Discussion of
Loose Monetary Policy and Financial Instability

(Grimm-Jordà-Schularick-Taylor)

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1-page summary of the paper

Motivation:

- Commentators have pointed out that too low monetary policy rates may increase excessive risk taking in banks and other financial intermediaries
- There is also theory on this. And substantial micro evidence on risk-taking, e.g. at the bank, or loan level, or security level
- But not evidence of aggregate banking (financial) crises

Question: Does a persistently loose stance of monetary policy increase the risk of financial instability?

Method: They use the super important Jordà-Schularick-Taylor Macro-financial data + banking crisis chronology (18 advanced economies, 1870-2020) and loose stance of monetary policy as $r < r^*$

Results: Too low monetary policy rates over an extended period increases the likelihood of a banking crisis

- with credit creation and asset price overheating as key intermediating channels

General comments

- **Truly excellent paper** in terms of question, methods and interesting results

- I already discussed this paper in October at the ECB monetary policy annual conference (Moritz, not Òscar, presented) and the paper is the same

So taking the opportunity that we are at Bank of Spain, and we (Jimenez, Kuvshinov, Peydro and Richter, 2022) have a closely related paper to Òscar´s one using Bank of Spain's credit register data (as well as the Jordà-Schularick-Taylor historical data)

- I want to argue that for financial stability (**banking** crises) **higher monetary policy rates are important as well, in particular a U-shaped monetary policy rate dynamics**

  - As bank loans and deposits are in nominal rates, for interest rate risk and credit risk (and *banking* crises) nominal rates may matter, not just r over r*

  - Our results complement the ones by Jordà et al. (2023) paper, and we build our paper on their amazing data and service to the whole

Higher monetary policy rates and financial distress: 2022-23

There has been **financial distress** over 2022-23, e.g.:

- EU (Italy) **sovereign debt problems** on July 2002 when ECB raised rates → reaction ECB's "Anti-Fragmentation" Transmission Protection Instrument

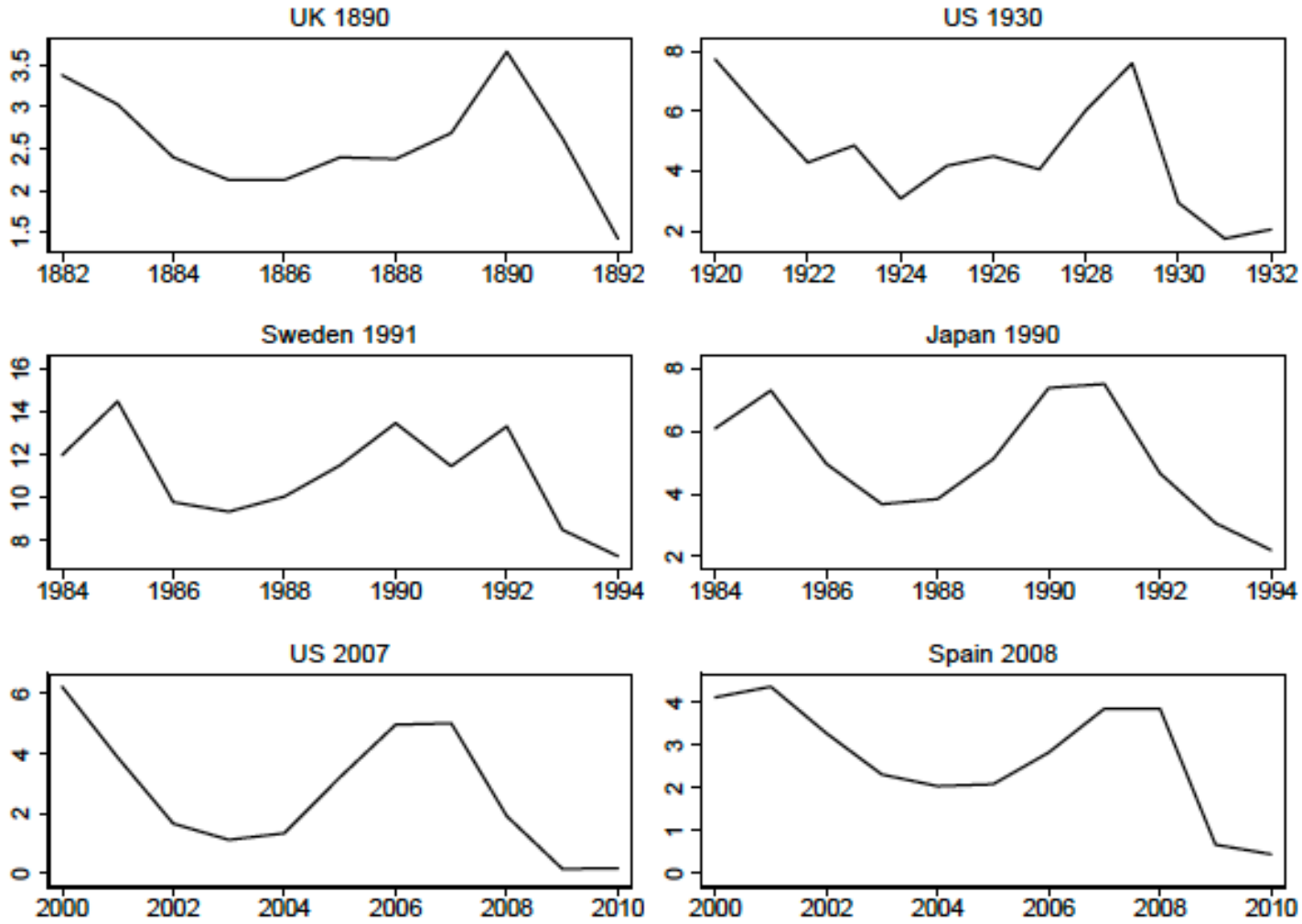
- UK's **pension LDI funds** and public debt distress in Sept 2022 after BoE raised MP rates and Truss mini-budget → BoE QE as financial stability purpose (also some changes in government)

- **Crypto** distress, including failures of the FTX crypto platform and the Terra Luna stablecoins, last Nov 2022 at time of increasing monetary rates

- **Bank failures** (SVB, 1st Republic, Signature, Credit Swisse) during March-May 2023 as well as related bank distress due to **higher monetary rates**. Central banks' and governments' help

- Drop in finance deals, in private markets, **delinquencies** are rising, problems in **commercial and real estate…**

Case studies of important banking crises



y axis: nominal monetary policy rate

Motivation for why a U-shaped monetary rates may matter (3)

Why then did the Federal Reserve raise interest rates in 1928? The principal reason was the Fed's ongoing concern about speculation on Wall Street.... The market crash of October 1929 showed, if anyone doubted it, that a concerted effort by the Fed can bring down stock prices. But the cost of this 'victory' was very high.'

Bernanke (2004), Money, Gold, and the Great Depression.

Jiménez-Kuvshinov-Peydró-Richter (2022)

- **Impact of monetary policy (MP) dynamics on banking crises?**
  - What is the full path of the MP rate before a financial crisis?
  - Does raising rates in an environment like today (U-shaped path) increase crisis risk?
  - Is it different than (even deep) non-financial recessions?
  - What are the underlying **mechanisms**?

- **Data: two-pronged approach**
  - A panel of historical crises to establish the results & mechanisms: **17 countries, 1870–2016**, 60–80 financial crises
  - Credit registry data to dig further into the mechanisms: **Spain, 1995–2020**

- MP rate: short-term nominal rate (controlling for macro variables); international finance trilemma IV

Findings

- **Banking crises preceded by a U in monetary policy (MP)** rates. Indeed, raising MP rates materially increases crisis risk, but only if rates were previously cut and low over a long period
  - **Different for non-crisis recessions** (even deep non-financial recessions)

- **Mechanism**: increases in **credit & asset prices** as MP rates are cut (first half of the U), reversal as MP rates are raised
  - Red-zone (R-zone) booms (Greenwood et al., 2022) especially after (large) MP rate cuts
  - Higher crisis risk within R-zone only if MP rate hikes
  - Combination of **U-MP & Red zones (credit & asset prices)** key for crises
  - **Boom-bust in bank performance (bank ROE, NPL, interest rate risk, stock prices)** around U-MP & R-zones
  - Microdata from Bank Spain: loan defaults higher after U-MP, especially for **ex-ante riskier firms & banks**

Frequency of crises after different MP rate paths

- Sort data in 2×2 groups by time window ($t-8$ to $t-3$ & $t-3$ to t) and monetary rate change (cut vs raise)
- Compute crisis during 3 years after each shape (t to $t+2$)
- Crises are more than twice as frequent after the U shape

	(1)	(2)	(3)	(4)
	Crisis	Deep crisis	Post-WW2 crisis	Post-WW2 deep crisis
U shape (cut, raise)	0.20	0.13	0.18	0.14
Raise, raise	0.08	0.04	0.03	0.00
Raise, cut	0.05	0.02	0.01	0.00
Cut, cut	0.04	0.02	0.02	0.00
Unconditional	0.10	0.05	0.06	0.03

Frequency of recessions by policy rate path

	(1)	(2)	(3)	(4)
	Non-crisis recession	Deep non-crisis recession	Post-WW2 non-crisis recession	Post-WW2 deep non-crisis recession
U shape (cut, raise)	0.37	0.15	0.25	0.04
Raise, raise	0.30	0.12	0.27	0.05
Raise, cut	0.28	0.11	0.21	0.02
Cut, cut	0.26	0.15	0.09	0.00
Unconditional	0.31	0.13	0.21	0.03

Recession: non-financial business cycle peak in the 3-year window after the policy shape (t to t + 2)

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Raising rates in the R-zone triggers crises

- Raising rates in R-zone increases crisis risk, but only if the R-zone was preceded by a rate cut ▸ Frequency table
- Also: raising in R-zone predicts lower GDP growth 1–5 years ahead ▸ R-zone LPs

	Dependent variable: $\text{Crisis}_{t \text{ to } t+2}$								
	R-zone			R-zone, pre cut			R-zone, pre raise		
	OLS		IV	OLS		IV	OLS		IV
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$\text{R-Zone}_{t-3 \text{ to } t-1}$	0.12***	0.04*	-0.08	0.17***	0.06*	-0.03	0.01	-0.01	-0.08
	(0.02)	(0.02)	(0.08)	(0.04)	(0.03)	(0.10)	(0.04)	(0.02)	(0.12)
$I(\Delta_3 \text{Rate}_t \geq 0)$		0.05**	-0.10		0.06**	-0.07		0.10***	0.04
		(0.02)	(0.07)		(0.02)	(0.08)		(0.02)	(0.08)
$\text{R-Zone}_{t-3 \text{ to } t-1} \times I(\Delta_3 \text{Rate}_t \geq 0)$		0.16***	0.41**		0.20***	0.41**		0.04	0.19
		(0.05)	(0.17)		(0.07)	(0.20)		(0.08)	(0.27)
Country fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kleibergen-Paap Weak ID			21.14			17.36			2.71
Observations	1474	1474	1474	1474	1474	1474	1474	1474	1474

U-Shaped MP & Red zone (high credit & asset prices) both key

	(1)	(2)	(3)	(4)
	Crisis	Deep crisis	Post-WW2 crisis	Post-WW2 deep crisis
U-shaped MP & R-zone	0.38 (19/50)	0.26 (13/50)	0.40 (14/35)	0.32 (11/35)
U-shaped MP & no R-zone	0.09 (10/116)	0.08 (9/116)	0.04 (2/57)	0.04 (2/57)
No U-shaped MP & R-zone	0.09 (9/97)	0.05 (5/97)	0.04 (3/70)	0.00 (0/70)
No U-shaped MP & no R-zone	0.05 (17/362)	0.02 (9/362)	0.02 (4/220)	0.00 (0/220)
Unconditional	0.09 (55/625)	0.06 (36/625)	0.06 (23/381)	0.03 (13/381)

Bank profits (ROE), also stock prices, NPLs… driven by U-MP

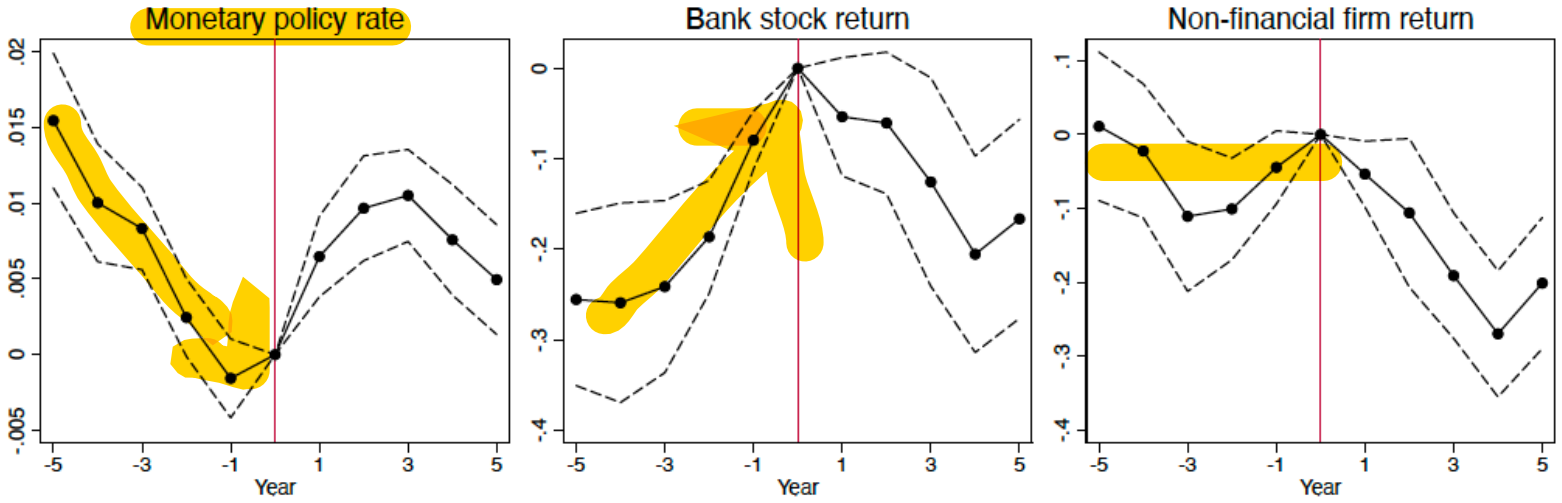
	Dependent variable: Change in $RoE_{t \text{ to } t+2}$					
	OLS			IV		
	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta_3 Rate_t$	-0.30***	-0.29***	-0.06	-0.80**	-0.80**	0.09
	(0.09)	(0.08)	(0.11)	(0.37)	(0.38)	(0.20)
Cut $Rate_{t-8,t-3}$		-0.26	-0.26		0.08	0.15
		(0.55)	(0.55)		(0.53)	(0.52)
$\Delta_3 Rate_t \times$ Cut $Rate_{t-8,t-3}$			-0.67***			-2.78***
			(0.23)			(1.04)
Country fixed effects	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓
Kleibergen-Paap Weak ID				56.05	55.07	22.43
Observations	1368	1368	1368	1368	1368	1368

Bank-driven rather than non-financial firm-driven results

Bank & non-fin. returns & MP rates around R-zones

$$y_{i,t+h} - y_{i,t} = \alpha_{i,h} + \alpha_{d,h} + \beta_h \mathbb{1}_{\text{Enter Pre-cut R-zone}_{i,t}=1} + \epsilon_{i,t+h}$$

- Conditional on entering pre-cut R-zone at t = 0: MP rate U, bank stock boom before, bank & non-fin. crash after
- Also: little change in capital ratios, boom-bust in bank equity sentiment ▸ All r-zones ▸ Bank capital ratio & sentiment



Bank of Spain's Credit Register data: similar effects but driven by riskier banks to riskier firms

	Dependent variable: Loan default$_{t+1 \text{ to } t+3}$						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$\Delta_3 \text{Rate}_{t,t+3}$	0.003***	0.003***	0.001*	0.002**			
	(0.001)	(0.001)	(0.001)	(0.001)			
Cut $\text{Rate}_{t-5,t}$	0.008***	0.007***	0.007***	0.007***			
	(0.003)	(0.003)	(0.003)	(0.003)			
$\Delta_3 \text{Rate}_{t,t+3} \times$ Cut $\text{Rate}_{t-5,t}$	0.004***	0.004***	0.005***	0.005***			
	(0.001)	(0.001)	(0.001)	(0.001)			
Δ_3Rate × Cut× Real estate firm	0.012***			0.012***	0.012***	0.010***	0.011***
	(0.002)			(0.002)	(0.002)	(0.001)	(0.001)
Δ_3Rate × Cut× Firm not audited		0.002*		0.002*	0.002**		
		(0.001)		(0.001)	(0.001)		
Δ_3Rate × Cut× Firm cost of credit						0.002***	0.001***
						(0.000)	(0.000)
Δ_3Rate × Cut× Bank NPL ratio			0.003***	0.003***	0.002***	0.002***	0.002***
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Δ_3Rate × Cut × Bank NPL × Real estate							0.003*
							(0.002)
Bank Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm × Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	No	No	No	No	Yes	Yes	Yes
Firm Controls	No	No	No	No	No	Yes	Yes
Observations	1.1m	1.1m	1.1m	1.1m	1.1m	0.7m	0.7m
R^2	0.552	0.551	0.551	0.552	0.552	0.586	0.586

Let me conclude with stressing again that

- **Òscar et al. (2023) is an excellent paper**

- Since I discussed this paper in October at ECB monetary policy annual conference and the paper is the same, and we are at Bank of Spain:

  - I wanted to share that we (Jimenez, Kuvshinov, Peydro and Richter, 2022) have a closely related paper to Òscar´s one using Bank of Spain's credit register data (as well as the Jordà-Schularick-Taylor historical data)

  - We argue that for financial stability (**banking** crises) **higher monetary policy rates are important as well, in particular a U-shaped monetary policy rate dynamics**
    - **Very different with non-financial (even deep) recessions, so it is not that U-shaped MP always matters**
    - **Why? Channels crucial and banks with MP**