

## Box 5

### DO CONTINGENT CONVERTIBLE CAPITAL INSTRUMENTS AFFECT THE RISK PERCEPTIONS OF SENIOR DEBT HOLDERS?

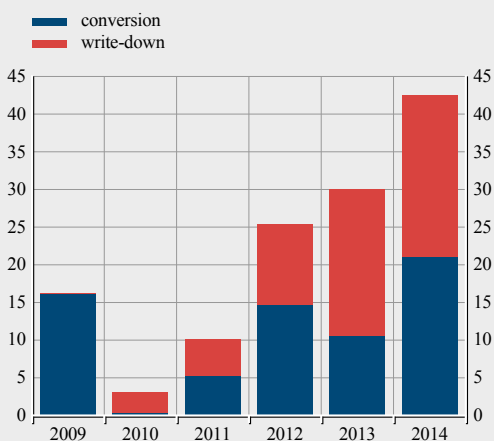
Contingent convertible capital instruments or bonds (CoCos) are hybrid instruments that are automatically transformed into equity or are written off in the event of a capital shortfall. CoCos thus contain built-in mechanisms for absorbing losses when trigger points are reached. CoCos are flexible instruments that are able to boost regulatory CET1 capital ratios when necessary, while preserving the respective debt status if the pre-specified trigger level is not reached. They have grown in popularity in recent years, not least on account of their state-contingent nature, their distinct accounting treatment and the fact that they combine elements of debt and equity.

The attractive features of CoCo instruments for issuers and investors have led to marked growth in this market. But as the importance of this nascent market for the structure of banks' liabilities increases, the risks involved may rise as well. The market has experienced dramatic growth over the last few years, with an increasing share of write-down instruments.<sup>1</sup> The supply of such hybrids appears closely related to a need of banks to increase their capital ratios in line with the new Basel III standards. On the demand side, the higher coupons paid to investors in CoCos in comparison with those of many other financial assets have proven to be very attractive in the current low-yield environment (see Chart A). The market is quite important in Europe, which has seen greater use of CoCos than the rest of the world (see Chart B).

One factor obfuscating an aggregate view of risk related to the growing market for these instruments is that contingent convertible bonds are complex in structure and, as a result, no two such hybrid instruments are identical. That said, the underlying loss-absorption mechanism is a key channel through which risk may arise, as this conduit for risk-taking incentives for holders of equity can create externalities.<sup>2</sup> The theoretical literature on hybrid debt is closely related to whether such instruments contain "write-down" or "conversion" clauses. Since write-down instruments imply that losses at the trigger point are first borne by CoCo investors, this could increase the risk-taking incentives for bank owners. By contrast, instruments with a conversion-to-equity clause imply that, if triggered, current equity holders suffer from the dilution of their shares. This aligns the interests of CoCo investors and shareholders, incentivising the latter to limit risk-taking in order to avoid triggering the CoCos. Hilscher and Raviv analyse the stabilising effect of CoCos on the issuing bank, conditional on the features of the instrument, concluding that a high conversion ratio significantly reduces the risk-taking incentives of stock-holders.<sup>3</sup> Berg and Kaserer show that a significant reliance on CoCos can lead to more

**Chart A Contingent convertible bond issuance: write-down versus conversion**

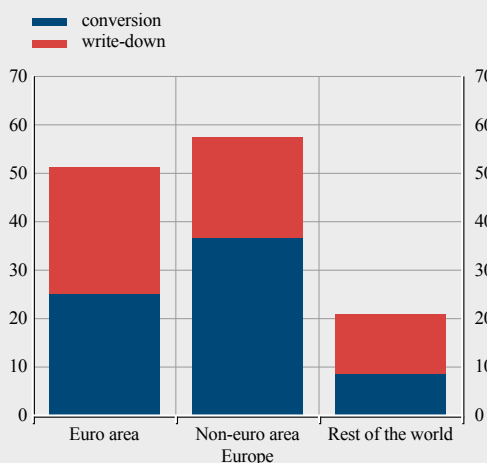
(July 2009 – Aug. 2014; EUR billions)



Sources: Dealogic, Bloomberg and ECB calculations.

**Chart B Cumulated amounts of contingent convertible bonds issued, broken down by region**

(Aug. 2014; EUR billions)



Sources: Dealogic, Bloomberg and ECB calculations.

1 See also Box 9 in *Financial Stability Review*, ECB, May 2014.

2 It should be noted that shareholders may be reluctant to allow capital levels to reach the trigger point as that could lead to restrictions on dividend payments.

3 See Hilscher, J. and Raviv, A., "Bank stability and market discipline: The effect of contingent capital on risk taking and default probability", *Journal of Corporate Finance*, 2014.

risk-taking, especially when capital ratios approach the trigger level.<sup>4</sup> Such behaviour could be amplified further by write-down clauses, as they imply only losses for holders when the trigger is reached. A significant level of dilution can hence help align the incentives of shareholders and those of the bondholders and reduce endogenous risk. These considerations raise the question as to whether different CoCo features create incentives for risk-taking by issuing banks.

An analysis of the effect of CoCo issuance on the pricing of senior unsecured debt (five-year credit default swap (CDS) spreads) suggests that the risk perception of senior bond holders depends crucially on the risk-taking incentives that CoCos may create for equity holders. The sample covers quarterly panel data for the period from the third quarter of 2009 to the first quarter of 2014 and for 60 banks (20 CoCo issuers and 40 non-issuers) from 19 countries.<sup>5</sup> First, the analysis aims at disentangling the effect of conversion/write-down CoCo dummies on CDS spreads. In a second step, the explanatory power of the quantity of CoCos as a percentage of equity is analysed. Since the control group is represented by non-issuers, the coefficients in the second column of the table below represent the effect of adding one more percentage point of CoCos relative to equity.

The point estimates in the first column of the table below show that the effect of the write-down dummy is positive and significant. Hence, a bank with write-down CoCos is perceived by senior bond holders to be riskier when compared with non-issuers, and this is reflected in a significantly larger increase in CDS spreads. Moving to the second column of the table of results, the effect of write-down instruments as a proportion of total equity is also positive. This implies that higher costs for protection against default are associated with a stronger reliance on write-down instruments in the capital structure. These results are quite illustrative, as empirical work on CoCo instruments and their impact on risk perceptions and incentives has remained limited, despite the recent surge in theoretical research.

Such results are consistent with the notion that issuing CoCos with a write-down clause appears to increase the perceived risk of a bank. On the other hand, the results suggest that holding instruments that are converted to equity if triggered has a negative impact on the change in bank CDS spreads, although that impact is insignificant in terms of quantities. As the prevalence of these instruments increases, a better understanding of their characteristics and behavioural implications in stressed market conditions is crucial for understanding their prospective impact on financial stability.

#### Impact of contingent convertible bonds on the change in banks' CDS spreads

Variables	ΔCDS	ΔCDS
Conversion dummy	-31.62*	
Write-down dummy	28.21***	
Conversion quantity in total equity		-2.97
Write-down quantity in total equity		2.83**
R2	0.471	0.470

Notes: The analysis is performed using a panel fixed effects estimator, with bank individual effects, quarter dummies and bank-clustered standard errors. The regressions are augmented with bank balance sheet variables (bank balance sheet and regulatory indicators, size) and country risk (sovereign CDS spread), but their effect is not shown. \*\*\*, \*\*, \* indicates significance at the 1, 5 and 10% levels.

4 See Berg, T. and Kaserer, C., forthcoming.

5 For further details on the empirical analysis, see Bicu, A., Stolz, S. and Wedow, M., "Layer cake: Risk incentive effects of CoCos".