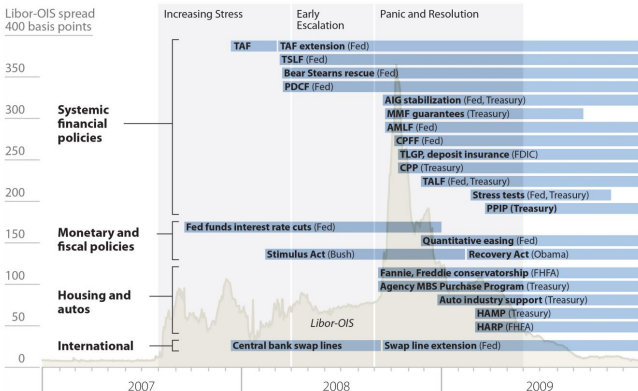
## Aggregate Household Debt as a Share of Disposable Personal Income



Source: Federal Reserve Board Financial Accounts of the United States, based on Figure 1, Panel 1, Michael Ahn, Michael Batty, and Ralf Meisenzahl, "Household Debt-to-Income Ratios in the Enhanced Financial Accounts," FEDS Notes (Washington, DC: Board of Governors of the Reserve System, January 11, 2018), <https://doi.org/10.17016/2380-7172.2138>

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## U.S. Government Responses to the 2007–2009 Global Financial Crisis



Notes: See second page.

Source: Libor-OIS: Bloomberg Finance LP.

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# Macroprudential

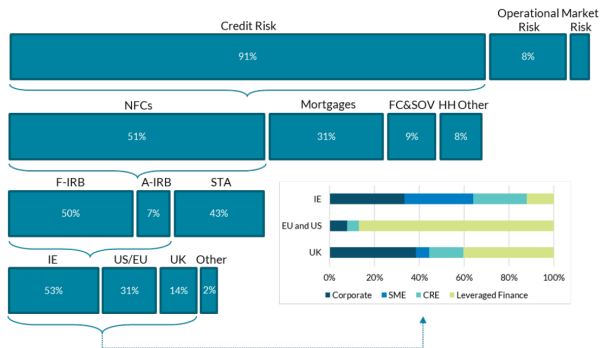
- ▶ Fire sales externalities
- ▶ Collateral multipliers
- ▶ Financial accelerators
- ▶ Bubbles
- ▶ ...

# Great insight from San Millan (2023)

- ▶ Residential real estate credit has smaller capital funding requirements than corporate lending
  - ▶ RE loans default less
  - ▶ Higher recovery values
- ▶ Real Estate is at the center of macroprudential risks

# Micro approach favors RE credit

Chart 1: RWAs waterfall - Irish Retail bank NFC Portfolios

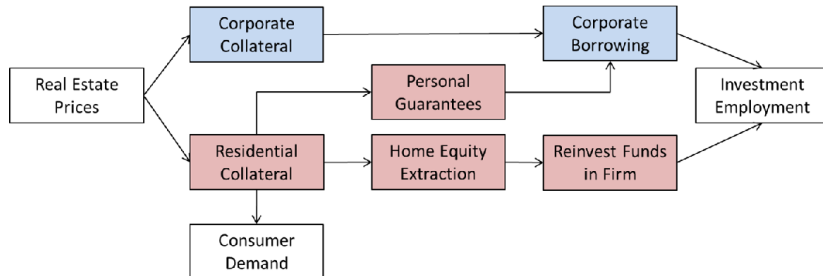


Source: Authors' calculations using Dec-21 regulatory returns and loan level data for the 5 Irish retail banks: AIB, BOI, KBC, PTSB and UBI DAC. Corporate represents loans to non-financial corporations, SME represents loans to small and medium sized enterprises, CRE represents loans for commercial real estate purposes, and Leveraged Finance represents leveraged asset finance. F-IRB represents foundation-internal ratings based, A-IRB represents advanced-internal ratings based, and STA represents standardised. NFC represents non-financial corporates and FC&SOV represents financial corporates, central banks and sovereigns.

Source: Lyons & Rice (2022)

# Comment #1: Propagation mechanisms

- ▶ Need impulse response analysis: show mechanisms
- ▶ Complementarity between RE and Corporate credit: Chaney, Sraer, and Thesmar (2012 AER); Cvijanović (2014 RFS); Adelino, Schoar & Severino (2015 JFE); Schmalz, Sraer & Thesmar (2017 JF) ...



## Comment #2: Match crowding-out facts

Chakraborty, Goldstein, & MacKinlay (2018 RFS); Martín, Moral-Benito & Schmitz (2021 AER)

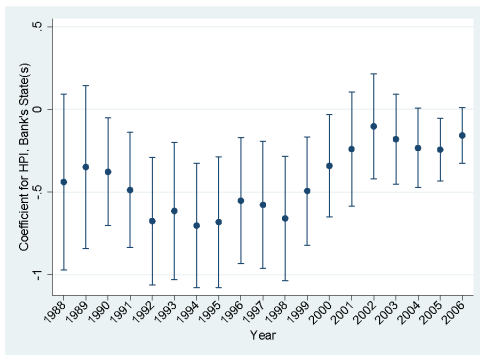
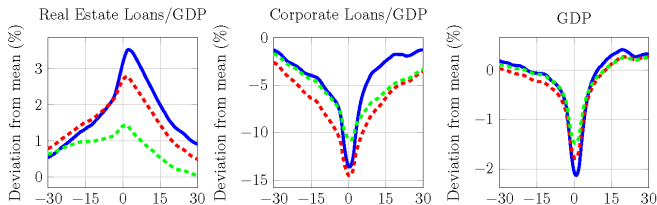


Figure 3: Effect of crowding out on C&I lending over time. Figure plots annual estimates of the coefficient for the effect of *Housing Price Index, Bank's State(s)* on  $\text{Log}(\text{Outstanding Loans})$  (Similar to Column 1, Table III). 95% confidence intervals provided for the estimated coefficients.

# Comment #3: Expand policy analysis out of crisis times

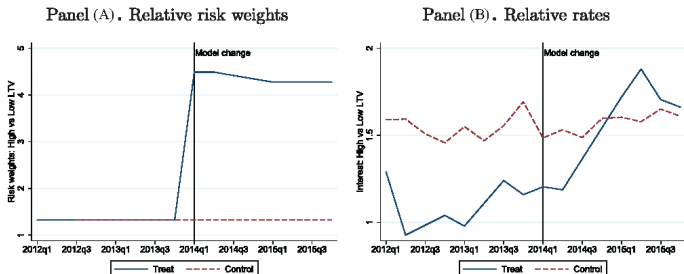
Figure 6: Evaluation of Basel III



- ▶ Simulate and compare unconditional outcomes
- ▶ Mitigating crisis implies opportunity costs (Gete & Melkadze 2020 JIE)

# Comment #4: Cap. Req. vs LTV regulations

## ► Benetton (2021 JF)

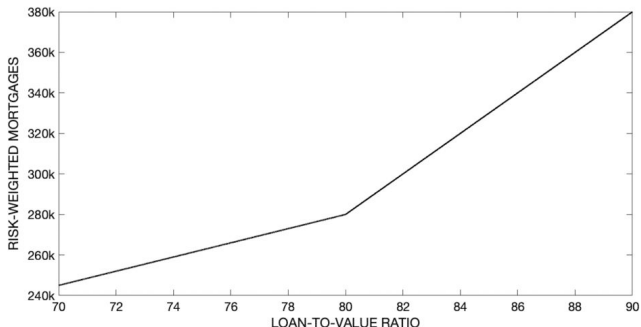


**Figure 4. Model change.** Panel (A) shows the relative risk-weight, while Panel (B) shows the relative interest rate of a maximum LTV of 95% relative to a maximum LTV of 70% for a treated lender before and after the adoption of an IRB model and a control lender that continues to adopt the standardized approach. (Color figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com))

# Comment #5: Role of the appraisers

- ▶ Mayordomo, Rachedi & Rodríguez Moreno (2023 MS)

**Figure 1.** The Kink in Capital Risk Weights



*Note.* This figure shows the risk-weighted mortgages of a €1,000,000 property as a function of the LTV ratio.



# Conclusions

- ▶ Great topic
- ▶ Promising paper
- ▶ Keep working!