Competition and Banking Crises

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Two perspectives

- Ex-ante perspective

    → Is competition good or bad for *preventing banking crises*?

- Ex-post perspective

    → Is competition good or bad for *managing banking crises*?

- This presentation focuses on ex-ante perspective

    → Competition and financial stability

What banking academics & regulators say?

- Widespread view captured in a painting of Ben Vautier

    → French artist born in 1935

    → Mostly known for his text-based paintings
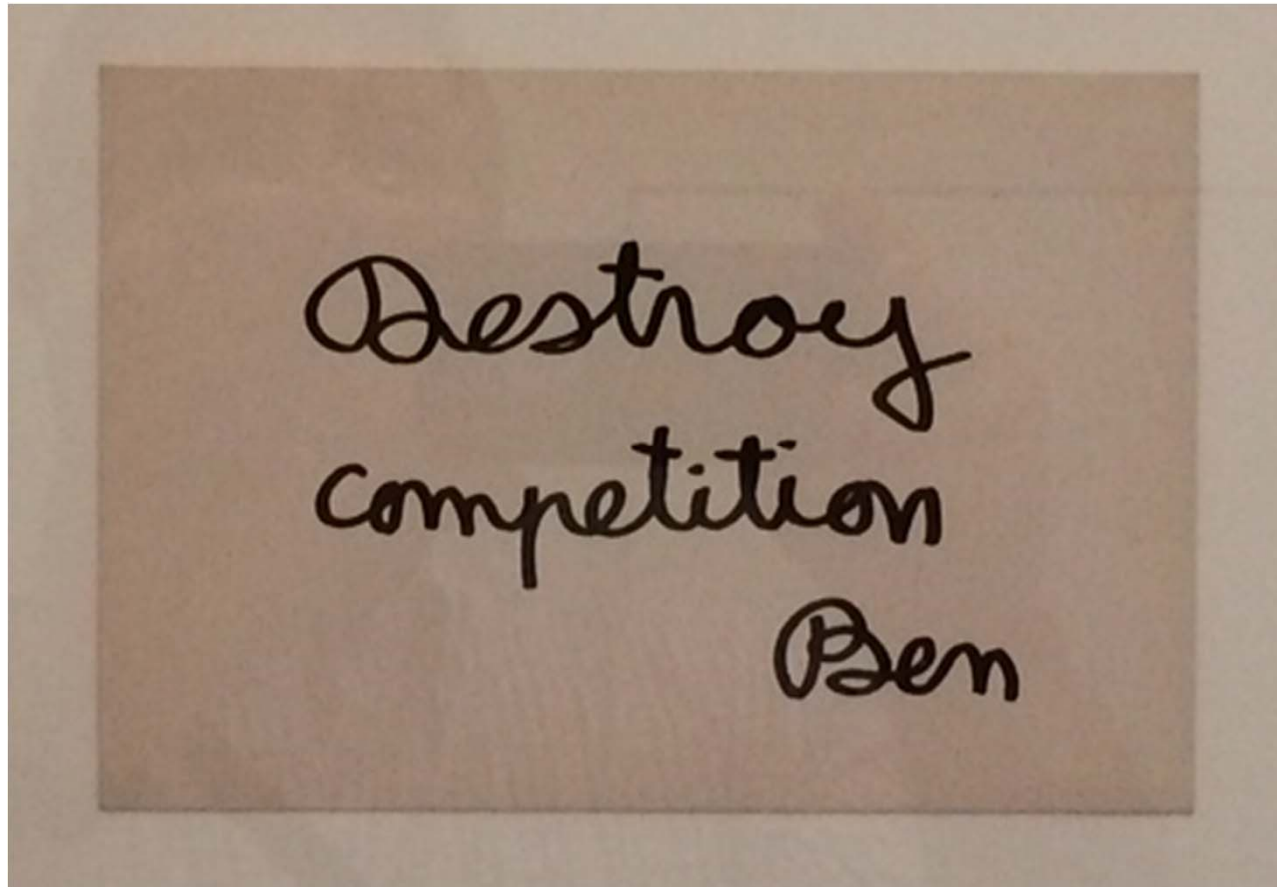
Ben Vautier (1972)

"The legislative reforms adopted in most countries as a response to the banking and financial crises of the 1930s shared one basic idea which was that, **in order to preserve the stability of the banking and financial industry, competition had to be restrained**."

Tommaso Padoa-Schioppa (2001)

Summing up

• Widespread view: competition is bad for stability

→ Justifies regulations in Glass-Steagall Act of 1933

• Deregulation spiral in late 1970's and early 1980's

→ Rationale: competition increases efficiency and growth

• Question: Is there a negative side effect in terms of instability?

→ Increased occurrence of banking crises

→ Starting with the savings & loan crisis of the late 1980s

This presentation

- Brief overview of results on the relationship between

  competition and stability in banking

    $\rightarrow$ Focus on moral hazard (risk-shifting) models

Outline

- Charter value hypothesis

- Regulatory response: capital requirements

- Other related results

- Empirical evidence

- Conflicts between different regulators

- Concluding remarks

Charter value hypothesis

A simple model

- Risk neutral banks that compete à la Cournot for deposits

  → Strategic variable is quantity of deposits to be raised

- Banks can invest in two assets

  → Prudent (and efficient) asset

  → Gambling (and inefficient) asset

- Questions:

  → Which assets will the banks choose in equilibrium?

 → How does this choice depend on the number of banks?

Model setup

- Two dates ($t = 0,1$) and n risk-neutral banks

    → Banks have no capital

    → Banks compete à la Cournot for insured deposits at $t = 0$

- Two assets with infinitely elastic supply: prudent and gambling

    → Prudent asset has higher expected return

- Two possible types of (symmetric) equilibria

    → *Prudent equilibrium*: all banks invest in prudent asset

    → *Gambling equilibrium*: all banks invest in gambling asset

Results

- Prudent equilibrium exists if $n \leq n_P$

    $\rightarrow$ Stability is associated with low competition

- Gambling equilibrium exists if $n \geq n_G$

    $\rightarrow$ Instability is associated with high competition

- Since $n_G < n_P$ there are three possible cases

    $\rightarrow$ Only prudent equilibrium exists: $n < n_G$

    $\rightarrow$ Both prudent and gambling equilibria exist: $n_G \leq n \leq n_P$

    $\rightarrow$ Only gambling equilibrium exist: $n_P < n$

Prudent and gambling equilibria

Prudent   Prudent & Gambling   Gambling

n_G n_P n
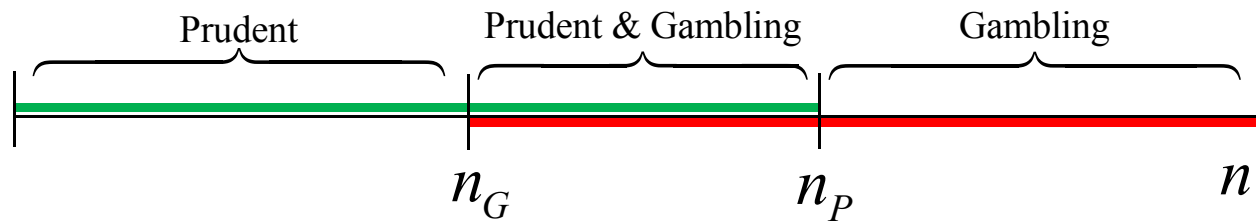
- Conclusion: **Too much competition is bad for bank stability**

Other results

- When both equilibria exist

    $\rightarrow$ Banks have more deposits in gambling equilibrium

    $\rightarrow$ Banks pay higher rates in gambling equilibrium

    $\rightarrow$ Banks' (expected) profits cannot be ranked

Regulatory response

Regulatory response

- The response to increased competition and deregulation

    → Capital requirements

    → 1988 Accord of Basel Committee (Basel I)

   → **Equity reduces risk-shifting incentives**

Introducing capital requirements

• What happens if we introduce capital in our previous model?

• Assumptions

→ Bank can also fund its investment with capital

→ Cost of capital is greater than return of prudent asset

• Result: Banks will not want to have capital

• Introduce capital requirement γ

→ Characterize set of equilibria as a function of γ

Results

- Prudent equilibrium exists if $n \leq n_P(\gamma),$ where $n'_P(\gamma) > 0$

    → Higher requirements expand stability region

- Gambling equilibrium exists if $n \geq n_G(\gamma),$ where $n'_G(\gamma) > 0$

    → Higher requirements shrink the instability region

- Conclusion: **Capital requirements are good for bank stability**

The effect of capital requirements
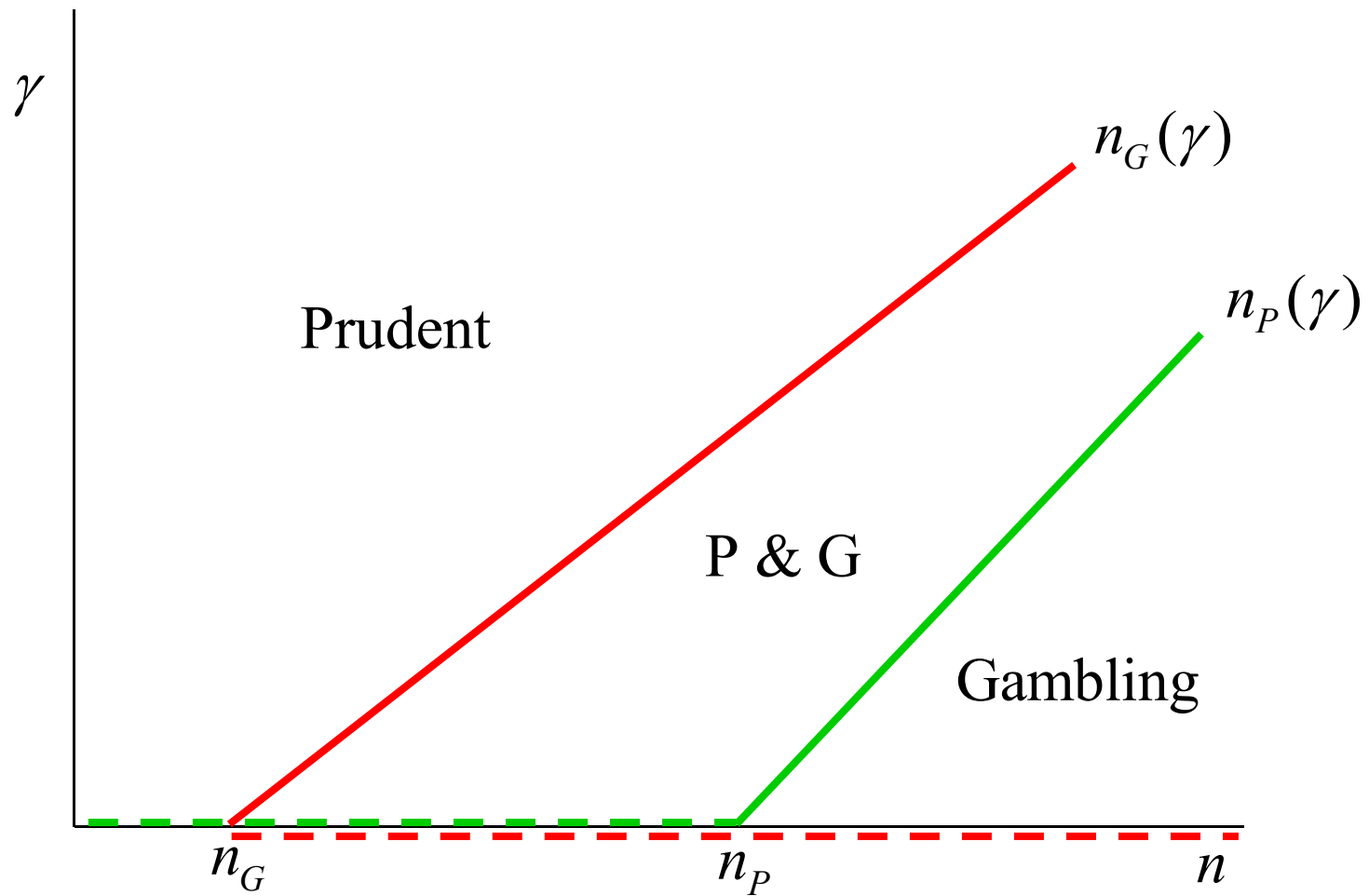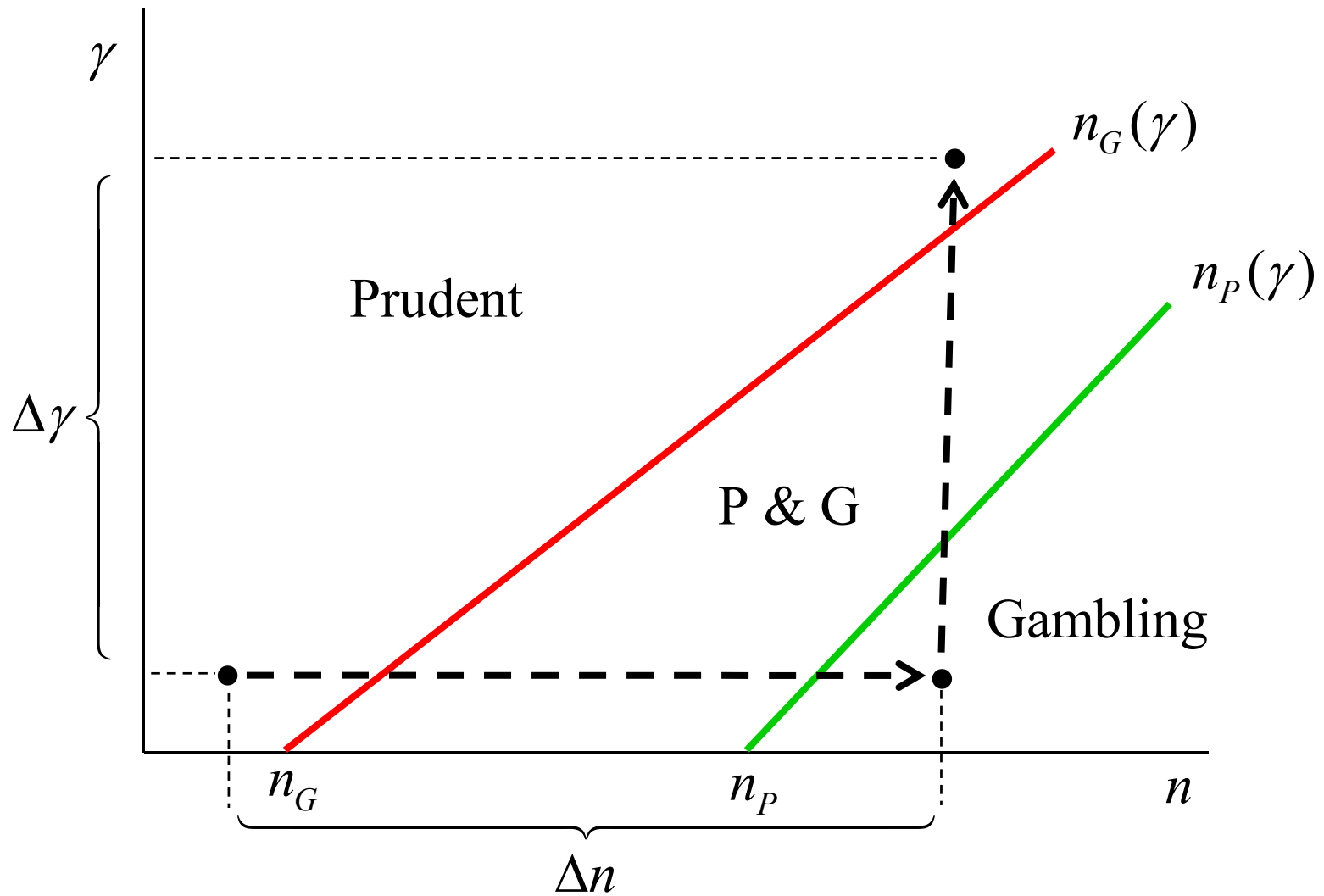
An interpretation of Basel I

- Basel I as response to increased competition in 1970s and 1980s

$$\Delta n \rightarrow \Delta \gamma$$

$\rightarrow \Delta n$ moves economy into the gambling equilibrium region

$\rightarrow \Delta \gamma$ brings economy back to prudent equilibrium region

An interpretation of Basel I

Other related results

The last bank standing effect

- Giving ex-post monopoly rents to surviving banks after crisis

    → Increases profits upon survival

    → Induces banks to take less risk ex-ante

- Conclusion: **Ex-post monopoly rents are good for stability**

The role of deposit insurance

- Insuring deposits reduces the cost of banks' funding

    → Increases margins and charter values

    → Reduces incentives to take risk

- Conclusion: **Deposit insurance is good for stability**

Empirical evidence

Empirical evidence

• Testing relationship between competition and risk not easy

• Problem is not measuring competition: HHI or Lerner

• Problem with measuring risk

    → *Non-performing loans* leaves out interest rate margins

    → *Distance to default* essentially depends on level of capital

• Results are not conclusive

    → Some evidence in favor of charter value hypothesis

# Conflicts between different regulators

Two authorities

- Prudential authorities

    → Focus on fostering safe & sound banking system

    → *Market power is good*

- Competition authorities

    → Focus on fostering competition
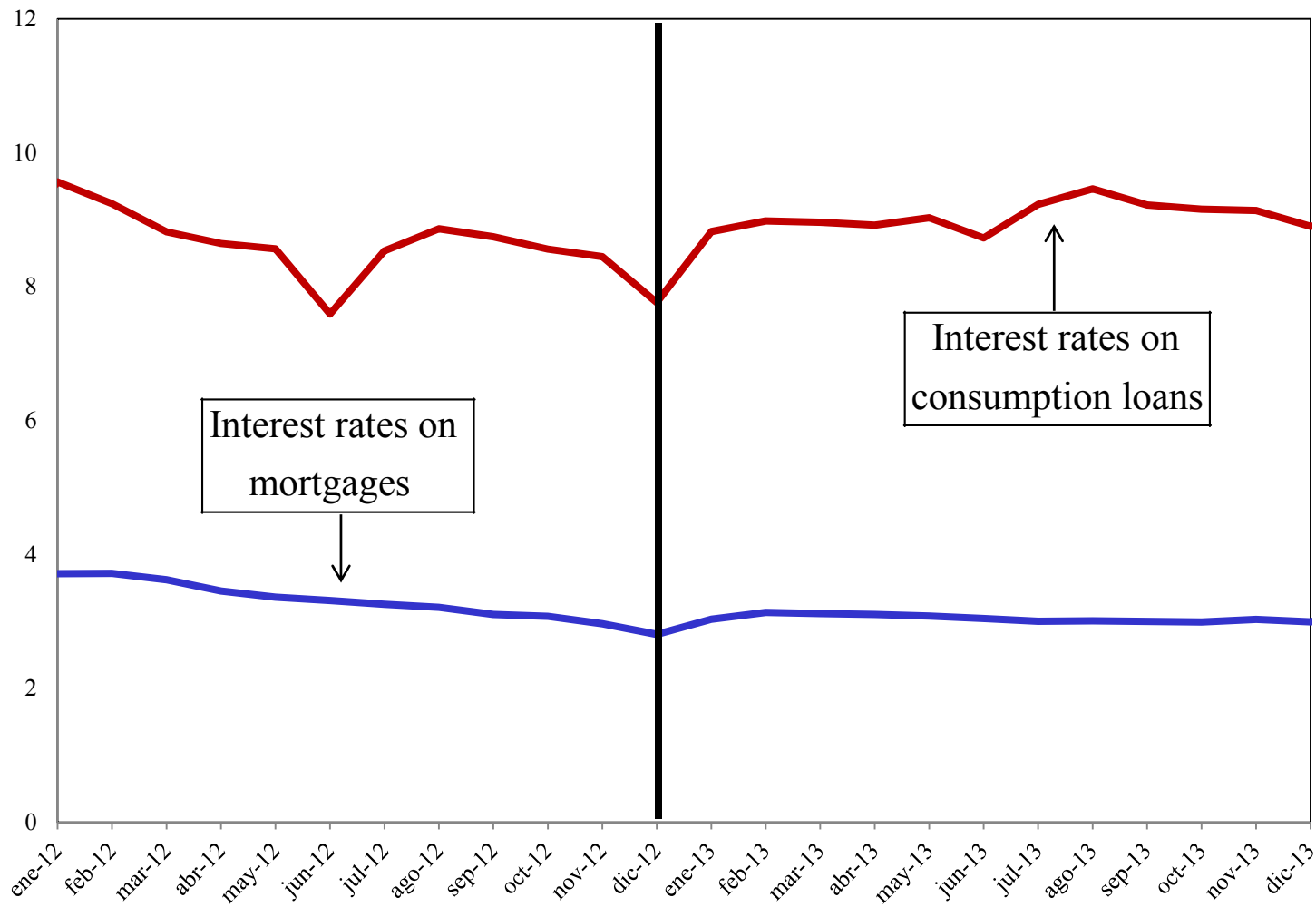
    → *Market power is bad*

An illustrative case

- January 2013 decision of the Bank of Spain

    $\rightarrow$ Limiting deposit rates

    $\rightarrow$ From 1.75% ($\leq$ 12 months) to 2.75% (> 24 months)

- Rationale of decision

    $\rightarrow$ Stop price war

    $\rightarrow$ Which could increase cost of funding and reduce solvency

- No problem from a prudential perspective

    $\rightarrow$ But what about competition perspective?

The effect on deposit rates (households)

Interest rates on
demand deposits

Interest rates
on time deposits
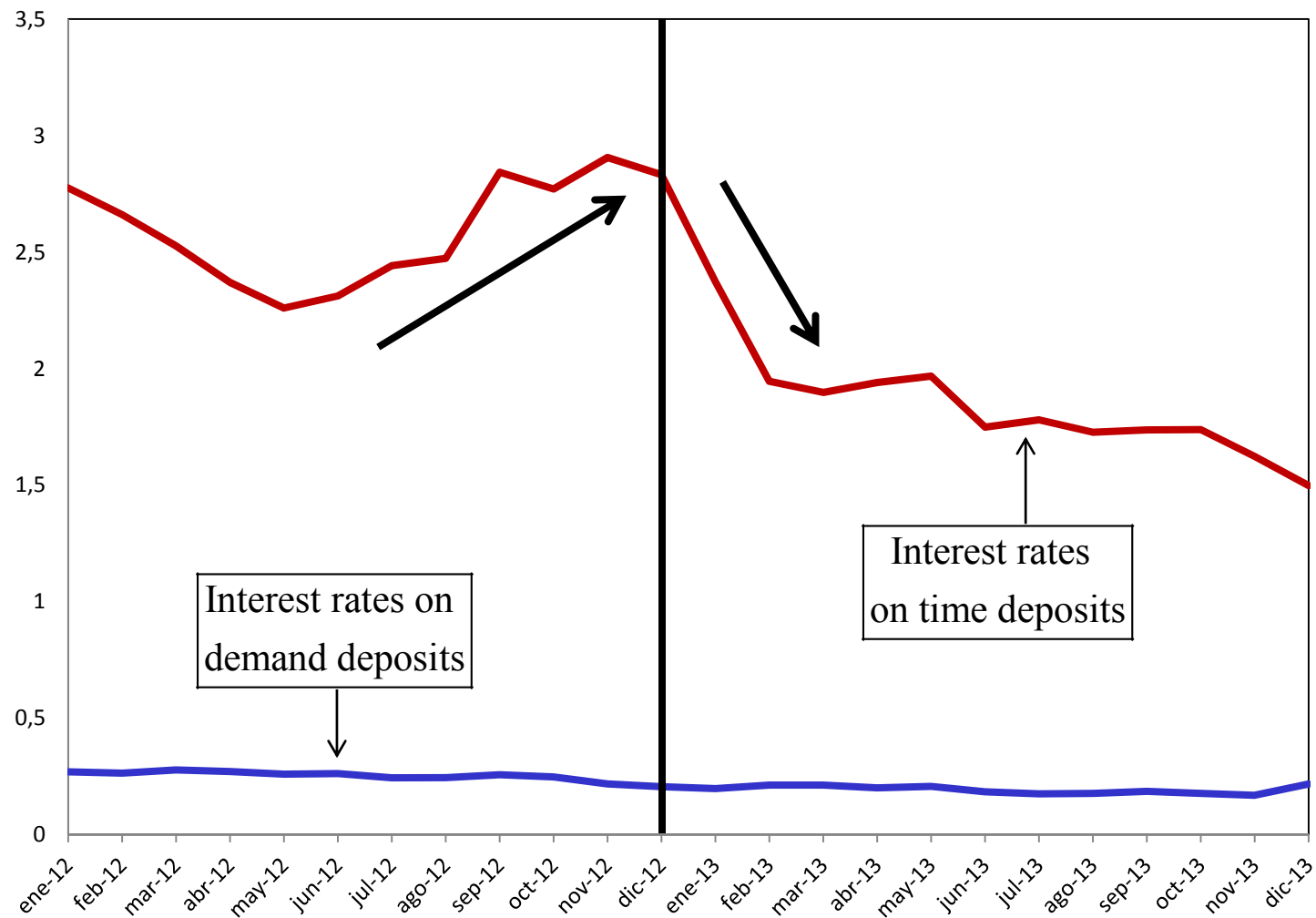
Source: Banco de España

The effect on loan rates (households)

Interest rates on consumption loans

Interest rates on mortgages

Source: Banco de España

Summing up

- Limit on deposit rates

    $\rightarrow$ Turned around the upward trend in deposit rates

    $\rightarrow$ Did not seem to have any effect on loan rates

    $\rightarrow$ Higher intermediation margins

    $\rightarrow$ Higher solvency of the banking system

    $\rightarrow$ End of story?

Concluding remarks

Two policy objectives

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    → Fostering a competitive environment

    → Preserving financial stability

- One possibility

    → Competition authority takes care of first objective

    → Prudential authority takes care of the second objective

- But this is too simplistic

    → There are important interactions

Concluding remarks

- Do we need a special competition policy for financial sector?

  → Probably yes

  → Social costs of financial crises are huge

- Such policy requires intelligent competition authority

  → Able to understand concerns of prudential authority

- But also requires intelligent prudential authority

  → Able to understand concerns of the competition authority

- Goal: move from noncooperative to cooperative policies

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