Countercyclical Contingent Capital (CCC): Possible Use and Ideal Design

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The opinions expressed are those of the speaker and do not necessarily reflect those of the Bank of Italy.
Outline

1. The debate on contingent capital
   1. Gone- vs going-concern use

2. A proposal for Countercyclical Contingent Capital
   1. Design
   2. Conversion rules
   3. Prudential treatment
The debate on CoCos

Intense (and not new) debate on contingent convertible instruments:
- mainly for improving market discipline: “no pain, no gain” (M. Flannery, 2002, 2005 ... and J. Fonda, 1982)

Goals behind more recent proposals:
- Gone-concern / non viability (e.g., SIFIs capital surcharge / bail-in option)
- Going-concern (e.g., early intervention, countercyclical buffers)

⇒ Consensus on the role of contingent capital in a gone-concern scenario (see BCBS, August 2010)
⇒ Role in going-concern scenarios more controversial
## Going-concern CoCos

<table>
<thead>
<tr>
<th>What banks want</th>
<th>What Supervisors want</th>
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<tbody>
<tr>
<td>• Keep cost of capital under control</td>
<td>• Keep capital instruments simple</td>
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<td>• Fixed-income investors to provide risk capital</td>
<td>• Ensure loss-absorbency (the quality of capital)</td>
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<td>• Predefined thresholds for the triggers, but</td>
<td>• Simple structure of triggers</td>
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<td>- Some degree of supervisory discretion is acceptable</td>
<td>• Contain contagion across different categories of investors</td>
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⇒ Not mutually exclusive, but design is key
Capital instruments to meet countercyclical buffers

- **Conversion from debt into equity based on a double trigger**
  - the financial system is facing problems, as predefined by some quantitative rule, and
  - the single bank – while still in a going concern status – shows weaknesses

- **The interaction of the two triggers would identify a “quasi-default” status:**
  - the bank is still able to meet regulatory requirements with its current capital...
  - ... but a need of additional capital injection emerges since aggregate risk is increasing
Why a double trigger:

- Macro-leg identifies “cyclical” problems
  - Severity (mild recession vs crisis) depends on the calibration of the threshold

- Micro-leg ensures that only weaker banks convert
  - Severity (troubles vs non-viability) depends on the calibration of the threshold
  - Right incentives to sound management

- Risk of manipulation / death spirals is lower (but can still materialize in bad times)
Need to identify triggers and thresholds that guarantee:

- “Reasonable” ex-ante probability of conversion
  - lower than Tier 1 hybrids and ideally greater than Tier 2 subordinated debt (cost of CCC should be in-between Tier1 and Tier2 instruments)
- Timely conversion
- Accuracy in determining conversion

Our sample

- 8 countries (Canada, France, Japan, Germany, Italy, Spain, the UK, the US)
- time span: 1994-2009
- top-15 banks in terms of total assets for each country at the end of each year
  - the sample is not constant over time
- Brokers/Dealers excluded
Various triggers:

- Macro: bank-index return, GDP growth, interest rates

Different (micro) triggers have different pros and cons:

- Market-based are frequent, timely, but volatile, prone to manipulation and may determine death spirals
- Prudential ratios are more stable, but lagging and infrequent
Main results:

- Continental Europe:
  - double trigger based on total capital ratios would be hit frequently, making CCC not very appealing for subscribers: Ex: $\text{Pr(Italy, TCR less 9\%, bank index fall 2.5\%) = 26\%}$
  - tier 1 ratio seems to be a much more suitable indicator: Ex: $\text{Pr(Italy, T1R < 5\%, bank index fall 2.5\%) = 5\%; Pr(Italy, T1R < 5\%, GDP gap > 0) = 3.7\%}$
  - a threshold at about 5 per cent can represent a suitable compromise (under current capital regulation)

- CA, UK and US:
  - prudential triggers are virtually never pulled (problem with definition of capital)?
  - market-based triggers as a valuable alternative

The frequency of triggers’ breaches does not reveal:

- The timing of conversion
- Which banks are required to convert
Timing of conversion 1/2

Would the triggers have been hit at the right moment?

- Tested for various combinations of triggers
  - A: Tier1 ratio below 5 per cent and GDP below its trend;
  - B: Tier1 ratio below 5 per cent and banking index return below -2.5 per cent;
  - C: two-week abnormal return below -6 per cent and a 1.5 GDP gap;
  - D: two-week abnormal and bank index returns below -6 per cent and -5 per cent respectively

- Results suggest that market-based variables for bank-specific triggers perform better than prudential ratios
  - Also due to public recapitalisations?
Timing of conversion 2/2

Double trigger: Version A
(micro: Tier1 ratio < 5% - macro: GDP deviation < 0)

Double trigger: Version C
(micro: Abnormal return < -6% - macro: GDP deviation < -1.5)

Double trigger: Version B
(micro: Tier1 ratio < 5% - macro: bank index return < -5%)

Double trigger: Version D
(micro: Abnormal return < -6% - macro: bank index ret. < -5%)
Would troublesome banks have been required to convert?

- Need to balance Type I and Type II errors
- Not easy to identify the “event” (i.e., the quasi default status)
- We leverage on Laeven and Valencia (2010):
  - 8 distressed banks: i) operate in countries where there are significant signs of distress in the banking system (in 2007-09: France, Germany, Spain, the UK, the US); ii) did benefit from significant banking policy intervention measures
  - This definition is close to our quasi-default status, but micro-conditions are tighter
- Results are mixed:
  - Prudential-based triggers (versions A and B) pulled for 4 banks only: 1 is a distressed bank
  - Market-based triggers (versions C and D) triggered more often:
    - Trigger C: 25 conversions in 2008 and 20 in 2009: 4 distressed banks
    - Trigger D: 11 conversions in 2008 and 7 in 2009: 4 distressed banks
An example for a troublesome bank

Solid lines represent micro variable (lhs) and macro variable (rhs) levels; dotted lines refer to trigger values; shaded areas represent periods in which double trigger was pulled.
Conversion mechanism

Critical for marketability:

- number of common shares that the holders of convertible debt receive on the occurrence of the trigger, can be either:
  - determined at the time of conversion
  - prefixed at issuance:

Choice depends also on policy objective:

- it determines the magnitude of the penalty for subscribers and existing shareholders

Our preference is for a conversion rate determined at time of conversion:

- Based on a variable number of shares, which penalizes more the shareholders,
- with a cap on the maximum number of shares to be issued upon conversion:

  ⇒ the risk of dilution poses correct incentives for existing shareholders to monitor managers
  ⇒ the cap implies some losses for CCC subscribers (market discipline preserved) ...
  ⇒ ... and prevents potentially “total dilution” of the existing shareholders: governance issue
Prudential treatment

CCC used for meeting the buffer requirement before conversion, it would NOT be eligible for meeting minimum capital requirements (ie, CCC is not included in supervisory capital before conversion)

CCC features:

- fully paid at issuance ⇒ avoid counterparty credit risk and prevent contagion effects
- perpetual or at least long dated and permanent ⇒ avoid roll-over risk
- flexibility of payments not necessary
- ex post, hierarchy can be violated:
  - in systemic crisis times, CCC is converted, while Tier 1 subscribers may be not affected at some banks
  - in the case of idiosyncratic problems, Tier 1 subscribers may bear losses while CCC investors would be unaffected
2 objectives, 2 policy tools

**Macro-prudential:**
- Guarantee that banks accumulate resources in good times, when risks build-up
- Countercyclical buffers
- CCC

**Micro-prudential:**
- Guarantee stability of individual institutions
- Minimum capital requirements
- Regulatory capital

⇒ unambiguous distinction between 2 tools (regulatory capital and countercyclical contingent capital) and 2 policy objectives (micro- and macroprudential policy)
Conclusions 2/2

Design not straightforward

- A double trigger can make the job

- Obvious sympathy of regulators for prudential ratios as bank-specific triggers, but they seem to underperform market-based indicators. However:
  - what about non-listed intermediaries?
  - risk of death spirals

- Definition of thresholds that ensure a “reasonable” ex-ante probability of conversion is possible, but results are mixed in terms of timing and accuracy of conversion

- Devil in details:
  - What happens if converted CCC holders are not “fit and proper”?

⇒ Difficult to “keep it simple”
THANK YOU!

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