



**AN ANALYTICAL FRAMEWORK TO  
CALIBRATE MACROPRUDENTIAL POLICY:  
THE FRENCH EXPERIENCE**

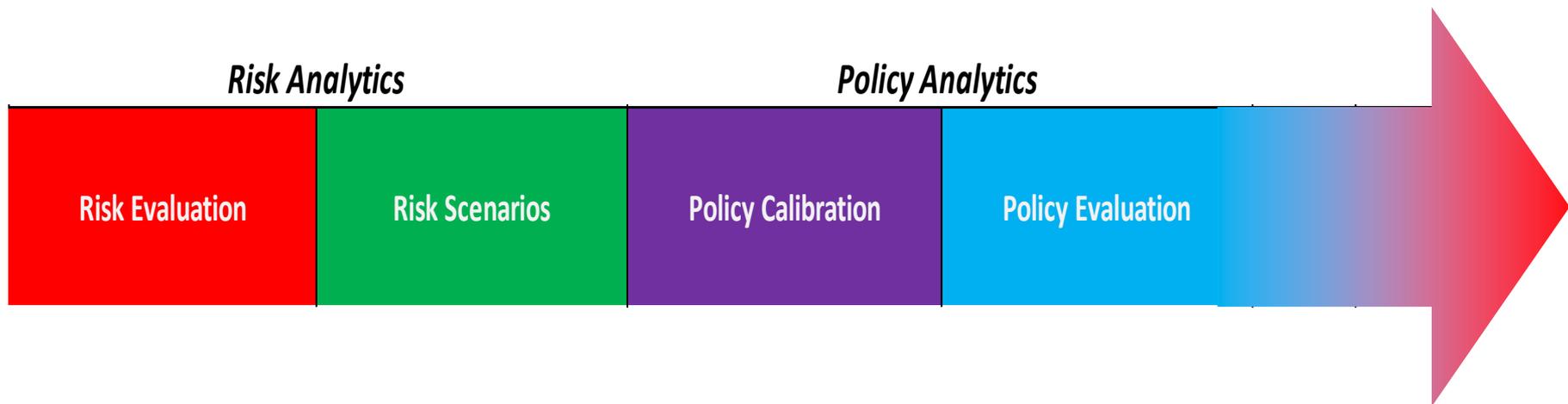
ABFER Annual Conference,  
Special session: Modelling Financial-Macro interaction, Policy Panel  
Singapore, 22 May 2018

# MACROPRUDENTIAL POLICY (MaP) FRAMEWORK

- “Those who cannot remember the past are condemned to repeat it” [George Santayana, 1905]
- The HCSF (Haut Conseil de Stabilité Financière) is the authority in charge of MaP measures upon proposal of Banque de France's governor.
- European banking regulation provides HCSF with a full set of MaP instruments in line with Basel 3 principles
- Not all HCSF instruments are covered by the European regulation

⇒ Have a set of analytical tools:

- ✓ to inform the policymaker on reasons to activate MaP instruments (risk analytics)
- ✓ to form a basis to calibrate MaP instruments (policy analytics)





# HCSF DECEMBER 2017 RISK AND POLICY ASSESSMENT

Chart 1. NFC debt (% of GDP)

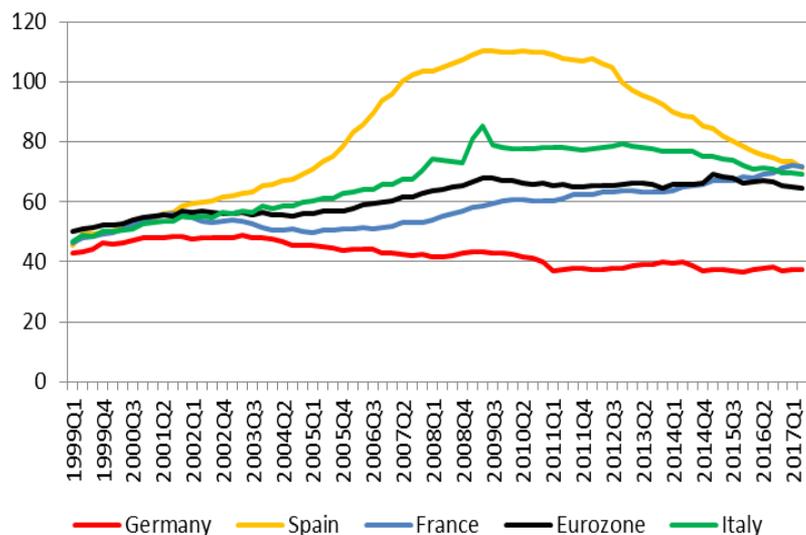
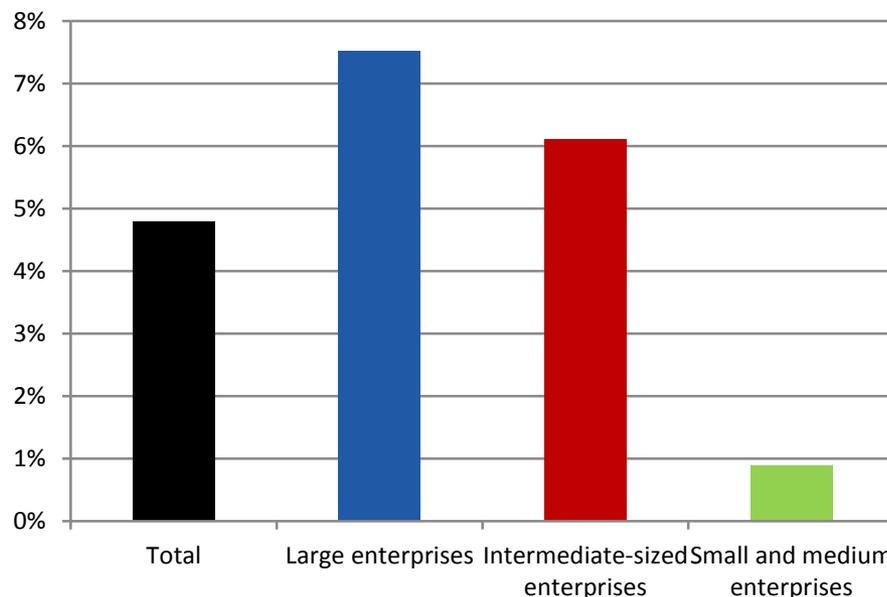


Chart 2. Average yearly growth in NFC indebtedness (2011-2016) %

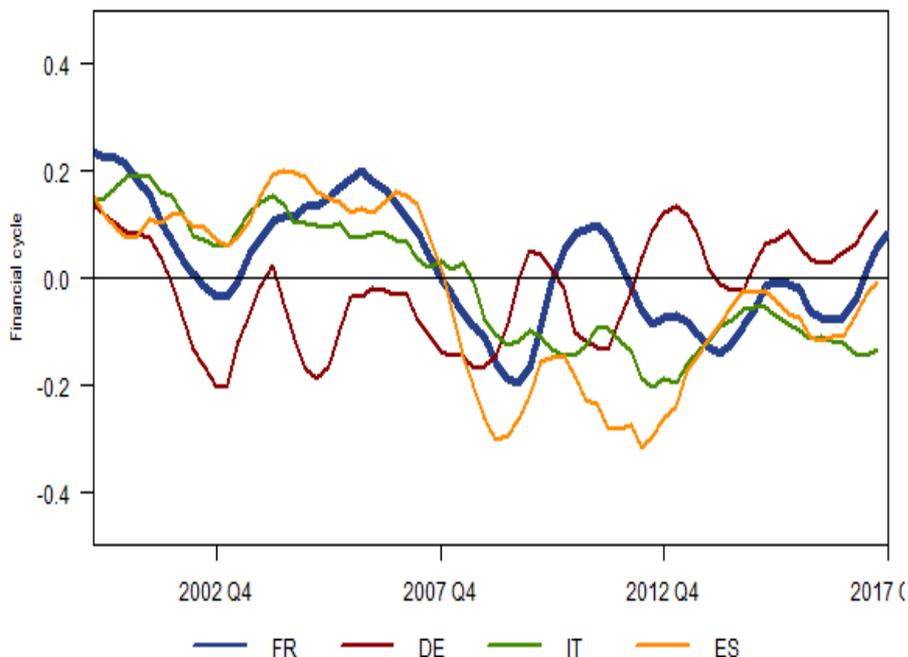


- Need of a MaP measure being a backstop against interest rate risk reversal and different from CCyB

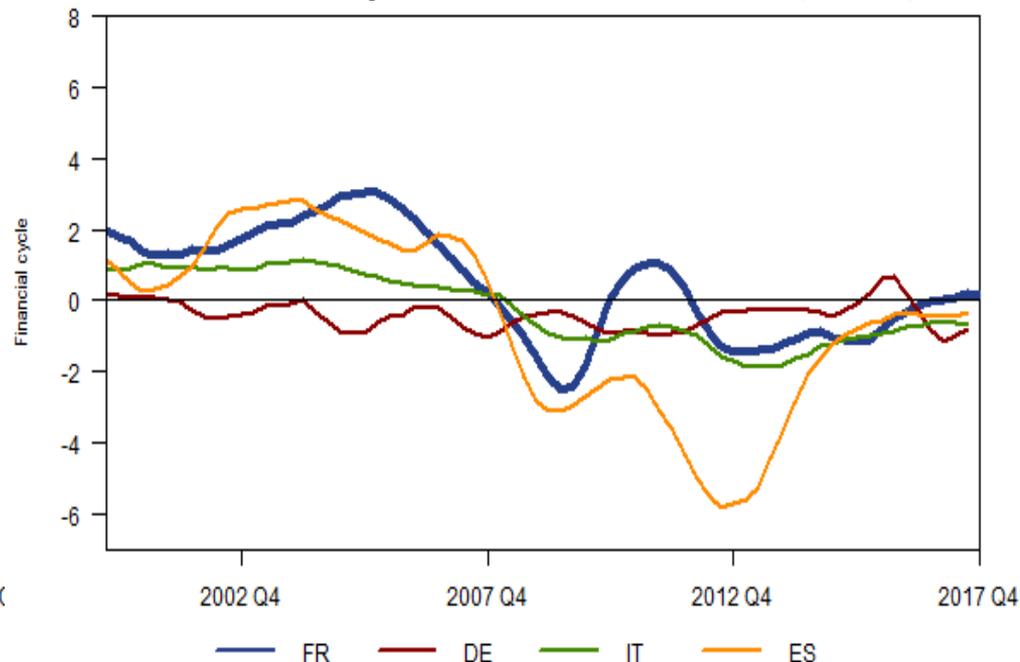
⇒ Require from **systemically important French credit institutions** a tightening of the **large exposure limit** on highly indebted large non financial corporations, down to 5% of banks' own funds. Will come into force in July 2018

# DYNAMICS OF THE FRENCH FINANCIAL CYCLE

## Financial cycle based on Schuler & al. (2015)



## Financial cycle based on Merler (2015)



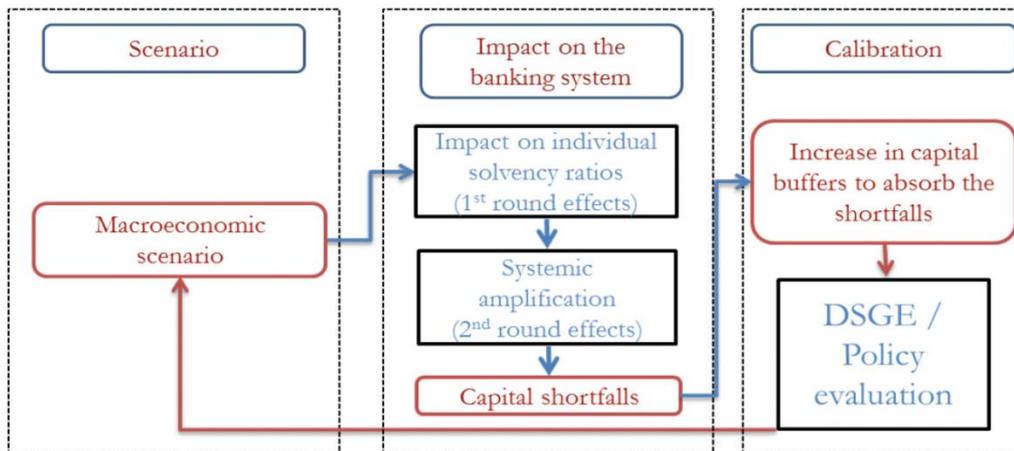
Source: BIS, Eurostat, OECD, Banque de France calculations  
 Note: Values above (below) zero indicate a cycle below (above) its historical median. The financial cycle is the equally weighted average of four variables: real quarterly growth in credit volume, residential property prices and equity prices, and the quarterly change (in pp) of real sovereign yields. Based on Schuler Y., Hiebert P., Peltonen T. (2015), "Characterising the financial cycle: a multivariate and time-varying approach", ECB WPS no. 1846

Source: BIS, Eurostat, OECD, Banque de France calculations  
 Note: Values above (below) zero indicate a cycle below (above) its historical median. The financial cycle is defined as the first component of the PCA of two variables: real quarterly growth in credit volume and residential property prices. Based on Merler S. (2015), "Squaring the cycle: financial cycles, capital flows and macroprudential policy in the Euro area", Bruegel WP 2015/14

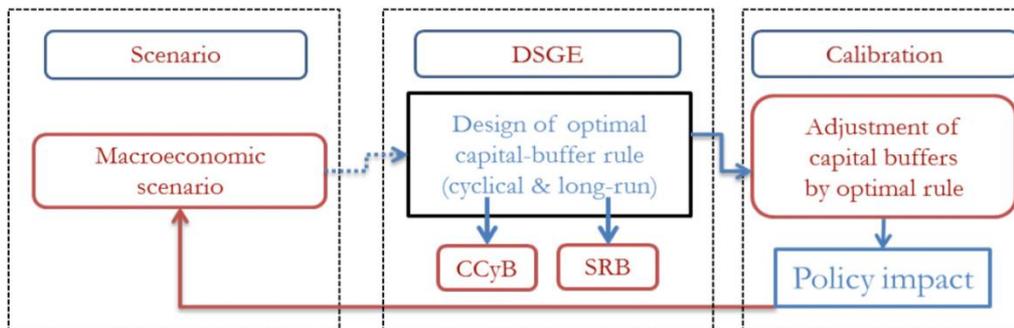
# HCSF STANDS READY TO ACTIVATE CCyB

- *Dual objective: enhance resilience of banks; stabilize credit cycle*
- *How to calibrate CCyB?*

## A hybrid strategy for CCyB calibration based on top-down stress testing

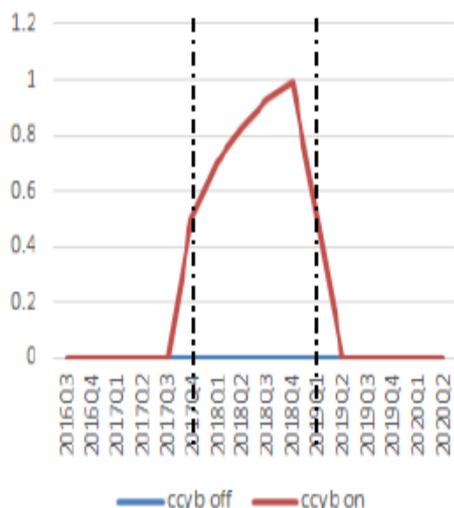


## A strategy for CCyB & SRB calibration based on a dynamic equilibrium model

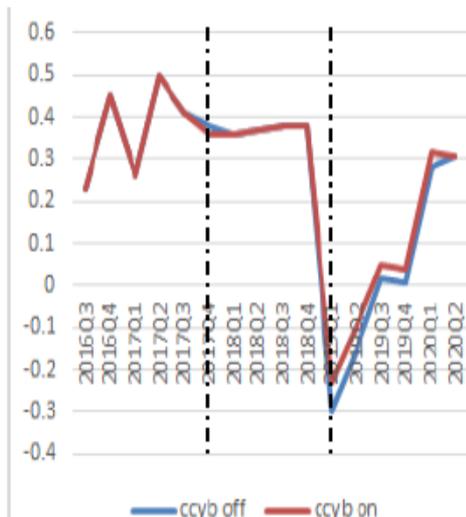


## Structural approach

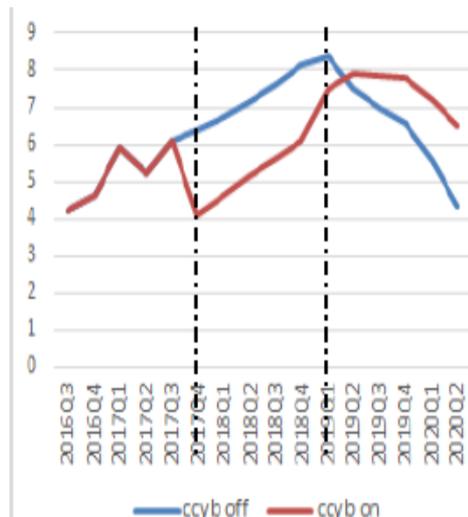
### CCyB (%)



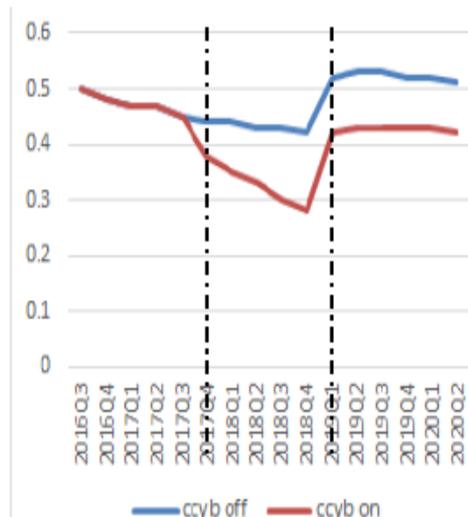
### GDP (q-o-q%)



### Credit-to-GDP gap (%)



### Banks EDF



**CCyB activated  
*ex ante*  
and reduced  
during the crisis**

**Lower decrease  
of GDP when the  
bubble bursts**

**Less volatile  
credit-to-GDP gap**

**Lower default  
probability of banks**

- Enhance macro model with financial variables required for stress testing
- Renovate models for stress testing the solvency of individual banks, accounting in particular for bank strategic decisions (dynamic balance sheets)
- Take account better of contagion outside the banking sector (interconnectedness among financial sectors and with corporate sector)

- We currently use a wide range of indicators. Accumulated experience will result into a more selective monitoring.
- We need diversity and complementarity of approaches and models: key feature for the robustness of the analysis.

# REFERENCES

- Bennani T., Couaillier C., Devulder A., Gabrieli S., Idier J., Lopez P., Piquard T. and Scalone V. (2017). An analytical framework to calibrate macroprudential policy, BdF Working Paper Series no. 648
- Couaillier C. and Idier J. (2017): Measuring excess credit using the Basel gap: Relevance for setting the countercyclical capital buffer and limitations, Bulletin BdF, Quarterly selection of articles no. 46.
- Coudert V. and Idier J. (2016). An Early Warning System for Macroprudential Policy in France, BdF Working Paper Series no. 609.
- Gabrieli S., Salakhova D. and Vuillemeys G. (2015). Cross-border interbank contagion in the european banking sector, BdF Working Paper Series no. 545.
- Idier J. et Piquard T. (2017). Pandemic crises in financial systems: A simulation-model to complement stress-testing frameworks, BdF Working Paper Series no. 621
- Task Force OMR (2017). Operationalization of the 3D model: A quantitative assessment of macroprudential policies in Euro area countries, ECB working paper series, forthcoming.



Thank you for your attention