

16th April, 2010

Basel Committee on Banking Supervision

Bank for International Settlements

Centralbahnplatz 2

CH-4002 Basel

Switzerland

baselcommittee@bis.org

“Strengthening the resilience of the banking sector” – consultative version Impact of amended counterparty risk measures on corporate hedging

Dear Committee Members,

First, we would like to thank you for having the opportunity to share our opinion on the impact of amended counterparty risk measures on corporate hedging.

Second, we want to highlight that we definitely agree with you on the necessity to strengthen individual risk management practices and reducing contagion risk within the banking industry to protect the real economy from negative spillovers.

However, we feel that the amended counterparty risk measures might be favorable within the banking sector, yet might induce substantial frictions outside the banking industry as we demonstrate in the appendix.

In particular, we are concerned that the idea of central counterparty clearing for derivatives is favorable for interbank counterparties, but not for corporate counterparties. The incentive gap between bilateral and central clearing is particularly increased by the stressed exposure calculation and the additional CVA-based capital charge. Central clearing stabilizes the banking sector by reducing interbank credit risk exposures, but offloads basis risks and margin liquidity risk to corporates. They might have to choose between very expensive tailored hedging contracts on the one hand and competitively priced but standardized contracts coupled with (margin) liquidity risk on the other hand. A change in market prices would lead to margin payments of the standardized derivative, however, typically the hedged underlying does not match these flows. Probably corporates will have to hedge these liquidity risks with banks in form of liquidity backup lines. Therefore, the OTC-counterparty risk has only temporarily left the banking sector but re-enters in the form of OTC-liquidity risk. Compared to the counterparty risk where triggers were known to the bank, the bank now faces a liquidity risk with unknown triggers making modeling more challenging. In addition to the liquidity risk, corporates bear the economic and accounting¹ basis risks. Especially the problem of not perfectly matching dates and maturities will lead to less effective hedging and might increase the default probability of corporates.

¹ Risk of hedges not being eligible under hedge accounting rules.

In order to de-couple the desired outcome (stabilize the banking industry) from the undesired one (distortions on corporate hedging), we would suggest to exempt derivatives with corporate counterparties from the stressed EEPE-calculation and the CVA-charge. We believe that the wrong-way risk (justifying the EEPE-stressing) is less pronounced for corporate than for interbank derivatives. The reason is that corporate defaults (PD) are rather linked to fundamental economic than to financial market variables (like EEPE). This is corroborated by the observation that corporates are more robust in financial market turmoils than banks.

With respect to the CVA-charge, we believe that banks are already (at least) partially hedged against corporate downgrades via covenants. Covenants ensure that the counterparty risk exposure does not substantially change in case of a downgrade by requiring additional collateral.

We are convinced that the correct models would endogenously lead to the outcome that is similar to an exemption of corporate derivatives from stressed EEPE and CVA-charge based on the above stated arguments. However, we doubt that the proposed models are refined enough to account for these effects. We thus plead to exempt corporate derivatives from the stressed EEPE and CVA till models endogenously reflect the above stated arguments. Prior to this, applying stressed EEPE and CVA to corporate derivatives would lead to major distortions for corporate hedging without further stabilizing the banking sector.

For any further questions we remain at the Committee's disposal.



Prof. Dr. Thomas Heidorn
Head, Centre for Practical Quantitative Finance
Frankfurt School of Finance & Management
Sonnemannstraße 9-11
60314 Frankfurt am Main

Tel.: 0049-69-154008-721
t.heidorn@frankfurt-school.de



Dr. Christian Schmaltz
Research Fellow
Frankfurt School of Finance & Management
Sonnemannstraße 9-11
60314 Frankfurt am Main

Tel.: 0049-176-21761996
c.schmaltz@frankfurt-school.de

Appendix

A.1. Counterparty Credit Risk under Basel II

Corporates extensively use derivatives to hedge mismatches from their economic activities. Important derivatives include interest rate-, currency- and commodity derivatives.

Due to the bespoke nature of underlying economic activities, corporates require bespoke derivatives in order to minimize basis risks and to ensure the required hedge effectiveness for hedge accounting.

Banks have to hold (regulatory) capital against the counterparty credit risk arising from these derivative transactions according to the following equation:

$$\begin{aligned} \text{Capital}^{\text{regulatory}} &= K(PD) \cdot \alpha \cdot \text{EEPE} \cdot 1.06 \\ &= \text{const} \cdot \alpha \cdot \text{EEPE} \end{aligned}$$

K denotes the unexpected loss per unit exposure and depends on the default probability (PD). EEPE denotes the non-decreasing expected exposure.² Alpha accounts for the potential correlation between PD and EEPE (so called “wrong-way risk”). EEPE takes into account netting and margin agreements.

The cost for holding the required regulatory capital is borne by the corporate end-user in the form of an additional spread in the derivative pricing.

A.2. Identified shortcomings of current counterparty risk measure

With respect to counterparty credit risk, the Committee identified shortcomings and proposed solutions as follows:

1. Shortcoming:
The current EEPE-model understated exposures at defaults and rating downgrades as these events often go together with higher market volatilities (“wrong-way risk”).
Solution:
New EEPE must use data that includes a period of stress.
2. Shortcoming:
MtM-losses due to credit valuation adjustments were not capitalized.
Solution:
A new capital add-on is proposed to better capture CVA-risk.
3. Shortcoming:
OTC-clearing dominated central clearing.
Solution:
Measures 1 and 2 increase the incentive to shift bilateral trades to multilateral clearing institutions as there is no capital charge for centrally cleared derivatives.

² EEPE for capital purposes is limited to a 1-year model horizon. For pricing, the EEPE over the contract’s lifetime is used.

A.3. Impact of amended counterparty risk measures on corporate hedging

If a corporate wants to hedge its exposures under Basel III³, it has three ways to do so (see Figure 1):

1. Bilateral/ OTC without collateral agreement
2. Bilateral/ OTC with collateral agreement
3. Multilateral via a central counterparty

		Impact on Banks	Impact on Corporates				
		Regulatory Capital	Contracts	Derivative Prices	Liquidity	Collateral	Comments
B-II	OTC	$\text{const} * \alpha * \text{EEPE}$	bespoke				
B-III	1. OTC	$\text{const} * \alpha * \max(\text{EEPE}, s\text{EEPE}) + \text{VaR}^{\text{new}}(1y, \alpha * \text{EEPE}, s\text{CDS})$	bespoke	++	0	0	
	2. Collateral Agreement		bespoke	+	0	+	• Corporates need Collateral Management
	3. CCP	0	standardized	--	++	0	• OTC-liquidity exposures with uncertain triggers • basis risks • questionable hedge accounting

Figure 1 Impact of existing and proposed counterparty risk measures on banks and corporates

For the bilateral-/ OTC-option the bank has to hold regulatory capital to back counterparty credit risk. The increase in regulatory capital compared to Basel II is mainly due to two reasons: First, EEPE is calculated with a stressed period (measure 1). Second, an additional capital charge for MtM-counterparty losses is added (measure 2). The impact is an immediate increase in derivative pricing. If the deal is partially collateralized, the pricing impact will be less pronounced, but corporates have to set up a collateral management function (see “2.Collateral Agreement” in Figure 1). This penalizes small to medium corporates as they are unlikely to currently have a collateral management in place. Additionally, hedging cost will increase for corporates as the collateral requirements are going to be increased, leading to the necessity to hold additional securities.

It has to be noted that in either case, the derivative contract can be customized (in terms of volume, coupon, frequency, maturity, etc.) to the needs of the corporate. In particular, the derivative can be configured such that it is eligible for hedge accounting.

If the corporate chooses the centrally cleared derivative, no regulatory capital has to be reserved leading to a derivative price that is more competitive than under the current Basel II-regime. However, the downside potential comes in two forms: First, the market movements have to be backed by liquidity (initial and variation margin). Second, the derivative is likely to be standardized. As corporates usually have less access to liquidity than banks⁴, it is reasonable to expect that they will protect themselves against the liquidity call risk by a bank liquidity facility. This converts formerly OTC-counterparty credit

³ We use „Basel III“ as an abbreviation for the revised capital standards (consultative version) as of 12/2009.

⁴ Banks have the central and interbank market to raise volatile amounts of liquidity, whereas corporates usually only have their “house banks”. Short-term regular issuance lines are often used for specific purposes but not for volatile margin calls.

risk into OTC-liquidity risk. Modeling of this liquidity risk is more challenging than the modeling of counterparty risk, as the economics behind the drawing (risk factors for the margin call) are blurred compared to the modeling of EEPE (where the bank knew the underlying deal details). Hence, a loss of information is incurred.

Apart from the liquidity risk, the potential contract standardization offloads basis risks from banks to corporates. If the standardized contracts are very different from the bespoke ones, they might not be eligible for hedge accounting leading to undesired profit & loss-volatility. Economically, corporates will face basis risk concerning their hedge operations because dates of payments, maturities and underlyings do not match exactly. For the stability of the financial system it is not desirable to shift these risks from the financial sector (specialist) to the corporate user, as this might lead to a substantial increase of corporate default probabilities.

Summarizing, we agree that the clearing via CPPs substantially reduces credit counterparty risk. However, hedge inefficiency is increased by standardized deals. Furthermore, counterparty credit risk does not disappear but is likely to re-enter the banking sector as OTC-liquidity risk via liquidity facilities. Corporate default risk may also rise due to less efficient hedging. In that case, modeling the drawdown behaviour of the liquidity facility is more difficult than the modeling of EEPE in the OTC-case as the bank does not know the underlying deal characteristics that trigger facility withdrawals. Following this argument, the bank (and the whole sector) is more opaque than in the bilateral case.

In each of the three cases, we expect major costs for corporates:

1. Bilateral / OTC without collateral agreement will have substantially higher derivative prices.
2. Bilateral / OTC with collateral agreement will have higher derivative prices and cost for collateral management.
3. Multilateral via a central counterparty will lead to more hedge inefficiency as well as liquidity (risk) cost for margin payments.

A.4. The impact of amended counterparty risk measures on corporate hedging

We agree with the necessity to refine counterparty credit risk in order to stabilize the banking industry. However, we see substantial downside potential for corporates.

The reason why corporates trade their derivatives OTC rather than CCP is the bespoke nature of the hedges. Corporates have substantially invested into processes and models to manage and reduce counterparty credit risk. The shift towards CCPs would devalue these investments and require additional implementation cost for the liquidity / margin infrastructure. Hence, we believe that OTC best fits corporates requirements. In addition to that, we are convinced that the destabilizing effects for the banking sector are likely to be caused by interbank rather than by corporate derivatives. The latter are usually linked to underlying economic activities ensuring that their growth is linked to economic growth. Excessive growth (and related counterparty risk) is thus unlikely to result from corporate derivatives.

We therefore agree that CCP is desirable for interbank, but we disagree that it is desirable for corporate derivatives. As using CCP is not made mandatory but incentivized by the price, corporates are penalized for their OTC-derivatives.

We therefore advocate exempting corporate derivatives from the two main price drivers: the stressed EEPE and the additional CVA-charge.

In particular, we suggest that the Basel II-EEPE (without stress) is continued to be used for corporate derivatives. We argue that wrong-way risk (which is the argument for stressed EEPE) is less pronounced for corporate derivatives than for interbank derivatives. This is due to the fact that corporate defaults

are more driven by real economic variables and bank defaults by financial variables. As EEPE is driven by financial variables only, it is intuitive that default probabilities of banks show higher correlation to EEPE than corporate default probabilities do. Hence, we see less wrong way risk in corporate than in interbank derivatives. However, the approach to stress EEPE no matter which counterparty does not account for that effect. Within more refined models that simultaneously model PD and exposure, we would expect this to be an endogenous outcome. Till such models are in place, we suggest the ad hoc exemption.

Furthermore, we propose to set the CVA-risk at zero for corporates. Our argument is as follows: the CVA is supposed to cover migration (downgrade) risk. However, banks protect themselves against downgrades via covenants. We prefer an endogenous over an exogenous approach. A zero CVA would be the correct outcome if the CVA-model took into account covenants. Yet we found that the exposure is fixed and not adjusted in case of a downgrade. This model mechanism ignores covenants.

Summarizing we are concerned that the proposed measures to stabilize the banking sector go hand in hand with undesirable effects on corporates without further stabilizing the banking sector. Therefore, we advocate applying the amended measures (stressed EEPE, CVA-add con) to interbank derivatives only and exempt corporate derivatives till appropriate models endogenously confirm the ad hoc measure.