Deutsches Aktieninstitut

Basel IV and the Cost of Hedging for Non-Financial Companies

Impact Assessment and Recommendations

Position Paper of Deutsches Aktieninstitut, 13 December 2019

Introduction and Summary

Non-financial companies have generally been supportive to the strengthening of bank and capital market regulation in the aftermath of the crisis because systemic stability as well as safe and sound banks are key for allocation of capital and thus growth of the entire economy. We also believe that the regulation of banks – if too strict or inappropriately calibrated – may interfere with the role of banks as intermediaries and risk takers for the economy.

Deutsches Aktieninstitut has therefore regularly raised concerns regarding bank regulation likely having a high negative impact on non-financial companies. This has been done also because both political discussions and impact assessments often tend to focus on the provision of credit facilities to small and medium sized enterprises (SMEs). **Though the provision of credit to SMEs is without doubt a highly relevant issue it should not be neglected that other services of banks typically used by bigger companies may also be negatively impacted by regulation.** This is particularly true for the ability of banks to provide non-financial companies with OTC derivative instruments used to hedge against currency, interest rate and commodity price risk related to operative and treasury financing activities.

The upcoming implementation of the so-called **Basel IV framework also gives reason for concern with respect to hedging services** provided by banks. With the support of KPMG, Deutsches Aktieninstitut therefore estimated the potential impact of two central elements of the Basel IV framework on the costs of risk management activities for a sample of 16 of our member companies: a) the impact of the output floor with respect to counterparty credit risks and b) the impact if the existing exemption for capital requirements on credit valuation risk (CVA risk) was dropped.

Our calculations show that the **16 companies alone will likely have to bear additional costs for their risk management activities totalling 200 to 280 million Euro per annum** depending on which average rating is assumed and assuming the additional capital costs for banks will be passed on to their clients. Albeit representing only a small subset of the European non-financial sector these potential cost increases are significant.

We therefore **urge the legislator to cope with this likely negative impact in the transposition of the Basel IV framework** to the European Union. More specifically, the legislator must **maintain the existing exemption for CVA risks in Art. 382 of the Capital Requirement Regulation (CRR)**. In addition, the legislator must also **seek ways to reduce the potentially negative impact of a full implementation of**

the output floor requirements in conjunction with the so-called Standardised Approach for Counterparty Credit Risk (SA-CCR).

Otherwise we would be concerned that hedging activities are made even more expensive than by the regulatory initiatives of the more recent past. As a a consequence, risk management of non-financial companies could be hampered. This would happen although EU regulation in general recognizes that hedging activities of non-financial companies are beneficial from a macroeconomic perspective.

1 Basel IV und the Costs of Hedging for Non-Financial Companies

1.1 Use of derivatives by non-financial companies

Using derivative instruments plays an essential role in corporates ability to manage their own currency, interest rate and commodity price risks. This ensures that risks are appropriately hedged and stabilises the impact of these types of risk on their profit and loss account. For example, for export-oriented non-financial companies (NFCs) the avoidance of losses from currency fluctuations is the raison d'être for the use of derivatives. Therefore, nearly every corporate which buys precursors from non- suppliers outside the Eurozone and sells products or services to customers outside the Eurozone uses derivatives.

As a general rule non-financial companies use OTC derivatives on an uncollateralised basis for that purpose. This is because collateralisation of derivatives, i.e. a change of hedging strategies, is not an alternative for the derivative business of non-financial companies. Though collateralisation typically reduces the own funds requirements for banks, it would result in massive liquidity/financing needs on the side of non-financial companies as non-financial companies typically lack liquid assets that could serve as collateral. The funding needs would either have to be drawn from existing funds at the expense of investment in business opportunities or additional funding has to be gained from the banking sector.

It is also worth to note, that derivative portfolios of NFCs typically have a low risk profile and do not create systemic risks because they are simply mirroring "real economy" business. As derivatives used by NFCs are in general linked to commercial or treasury financing activities, such derivatives do not pose additional risks to the economy as a whole. A negative market value of the derivative is widely offset by a positive performance of the underlying exposure from operative business (and vice versa).

Consequently, if derivatives were not available or too expensive (e.g. due do inappropriate own fund requirements) investment decisions would be less efficient or – ultimately – production could be moved outside Europe. Furthermore, an "unhedged" corporate which for instance is exposed to foreign exchange risk is a much riskier counterparty than a "hedged" one. Both shareholders and bondholders would require a much higher risk premium from an unhedged company and negative implications for ratings are most likely in medium-term.

1.2 Elements of the Basel IV framework that need attention

Against this background there are at least two elements of the Basel IV framework that may lead to an inappropriately high negative impact in the OTC derivative business:

1. The new standardised approach for the calculation of counterparty credit risk (SA-CCR) in conjunction with the so-called output floor will limit the benefits of the use of internal risk models which may – as a consequence – lead to a significant increase of own funds requirements for banks providing OTC hedging services.

2. In contrast to the existing European law the Basel IV framework does not contain any exemptions for own funds requirements for derivative exposures with non-financial counterparties regarding the credit valuation adjustment risks (CVA Risk). If the exemption was terminated in the course of transposition this would also lead to additional significant increases of own funds requirements.

It appears to be likely that either the costs of raising additional capital would be imposed on the end users of financial services and/or banks would reduce the volume of services provided to companies. Even though EMIR reporting has been introduced in 2012, there is currently no aggregated data publicly available that would allow for an estimate on the overall negative impact on non-financial companies in the derivative business.[1] The only public estimate on CVA risk stems from the July EBA report which was updated in December. The report concluded that CVA risk forms a significant part of the increase in overall minimum required capital (MRC), 4.1% of the total of 24.2% of the large European banks' which are catering their services the bigger corporates. To our knowledge, a proper impact assessment of the output floor effect in conjunction with SA-CCR on the provision of derivatives has not yet been conducted at all – neither by the Basel Committee nor by European policymakers.

[1] Existing impact assessments tend to focus on the overall effect of the Basel IV implementation. The EBA impact assessment comes to the conclusion that banks lack a total of 135 billion of capital if Basel IV was implemented in full (see EBA, Basel III reforms: impact study and key recommendations, August 2019). The updated version of the EBA study slightly revises that figure to a total of 124.8 billion of additional capital (see EBA, Basel III reforms: impact study and key recommendations, 4 December 2019). A more recent study by Copenhagen Economics even estimates a total of up to 400 billion Euros of additional capital needs (see Copenhagen Economics, EU implementation of the Basel III framework, November 2019).

1.3 Impact Assessment

In order to fill that gap, 16 non-financial member firms of Deutsches Aktieninstitut undertook the effort to estimate the potential effects for their transactions in the OTC derivative markets. The estimation was conducted by KPMG on the basis of a simulation model developed for that purpose. It was based on the turnover in uncollateralised OTC derivative instruments of the participating companies for the year 2018 totalling a combined notional value of 1.3 trillion Euros.

Under simplifying assumptions (see Annex I) and supposing all resulting cost effects would be passed on to customers via pricing, the participating non-financial companies may be confronted with the following impact:

- Regarding counterparty credit risk additional hedging costs from 112 million to 167 million Euro a year may be expected depending on whether an average A or BBB rating is assumed. This would mean a ca. 200 percent increase in costs related to own funds requirements compared to the status quo.
- Regarding a potential termination of the CVA exemption in Art. 382 (4) (a) CRR a potential additional cost of 86 to 112 million Euro would have to be expected. As the CVA risk with non-financial companies' exposures is currently rightly exempted from own funds requirements in the EU, no increase in percentage figures can be attached to the number.

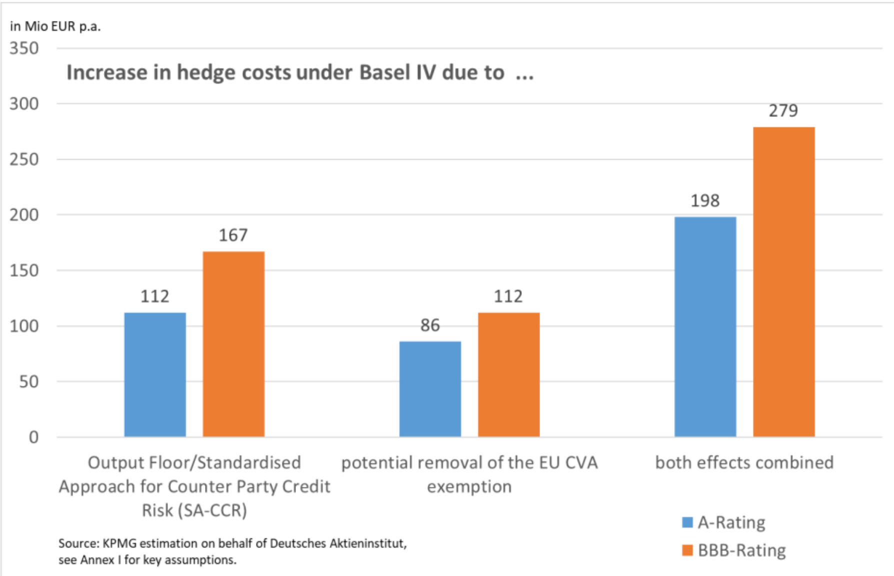

Figure 1: Additional risk management costs due to Basel IV

In sum, if Basel IV was implemented in the European Union without any modification and – in the course of that implementation – the current CVA exemption was also dropped, the 16 participating companies might be hit by additional hedging costs of 200 million to 280 million Euro a year.

The participating companies are however only a small subset of the whole non-financial sector using (uncollateralized) OTC derivatives for hedging purposes. Unfortunately, data restrictions and methodological difficulties make it impossible to estimate the effect on a macroeconomic level. However, it is fair to assume that the effect on the macro level would be much higher.

The calculations furthermore show that the effect significantly depends on the type of derivative as well as the maturity. In general, long-term hedging instruments will be affected more than short-term instruments. That means that there can be huge differences in the impact among NFCs depending not only on the volume of hedging transactions, but also on the business model or the main export or import markets the company is active on.

The effect on costs of hedging might be only one of the possible negative impacts. It might also happen that banks are simply not able to raise enough capital to comply with the own funds requirements in full or may not be able to fully pass on additional capital costs to NFCs. As a consequence, they may decide not to offer the respective services anymore and reduce their exposures in the derivative business. This may result in less liquidity and less competition (with maybe even further price increases) and/or decreased availability of hedging possibilities.

2 Recommendations for Basel IV Implementation

First of all, from the perspective of the non-financial sector we urge the legislator to carefully evaluate the potential negative effects before drawing conclusions. Having in mind that policy makers concluded that Basel IV should not lead to significant increases in total own funds requirements, respective evaluation should be undertaken with the ultimate goal to adjust Basel IV implementation to the European economy's needs.[2]

As mentioned above the needs of the European economy are not limited to the issue of ensuring sufficient provision of credit financing to SMEs. Though that is without doubt an important political objective, policy makers should also recognize the needs of larger companies deeply integrated in the world markets to hedge against currency, interest rate and commodity price risks in order to avoid that these risks will have to be absorbed by to the non-financial sector and in order to avoid competitive disadvantages.

More concretely, two adjustments to the original Basel IV framework appear to be necessary/meaningful:

- The existing exemption in Art. 382 (4) (a) CRR regarding the own funds requirements for CVA risk should be maintained. The justification that once led to that important modification still applies, i.e. ensuring consistency to EMIR and recognizing the lower risk profile of hedging instruments of non-finanical companies.

- Our analysis furthermore lets us conclude that the current SA-CCR for counterparty credit risk exposures in combination with the output floor might bring too conservative results. In the same vain we, for example, feel that the output floor and other elements of Basel IV tend to discriminate companies with a good credit standing against those with a lower credit standing. We thus urge policy makers to avoid negative consequences for non-financial companies. For example, we have recognized that there is already a debate whether SA-CCR is calibrated adequately. As the US regulator has just removed the so-called alpha multiplier (scaling exposures up by 40%) in the SA-CCR approach for

[2] For example the Council of the European Union once noted "the reform package would not be expected to result in a significant increase in the overall capital requirements for the banking sector, therefore, not resulting in significant differences for specific regions of the world." (see ECOFIN press release, 12 September 2016).

derivative exposures with corporates; this might also be a good starting point for the European debate.

If instead policymakers chose not to adjust Basel IV implementation to the needs of non-financial companies, the following consequences appear to be likely:

- Less hedging and higher risks: Hedging is important to reduce risks for both companies and banks providing services to them. Basel IV – if unadjusted – will likely lead to less hedging activity and thus higher volatility of profits and losses which makes corporates riskier counterparties by forcing them to bear risks that should better be taken by the financial sector.

- Regulatory inconsistency: against the background above, the use of OTC derivatives by non-finanical companies is rightly regarded as beneficial for the economy as whole. This broad political consensus has been consistently implemented in the EMIR regulation, the MIFID/MIFIR regulation and also in the existing CRD/CRR. All of these pieces of regulation rightly recognise that non-financial companies need to conclude OTC derivatives on an uncollateralised basis in order to cope efficiently with risks related to operative business. This broad consensus would be disregarded and regulatory inconsistency would be introduced.

Annex I – Design of the Study

The aim of the study was to estimate the incremental cost of bank capital requirements as part of OTC derivative hedging transactions with non-financial entities (“Corporates") related to future Basel IV capital requirements.

Two effects were calculated as part of the impact study: (1) Increase of OTC derivative cost due to increased bank capital requirements for Counterparty Credit Risk (CCR) with Basel IV and (2) the increase of OTC derivative cost if „EU CVA exemptions“ would be removed with Basel IV implementation. Both effects are considered independently, but would have to be added if the “EU CVA exemption” would be removed in the course of the Basel IV implementation.

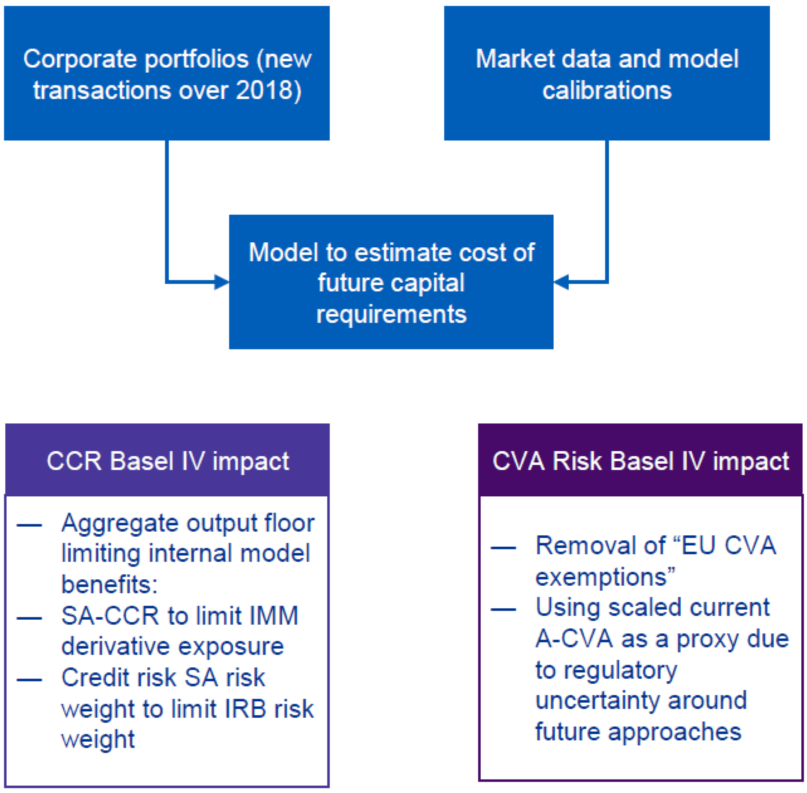

Figure 2: Calculation method and main assumption regarding choice of models applied

In order to estimate the effects, 16 non-financial companies provided KPMG with transaction data for OTC derivative related to new transactions entered into with banks during the year 2018. In total, companies notified transactions, with a combined notional value of 1.3 trillion Euros in total, to KPMG.

KPMG's calculation was necessarily based on a number of simplifying assumptions and methodological conventions. The most important of them are:

- For calculation purposes companies were asked to cluster their derivative transactions to five pre-defined product types (FX forward, IR swap, Cross-currency swap, Metal forward, Oil swap) with a number of maturity and currency buckets. This was done under the assumption that the derivative instruments chosen for the clustering are representative for a wider spectrum of derivatives and currencies and for this reason can serve as a proxy.

- It was assumed that market data as per Q2 2018 is representative as a basis for the calculation. Higher and lower volatility scenarios have been calculated but showed relatively little effects.

- It was assumed that non-financial companies typically contract with banks currently using internal model based approaches for counterparty credit risk exposures (Internal Model Method, IMM) and credit risk weights (Advanced Internal Ratings Based Approach, A-IRB). This is realistic as big non-financial companies typically interact with bigger banks which regularly use internal model based approaches.

- For the calculation of future cost of capital for banks, the following parameters are assumed: Probability of Default (PD) 0.05% for A-rated and 0.1% for BBB-rated corporate, Loss Given Default (LGD) of 50%, cost of capital for banks (Return on Equity-Rate rate) of 8% (based on publicly available reports).

- As part of the estimation, capital requirements were furthermore calculated without taking into consideration legal netting agreements or collateralization, e.g. capital requirements are estimated on a stand-alone basis for each transaction (potentially overstating the effect as corporates tend to have legal netting agreements in place).

- The Basel IV aggregate output floor for banks' capital requirements to limit benefits from internal models will be determined based on the overall capital requirements across all risk types. For that reason, a break-down to single transactions is hardly possible (esp. for the risk weight based on PD, LGD and maturity will also be restricted to all other credit risk exposures apart from derivatives) and impacts were calculated on a "stand-alone" basis. This however can be justified as the EBA survey suggests that for bigger banks the output floor will be a binding restriction so that additional new derivatives will most likely be charged with the full impact. CVA Risk charge is basically calculated based on current advanced method (A-CVA). To account for portfolio effects with respect to CVA Risk Charge calculations, a diversification factor of 55% is utilized which was derived via expert opinion. To account for potential increases for CVA Risk due upcoming changes in the method, an increase of 75% was assumed in order to scale the results (based on results of the Basel Committee's Basel monitoring report, October 2019, p. 103).[3]

[3] The calculation, however, does not consider changes proposed more recently by the Basel Committee open for consultation until February 2020. See Basel Committee, Consultation Document, Credit Valuation Adjustment Risk: targeted final revisions, November 2019.

Contact

Dr. Gerrit Fey
Head of Capital Market Affairs
Deutsches Aktieninstitut e.V.
Senckenberganlage 28
60325 Frankfurt am Main
Phone + 49 69 92915-41
Fax + 49 69 92915-12
fey@dai.de
www.dai.de