Foreseen Risks

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Bundesbank Spring Conference
15 May 2019
Frankfurt am Main

[1]This presentation does not necessarily express the views of Banque de France.

The Question

- Several empirical and theoretical papers argue that large credit expansions are a key cause of severe downturns.
- But is there really a *causal* relationship between bank credit expansion and recession?
- Objectives of the paper:
  - build a model where macro aggregates co-move with bank credit but are - by design - fully independent from it;
  - provide arguments that the mechanism of the model is empirically relevant and useful from the policy perspective.

Model's summary

- 3 sectors: representative investor/consumer, banking sector and productive sector
- Banking sector a la Merton (1978) augmented with corporate sector making investment and production decisions:
  - Banks benefit from economic rents.
  - They invest in a mixture of risky loans and safer government notes.
  - They lend only to households: corporate behavior remains fully independent of bank credit decisions.
- 3 sectors are exposed to rare disaster that occurs with a time-varying probability.

Model's intuition

- The key assumption is that banks benefit from economic rents, due to subsidized deposit insurance.
- The value of these rents (franchise value) is decreasing with the crisis probability.
    - The greater is the crisis probability, the lower is franchise value, and the greater the incentive for banks to gamble for resurrection.
- At the same time, when disaster risk increases the non-financial firms reduce their investment, and output declines.

Results

- As a result, leverage and the crises are caused by the same exogenous phenomenon: a time-varying likelihood of an economic crisis.
- Model replicates the empirical patterns of Schularick and Taylor (2012) and Mian, Sufi and Verner (2017).
- Policy implications: unconventional monetary policies increase the franchise value of banks and reinforce their incentives to hold more safe assets.
- Empirical evidence suggesting that deposit insurance contributes to financial crises: there is no relation between credit and GDP in countries without explicit government insurance.

Interesting and policy-relevant paper

- This paper brings a novel and challenging insight into debate on the role of credit expansion in causing recessions ...
- ... that has important implications for monetary policy and deposit insurance design during crises
- .... and opens research avenues in empirical economics: testing the model's mechanisms, exploring the drivers of disaster risk.

Credit and Recession: what is the main story?

- Credit and Recessions - several possible stories:
  - Excessive credit *causes* recession (e.g. Bordalo et al. (2015))
  - Excessive credit *amplifies* recession (e.g. Iacoviello (2005), Eggertsson and Krugman (2012), Korinek and Simsek (2016))
  - Excessive credit and recession are *unrelated* but driven by a third factor: disaster probability (this paper).
- Which story should policymakers take into consideration when designing monetary and macro-prudential policies?
- More arguments on advantages of this model's mechanism and its empirical relevance with respect to others stories would be useful.

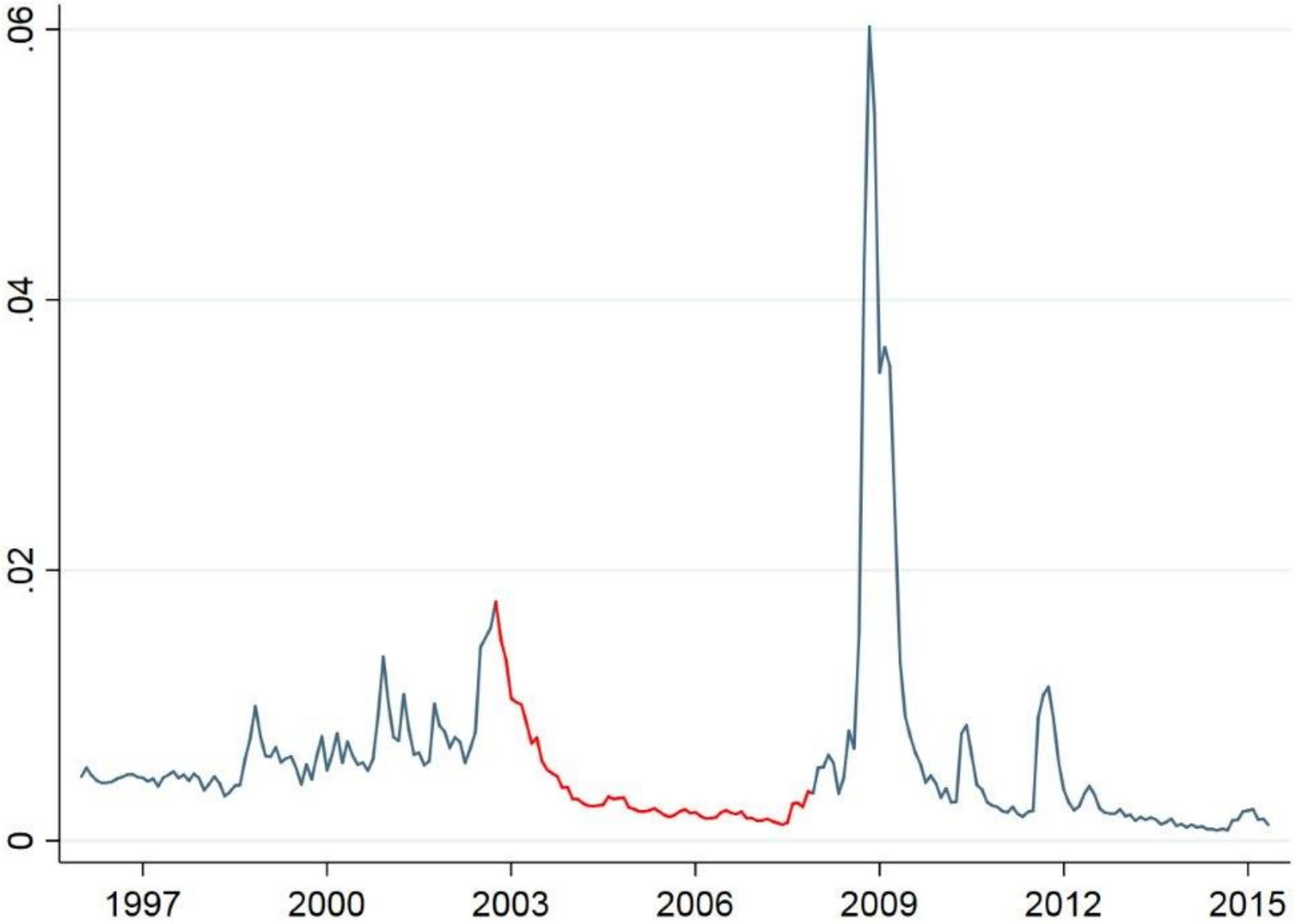
Disaster risk and business cycle dynamics

- In the model, an increase in disaster probability $\Uparrow$:
  - decreases output $\Downarrow$, consumption $\Downarrow$ and investment $\Downarrow$ and increases risk premia $\Uparrow$ (Recession / Financial crisis)
  - increases risk taking $\Uparrow$ and HH leverage $\Uparrow$ (Expansion?)
- Does an increase in disaster risk explain a recession (financial crisis) or an expansion phase of the cycle?
  - "bank credit co-moves with - and even precedes - macro aggregates such as investment and output"
- Mian, Sufi and Verner (2017) show that consumption rises simultaneously with the rise in household debt.
  - Can increase in disaster risk explain this co-movement?

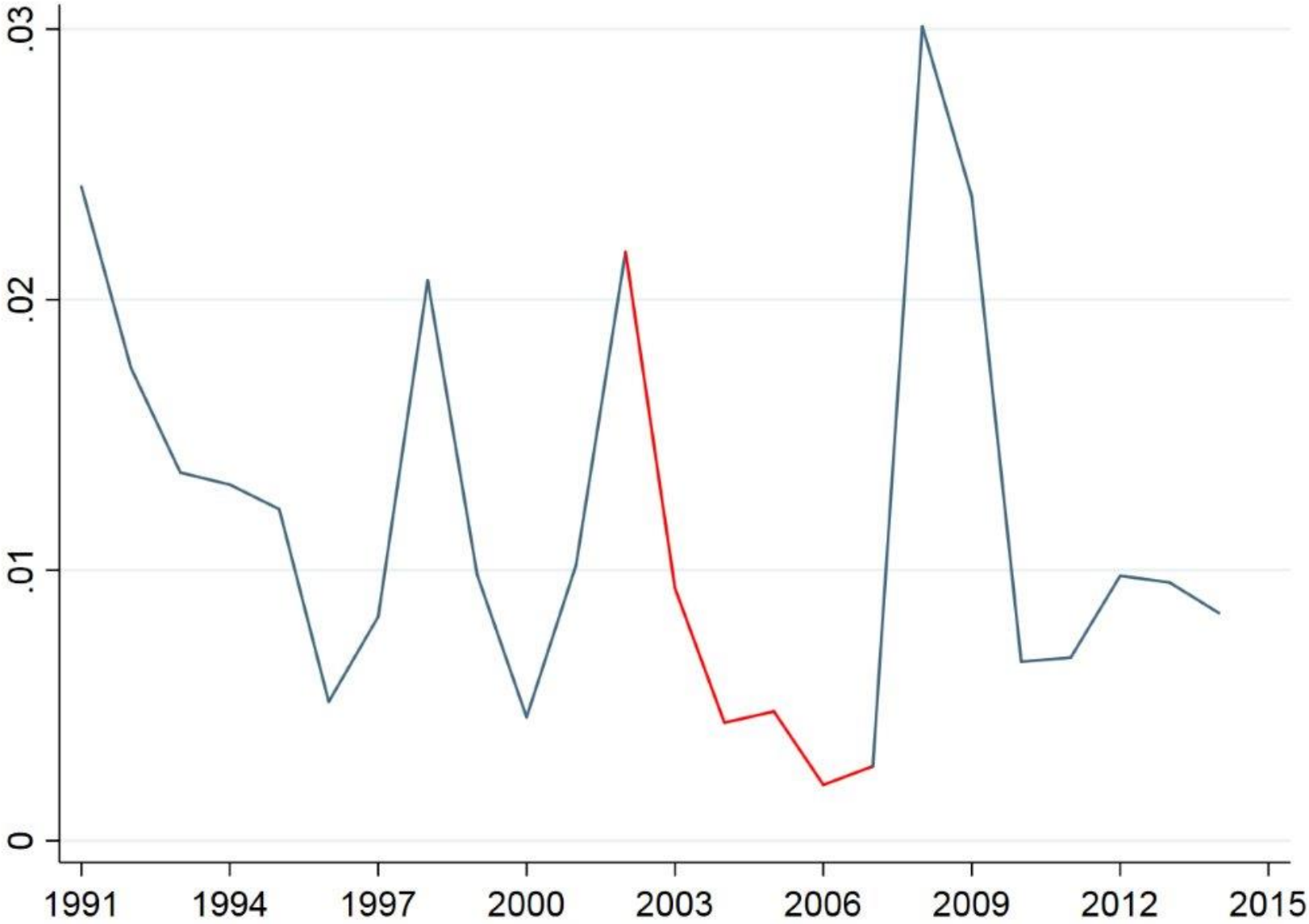
Was the disaster risk high in the build-up of the 2008 crisis?

- Excessive household leverage and bank risk taking took place a few years before the crisis.
- In the model, these developments are due to disaster risk increase.
- But according to empirical estimates of Siriwardane (2016), Marfè and Pénasse (2019) for the US, and Gouriéroux et al. (2019) for the euro area, the disaster risk before 2008 was quite low and decreasing.

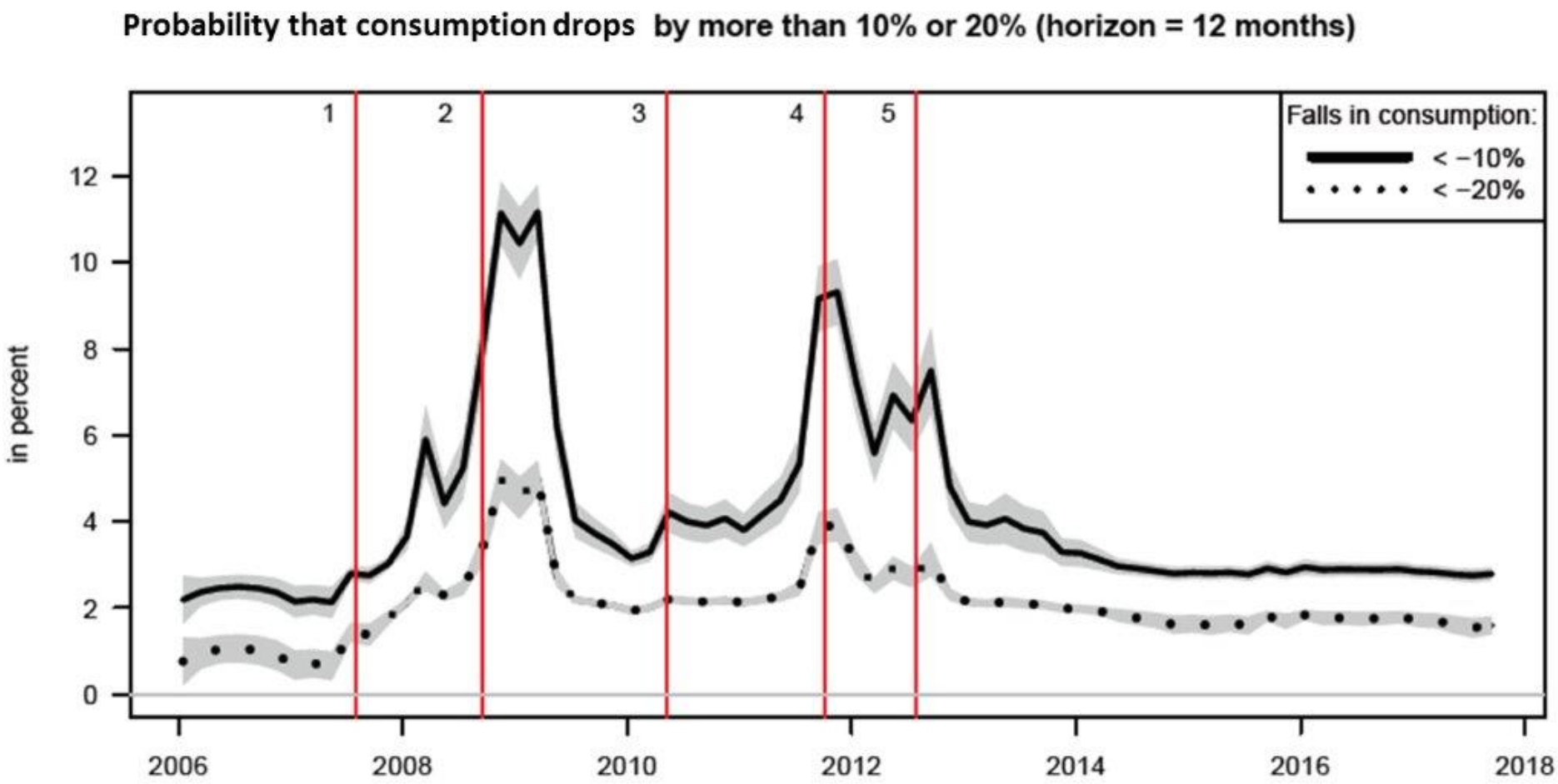
Disaster probability, Siriwardane (2016)



Disaster probability, Marfè and Pénasse (2019)



Disaster probability, Gouriéroux et al. (2019)



What is a disaster risk?

- From the policy perspective, what are the indicators that policy-makers should supervise?
- In your model, disaster risk is exogenous
  - Could household leverage and bank risk-taking be a factor of the increase in disaster probability?
  - Could a reversal of ''optimistic sentiment'' be a factor of the increase in disaster probability?

Policy Evaluation

- The paper suggests that unconventional monetary policies (QE, LTRO) *reduce* overall risk taking and lending to private sector, especially during the crisis.
- However, several empirical papers confirm that UMP *stimulate* lending and risk-taking during the crisis:
  - LTRO: Darracq-Paries and De Santis (2015); Cahn et al. (2017); Crosignani et al. (2016); Altavilla et al. (2015), Drechsler et al. (2016)...
  - Carpinelli and Crosignani (2018): "banks more affected by the dry-up use this facility to restore their credit supply, while less affected banks use it to increase their holdings of high-yield government bonds"

Suggestion

- It might be interesting to use the estimates of rare disaster probability (Siriwardane (2016), Marfè and Pénasse (2019), Gouriéroux et al. (2019)) to mesure if disaster probability increase is followed by higher bank lending, risk taking (or a measure of a franchise value).