



**FI supervision**

# Credit institutions' management of counterparty risk and CVA risks

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## Summary

Finansinspektionen (FI) has conducted an investigation into a number of credit institutions' exposures, risk measurement and management of counterparty risk and credit valuation adjustment (CVA) risk related to positions in financial derivatives. Through the investigation, FI identified that these institutions need to focus on developing the risk sensitivity and precision of their existing methods and measures for quantifying of exposure amounts and valuations, and also strengthen aspects of how they manage counterparty risks in derivatives. All of the investigated institutions have now initiated improvement programmes with the aim of developing risk measurement and risk management.

In 2019, Finansinspektionen (FI) completed a comprehensive investigation into a number of credit institutions' exposure, risk measurement and management of counterparty risks and credit valuation adjustment risks (referred to below as CVA risks) that are related to their positions in derivatives. As part of this investigation, FI studied a selection of the credit institutions with positions in derivatives as an important component of their respective business models and, as a result, are particularly exposed to the dynamic risks that derivative positions can entail.

In addition to market risks, positions in derivatives can also entail counterparty and CVA risks. In a derivative, counterparty risk is the risk that the counterparty in a transaction will default prior to the expiration date and final settlement. In simple terms, counterparty risk in a derivative depends on the development of the derivative contract's underlying market risk factors, and the probability that the counterparty will default during the lifetime of the derivative contract. Losses arise if one or more of the transactions with the counterparty have a positive economic value at the time the counterparty defaults. In simple terms, the CVA is the current market price of the counterparty risk and CVA constitutes an adjustment of the risk-free fair value taking into account the price of the counterparty risk. The CVA risk indicates the uncertainty of the CVA and, hence, the profit-and-loss volatility caused by the CVA.

Counterparty and CVA risks may lead to substantial losses for a credit institution and can also lead to disruption to the institution's operating activities, for example in respect of its ability to hedge undesirable risks.

Counterparty risk is a dynamic risk and can alter rapidly when market conditions change or when the financial stability of the counterparty is called into question. This became especially clear in the COVID-19 outbreak and the market turbulence that followed in March and April 2020. The sharp increase in volatility in credit spreads and other market risk factors, combined with a general increase in credit spread levels, resulted in large increases in counterparty risk and CVA for a number of banks and credit institutions globally.

In many respects, counterparty risk and CVA are complicated to identify and model. This implies challenges for credit institutions' capacity and ability to frequently value, measure and manage those risks.

FI's investigation focused on five main areas:

1. quantitative risk measurement, valuation and value adjustment,
2. risk mitigation with regards to the risk associated with non-cleared derivatives,
3. credit institutions' internal instructions for taking on new products and markets,
4. stress tests, and
5. internal risk management and governance.

With regard to risk measurement, valuation and value adjustment, the investigation focussed on institutions' quantification of exposure amounts, calculation of CVA and management of valuation uncertainties and correlation risk.

The investigation shows that credit institutions' methods for measuring counterparty risk and CVA differ in terms of how comprehensive and risk sensitive the methods are. Consequently, there are also differences in institutions' access to sophisticated and reliable risk measures. FI's assessment is that the methodological differences between institutions are generally larger than the differences in the positions taken and, hence, the exposure to risk. In light of this, FI makes the assessment that there is a need in many cases for credit institutions to develop their methods further to increase their risk sensitivity and thus their capacity to measure counterparty risk and determine CVA. This is particularly pertinent with respect to modelling of underlying market dynamics and exposures subject to the structure of the derivatives.

Furthermore, FI notes in the investigation that credit institutions face challenges when it comes to continuous identification, internal and external reporting, and following up on correlation risk (aspects of wrong-way-risk), i.e. how counterparty risk and CVA are affected by underlying relationships between exposure and probability of default. These challenges include establishing procedures, methods and IT systems. In many cases, institutions do not conduct identification, modelling or reporting of such relationships.

In terms of risk mitigating measures to limit the risk of non-cleared derivatives, the investigation shows that all institutions have internal procedures for reducing the risk of OTC derivatives that are not cleared by a central counterparty. However, FI would like to see further improvements at the institutions when it comes to increasing the level of detail and clarity of their internal instructions and procedures. This is particularly relevant given that non-financial counterparties enter into CSA agreements with credit institutions only to a limited extent.

The investigation shows that credit institutions' internal instructions for counterparty and CVA risk for new products and markets generally need to be revised so that these instructions are more consistent with the institutions' existing internal processes. FI also expects institutions to conduct reviews of and focus on strengthening existing processes and documentation pertaining to the approval of new products, counterparties and markets so that these are consistent with the institutions' potential to value, measure and follow up risk for all transactions that are entered into.

Based on the results of the investigation, FI generally concludes that there is room for further improvement in terms of the institutions' design and set-up of stress testing, in particular in the development of assumptions, scenarios and risk factors that are included in their stress tests so that these better correspond to the institutions' derivative business. In addition, institutions can improve their descriptions of the underlying assumptions, justifications and reasoning that are used when designing stress tests. There are also challenges for institutions when it comes to estimating the effects and consequences of replacing contracts and the closing costs in the event of counterparty default or significant market stress.

FI also investigated institutions' internal risk management and governance within a number of areas such as risk appetite, limit setting, escalation and reporting. The investigation reveals that, in many cases, institutions do not have an explicitly designed risk appetite for exposure to counterparty risk. However, the investigation also shows that several credit institutions have limits and mandates for their exposures, as well as set maximum levels for contributions to central counterparties' default funds. In addition, the investigation shows that a number of the institutions investigated have implemented trading restrictions for certain groups of counterparties.

FI notes that risk indicators and risk factors are applied differently among credit institutions. Furthermore, FI assesses that, in several cases, there is no consistent management of counterparty risk and CVA on the basis of a comprehensive risk perspective that captures the risk dynamics that accompany derivative positions. For example, FI sees room for improvement in terms of internal risk reporting based on a broader risk perspective that, compared with the current situation, includes additional risk aspects, as well as escalation routines and management of limit violations as a result of changes in underlying market risk factors.

As part of FI's recurrent dialogue with the credit institutions investigated, all institutions have decided to take action on the basis of FI's observations and assessments. They have also established improvement programmes in several parts of their risk measurement and risk management. FI generally agrees with the institutions' planned improvement programmes and internal action plans.



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