Monetary Policy and Financial Stability

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My presentation

- Today's session is about the size of the balance sheets of central banks and in general about the relationship between monetary and financial stability

- The size of the balance sheet of the central bank affects interest rates and one key aspect of financial stability is the risk of banking crises
  - Note that QT may increase rates significantly, especially in areas with very high levels of private and public debt and not full banking and fiscal union
  - At the same time large balance sheets may imply excessive risk-taking

- So in this presentation I want to provide you evidence of the path of monetary policy rates (similar to the current one, low for long and then substantial higher rates) and the risk of banking crises

- We use historical data as banking crises are (somewhat) rare phenomena

Monetary Policy, Inflation, and Crises: Evidence from History and Administrative Data

Jiménez-Kuvshinov-Peydró-Richter

Motivation

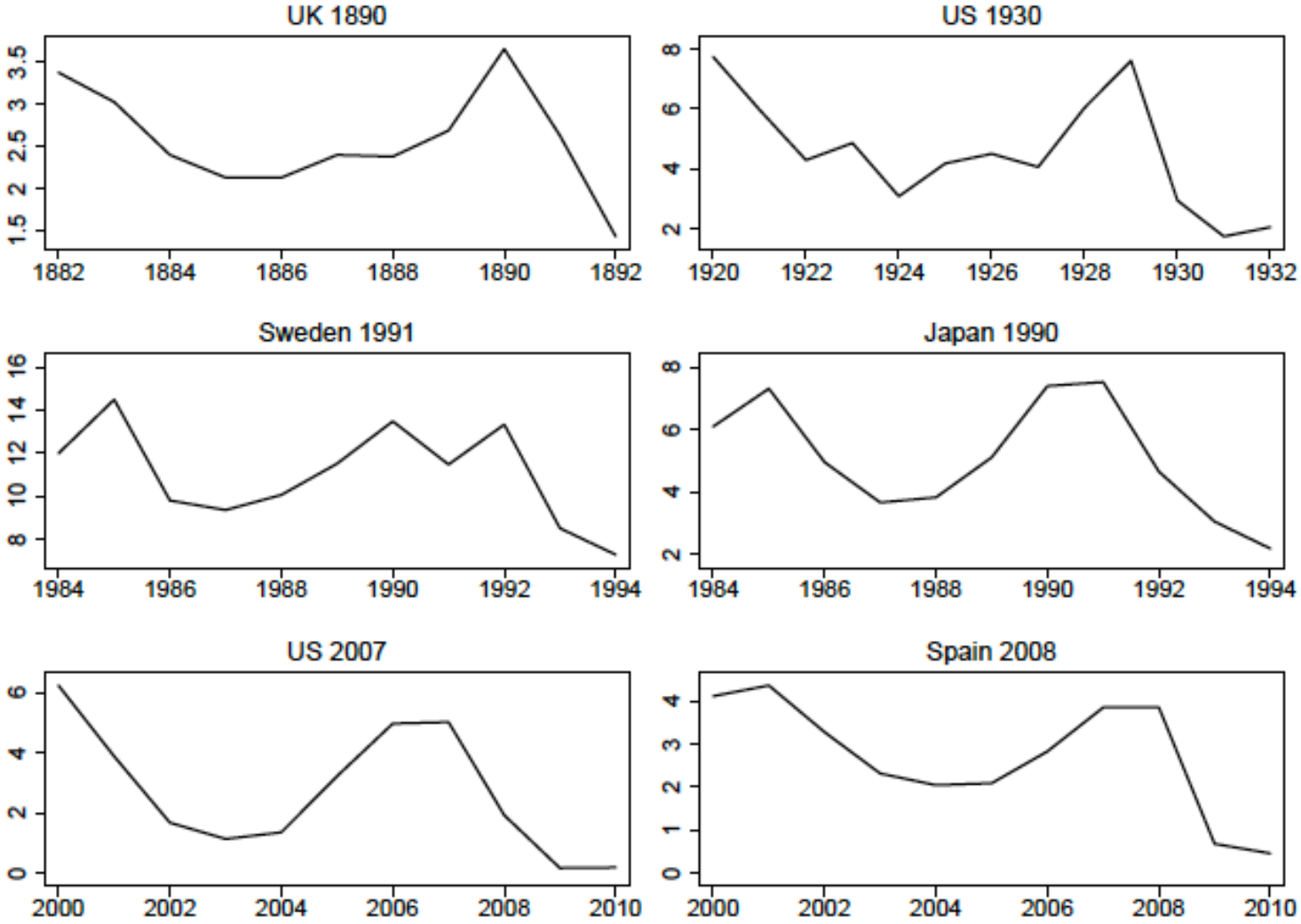
- 2022-24 environment: higher inflation and rising monetary policy rates (including initial QT)

- Policymakers are balancing risks of inflation vs recession
  - We know a lot about these inflation–GDP trade-offs (Blinder, 2023)

- But raising monetary policy rates can also trigger a financial crisis (2022-23 financial distress: SVB & other banks, sovereign EA, UK pension funds / Gilts, crypto, CRE, private credit...)
  - Especially after a period of low rates (Acharya et al., 2022; Kashyap and Stein, 2023; IMF, 2023; ECB, 2023; Rajan, 2023)

- We know little about the links between the path of monetary policy and banking crises, i.e. between **monetary policy and financial stability**

Case studies of important banking crises



y axis: nominal monetary policy rate

This paper

- Impact of monetary policy (MP) dynamics on banking crises
  - What is the full path of the MP rate before a crisis?
  - Does raising rates in an environment like today (U-shaped path) increase crisis risk?
  - What are the underlying mechanisms?

- Data: two-pronged approach
  - A panel of **historical crises** to establish the results & mechanisms (17 countries, 1870–2016, 80 banking crises & hundreds of recessions)
  - Credit registry data for detailed crisis case study (Spain, 1995–2020)

- MP rate: short-term nominal rate (raw or relative to GDP and inflation dynamics); international finance trilemma IV

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Main Results

Policy rate U shape (lower MP rates, low for long, and then high MP rates) increases banking crisis risk

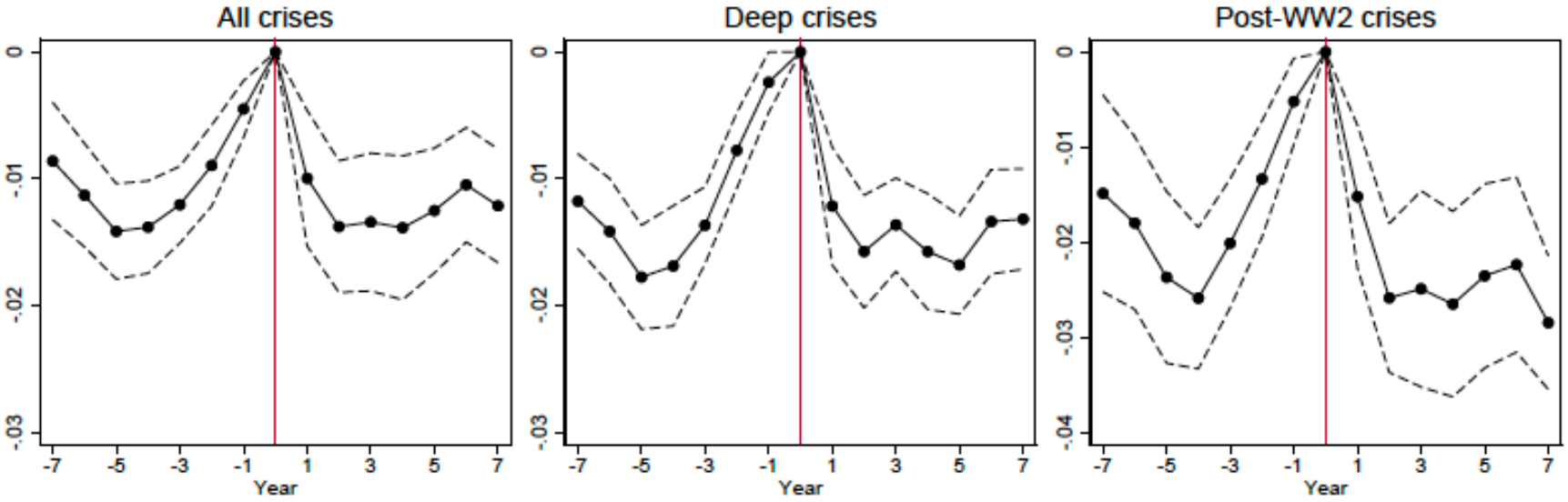
- Different from non-financial recessions
- Results are stronger for deeper U shape (absolute or relative to what is implied by inflation and real GDP growth)

Mechanism: higher credit & asset prices as MP rates are cut (first half of the U), much stronger reversal if raises follow such cut

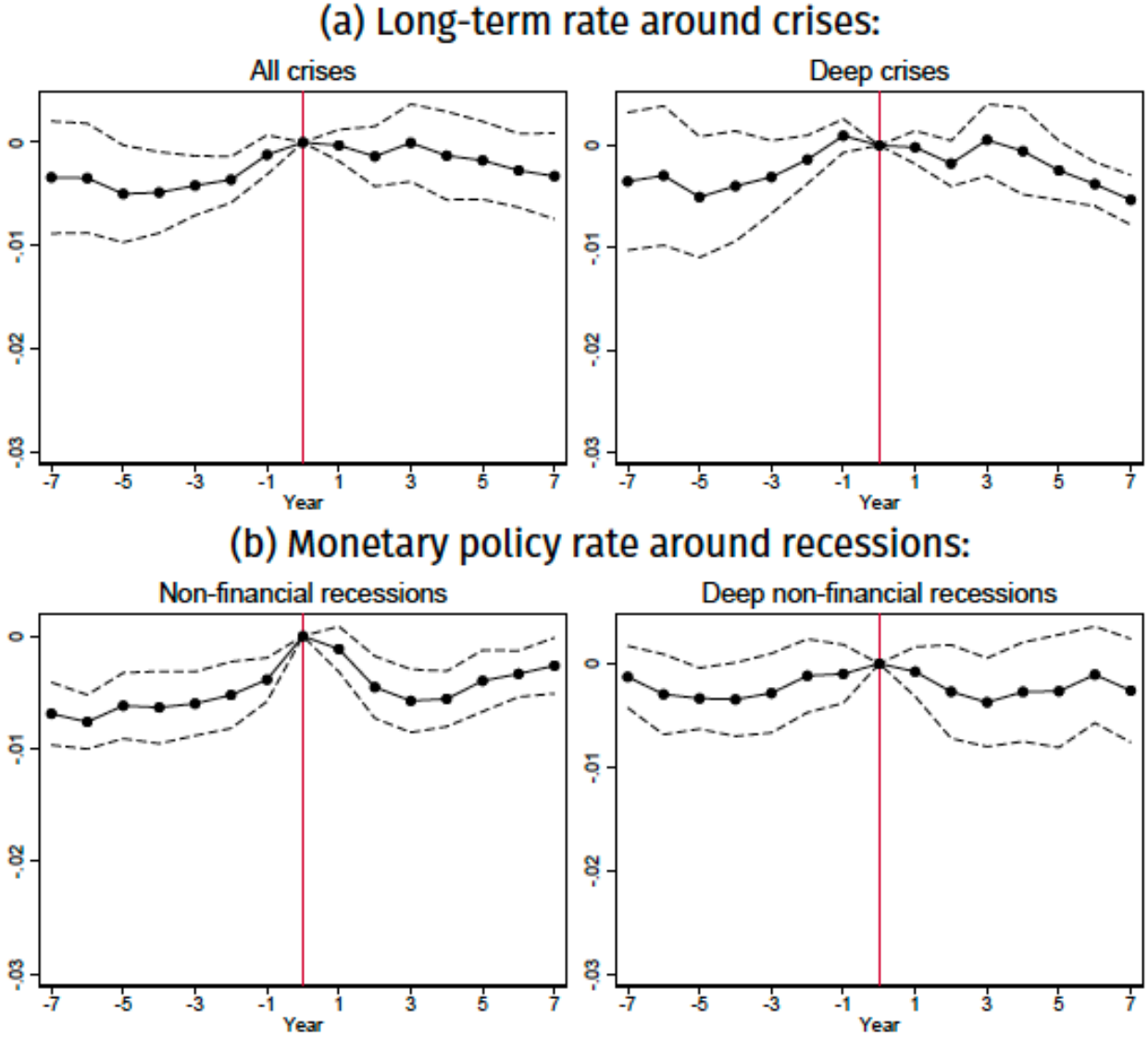
- Red-zone (R-zone) booms (Greenwood et al., 2022) especially after (large) MP rate cuts
- Higher crisis risk within R-zone only if MP rate hikes
- Combination of U-MP & R-zone crucial for crises
- Boom-bust in bank performance (bank NPLs, ROE, stock prices) around U-MP & R-zones
- Microdata: loan defaults higher after U-MP, especially for ex-ante riskier firms & banks

Crisis window regressions: monetary policy rates

$$r_{i,t+h} - r_{i,t} = \alpha_{i,h} + \alpha_{d,h} + \beta_h \mathbb{1}_{Crisis_{i,t}=1} + \epsilon_{i,t+h} \quad h \in \{-7, ..., 7\}.$$



Window regressions: recessions & long-term rates



Recession graphs: business cycle peak at t = 0.

Frequency of shapes before banking crises

- Sort data in 2 x 2 groups by time window (t − 8 to t − 3 & t − 3 to t) and monetary rate change (cut vs raise)
- 55% of crises are preceded by a U shape in the full sample
- 71% of crises (100% of deep crises) are preceded by a U shape in the post-WW2 sample
- 30% only for non-financial recessions, even deep

	(1)	(2)	(3)	(4)	(5)
	Crisis	Deep crisis	Post-WW2 crisis	Post-WW2 deep crisis	All observations
U shape (cut, raise)	0.55***	0.63***	0.71***	1.00***	0.27
Raise, raise	0.19	0.16	0.12	0.00	0.24
Raise, cut	0.16	0.11	0.08	0.00	0.26
Cut, cut	0.10	0.11	0.08	0.00	0.23

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Without MP U, excessive credit and asset price booms do not imply banking crises (and vice versa)

R-zone (red zone) is very elevated credit and asset prices (stocks and real estate)

	(1)	(2)	(3)	(4)
	Crisis	Deep crisis	Post-WW2 crisis	Post-WW2 deep crisis
U-shaped MP & R-zone	0.36*** (18/49)	0.25*** (12/49)	0.37*** (12/33)	0.30*** (10/33)
U-shaped MP & no R-zone	0.10 (11/118)	0.07 (8/118)	0.06 (3/58)	0.04 (2/58)
No U-shaped MP & R-zone	0.11 (10/98)	0.05 (5/98)	0.06 (4/71)	0.01 (1/71)
No U-shaped MP & no R-zone	0.05 (19/364)	0.03 (10/364)	0.02 (4/220)	0.00 (0/220)
Unconditional	0.09 (58/628)	0.06 (36/628)	0.06 (24/382)	0.03 (13/382)

U-shaped monetary policy and bank stock returns

- Banking sector key to MP transmission & crises
- Below: U-shape in MP rates leads to declines in bank profitability, increasing loan losses, lower bank stock returns ▸ Bank equity crises

	$\Delta \text{RoE}_{t \text{ to } t+2}$		$\Delta \text{LoL}_{t \text{ to } t+2}$		$\text{Return}^{\text{Bank}}_{t \text{ to } t+2}$	
	OLS	IV	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta_3 \text{Rate}_t$	-0.12	-0.01	0.05**	0.13***	-0.02	0.02
	(0.15)	(0.33)	(0.02)	(0.04)	(0.01)	(0.02)
$\text{Cut Rate}_{t-8,t-3}$	0.17	0.43	0.03	-0.04	-0.04	-0.06
	(0.70)	(0.65)	(0.09)	(0.07)	(0.05)	(0.05)
$\Delta_3 \text{Rate}_t \times \text{Cut Rate}_{t-8,t-3}$	-0.83***	-3.16***	0.09***	0.27***	-0.03*	-0.07*
	(0.26)	(1.04)	(0.03)	(0.09)	(0.02)	(0.04)
Country fixed effects	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓
Kleibergen-Paap Weak ID		30.49		16.51		17.91
Observations	1563	1350	868	756	1420	1298