Corporate sector risk becoming a key dimension in Stress-testing and capital adequacy

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Current context: covid 19 crisis and climate risk

Covid 19 pandemic

Although the covid 19 pandemic is a global crisis, it is characterised by **a highly heterogeneous impact between corporate sectors**. The health crisis caused by the COVID-19 outbreak has led public authorities to take unprecedented measures to contain the propagation of the virus. Administrative business shutdowns, quarantines and restrictions on mobility and social contact have thus brought some parts of our economies almost to a standstill. As a result, some sectors like airlines, aircrafts, oil and gas, tourism, automotive … are very impacted.

When projecting losses as part of stress-testing, mainly for credit risk but also for market risk, it is so **essential to take this into account. Using for instance a generic transition matrix for all type of corporates will obviously not reflect this and will not be able to forecast accurately portfolio losses.**

Current EBA stress-testing methodology doesn't require to capture the sector effect in losses projections (no split by sector in the corporate asset class)

neither provides a sector granularity in its market risk shocks but **we can expect this to change as it's obviously a key driver of credit impairments and market shocks as demonstrated by the recent covid 19 crisis.**

Climate risk

The corporate sector dimension is also essential for performing transition risk/climate risk stress-testing. Indeed, companies will tend to be very diversely affected by transition risk depending on the activity sector they belong to.

As part of the ACPR climate stress-testing currently happening, financial institutions are thus requested to classify their corporate portfolio by sectors and perform projection losses by sectors. On the credit side, ACPR would ideally expect financial institutions to adjust or develop quantitative tools to achieve this.

Moreover, given the long-term horizon of the exercise, a dynamic balance sheet assumption is advocated, enabling institutions to adjust the sectorial mix of their portfolio considering transition risk.

The stakes around global warming are clearly huge and the financial sector must play a significant role in financing the transition to a low carbon economy.

Consequently, the need to perform climate stress-testing with a focus on its sectorial specificities should definitely extend and financial institutions will surely have going forward to include climate risk assessment in their capital adequacy process, through both normative & economic approaches.

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The sectorial dimension is not really a new topic but it's becoming a key risk and capital driver

It follows on a regulatory and risk management trend emphasizing more and more the sectorial dimension as a key risk and capital driver:

- This is the case for example in the **new regulatory frameworks FRTB and FRTB CVA regarding counterparty and issuer risk. Sector is therefore seen as the main driver of the credit spread shifts** in the Sensitivity Based Approach calculation and the Basic Approach, and a **core dimension of the equity shifts.** Whereas, in the previous CVA capital charge regulation, the main driver was the rating of the counterpart and the sector was not considered.

- This has been reflected also for a long time in the regulatory guidelines underlining **the need to address business sector concentration risk as part of pillar 2**. Indeed, Pillar 1 credit risk capital calculation relies on a one-factor model and the correlation between default of the counterparties is assumed independent of the sectors of these counterparties. **Credit VaR/credit portfolio type of models are usually used to integrate sector-specific factors in the joint modelling of counterparties default** and so provide a more accurate assessment of the capital required.

What does that mean for financial institutions?

It is highlighting the need to:

- **Monitor sector level exposures and so to aggregate all exposures to each sector.**

  This monitoring should be across risks to have a comprehensive view of the institution's exposures.

  To be able to map each exposure to a sector is usually not straightforward as it demands a common referential for counterparts and issuers and between different systems, or at least clear mapping rules that enable to link several sector classifications together.

- **Define sector-specific scenarios and parameters**.
  Particularly, **shocks and stressed parameters should be discriminated between corporate sectors:** credit spread shocks, equity shocks, stressed migration matrices … As a matter of illustration, IFRS 9 provisions should be stressed quite differently if a counterparty belongs to a vulnerable sector, vulnerable meaning here strongly impacted by the specific risk/scenario being investigated.
  This could be addressed in different ways, for example:
  - Move most or all counterparts belonging to a vulnerable sector to stage 2, considering that there is a « significant increase in credit risk » and as such calculate lifetime expected credit losses for transactions done with these counterparts
  - Define a list of counterparts belonging to vulnerable sectors to be put in default
  - Calibrate a PIT transition matrix per sector using specific sectoral historical data: credit data if available or equity data as in credit portfolio type of models as these may be more accessible
  - Apply some expert judgement sector-specific coefficients to the generic corporate current or TTC matrix

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- **Have stress calculations allowing to apply shocks at the sector granularity level.** Current systems and processes may not provide readily that level of flexibility.
- **Dispose of a portfolio risk management framework.** It will typically include:
  - Monitoring of portfolio exposures, mainly sector and country exposures
  - Portfolio limits set up in line with risk appetite and capital implications
  - Regular portfolio stress-testing
  - A portfolio risk management committee to review exposures, sector and country strategies, stress-test impacts, sector, and country risk appetite.

How Capteo can assist you?

CAPTEO can undertake a gap analysis against any of these needs (comprehensive aggregation and reporting of sector exposures, calibration of sector specific shocks and stressed parameters, use of these sector specific parameters in the stress calculations, portfolio risk management framework …) **and support you on the implementation of the known or identified gaps.**

More broadly, CAPTEO is a consultancy company specialised in the transformation of financial institutions. We are providing subject matter advisory on risk and finance topics to financial institutions.

Our Stress-testing and capital optimisation offer is notably covering :

- Steer and Oversee regulatory and internal stress-testing (STEBA, ICAAP, climate stress-testing …)
- Lead and/or support the continuous improvement of methodologies and processes used to compute economic capital and all types of stress-testing impacts
- Implement metrics and methodologies to perform any types of stress-testing
- Frame and lead the setup of internal capital calculation, ICAAP, ILAAP
- Review existing risk management frameworks and assist institutions on using stress-testing as a risk management tool
- Assist organisations on the set up of transversal risk/portfolio risk framework (process, metrics, methodologies, tools)
- Review existing regulatory or prudential frameworks

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Michael has 18 years of international experience in Risk management. Throughout his carrier, he has developed a strong expertise across risk disciplines (market, counterparty, credit …). He has an extensive experience managing quantitative risk teams, leading risk and capital projects (IMM, IMA, IRBF, AMA, FRTB CVA …) and driving the implementation of risk management and stress-testing frameworks across the risk range.

He joined CAPTEO in 2018 as a Director to develop the advisory risk management and the stress testing and Capital optimisation offering. He is assisting financial institutions on risk & capital management topics and projects. He has notably framed and directed the FRTB CVA project of a large French investment bank and was responsible of the steering and oversight of internal and regulatory stress-testing (STEBA, ICAAP, Covid 19, climate stress-testing) across risk disciplines of a large French investment bank.

ABOUT CAPTEO

CAPTEO is a strategy, organization and management consulting company, dedicated to the financial industry and the financial markets. Referenced in the financial sector, we have been supporting our clients for over 15 years in their strategic reflections, in implementing their transformation projects and improving their performance.
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