Risks Associated with the Services provided

Version 8.1

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Document history

Version	Date	Responsible	Description
0.1	20131111	CRO	Set-up
2.0	20140101	CRO	Adjust for EMIR application
3.0	20150721	Risk Analyst	Alignment with new shareholder structure
4.0	20150804	Risk Analyst	Alignment paragraph 3.1 **MT approval: 20150811**
5.0	20150812	Risk Analyst	Amendment paragraph 3.1 (MT 11082015)
6.0	20160329	Risk Analyst	Changes for migration to ICE Risk Model **MT approval: 20161115**
7.0	20170516	Risk Analyst	Change to reflect sale of 25% stake of AACB in ICNL to ICE
8.0	20171101	CEO/Risk Analyst	Update to new Policies and Rulebook
8.1	20171220	CCO	Risk Committee advice incorporated; reference to article 46 EMIR deleted.

Version control

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Contents

1 Introduction

The purpose of this disclosure document is to inform clearing members and clients of the risks associated with the services provided by ICE Clear Netherlands B.V. (ICNL), a central counterparty (CCP).

REGULATION (EU) No 648/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on OTC derivatives, central counterparties and trade repositories (EMIR), Article 38.2 requires a "CCP to disclose to clearing members and clients the risk associated with the services provided".

2 Risks and control framework of ICNL

2.1 Regulatory framework

ICNL is a CCP licensed under EMIR. ICNL is wholly owned by IntercontinentalExchange Inc. (ICE).

ICNL, as an independent CCP, is regulated by the Netherlands Authority for Financial Markets (Autoriteit Financiële Markten (AFM)) and the Dutch Central Bank (De Nederlandsche Bank (DNB)). DNB and AFM will assess once a year if the ICNL organisation and processes comply with EMIR, Regulation (EU) No 152/2013 and Regulation (EU) No 153/2013.

As a company incorporated in The Netherlands, ICNL is subject to Dutch company law. The ICNL board is committed to high standards of corporate governance, as well as complying with national and international legislation and regulations.

A CCP is described as 'a legal entity that interposes itself between the counterparties to the contracts traded on one or more financial markets, becoming the buyer to every seller and the seller to every buyer'. Thus a CCP takes over the mutual counterparty risks from the market members on the markets that it clears.

Counterparty risks are however not mutualised on the individual market member level, but, in order to get access to a market cleared by ICNL, every individual market member needs to appoint a clearing member. A clearing member guarantees the fulfilment of the obligations of the market member towards the CCP. So if a market member fails, first the clearing member will have to fulfil the obligation and possibly absorb a loss and not the CCP, thus stabilizing the CCP as risk mutualisation system. ICNL has established strict acceptance rules for new clearing members. These are described in the **ICNL Rulebook**.

Of course, the original counterparty risks as such are not absorbed in the sense that they disappear. They are only split up, redistributed and mutualised between the clearing members by means of the CCP.

Please note that as long as no clearing member defaults, a CCP has a net open position of zero. All obligations from short positions are covered by long positions; the net market risk is zero. Please also note that no clearing member receives collateral from a CCP for exposure it might have towards the CCP.

To the extent possible, obligations are also netted per clearing member. This adds to the overall stability. A CCP usually settles its obligations netted per clearing member, and not per individual market member. The clearing member subsequently routes the resulting transactions to its client, the individual market member.

2.2 Credit risk

The credit risk inherent in ICNL's business results from the fact that ICNL guarantees as a CCP the fulfilment of obligations towards the clearing members arising from their (or their customers') securities transactions and open positions. If a clearing member defaults ICNL still has to fulfil the obligations of the defaulted clearing member towards the other clearing members without receiving cash, securities or collateral from the defaulting clearing member. Thus ICNL eventually bears the additional risk of holding the open positions in derivatives and having to buy the deliverables or sell the receivables (cash or securities) in the market. When managing the default of a clearing member, ICNL applies a default waterfall which is described in the ICNL Rulebook and paragraph 3 below. Depending on the size of the default, it could be the case that the default fund contributions of the non-defaulting clearing members are hit. Pursuant to the Rulebook ICNL is, when their default fund contributions are hit, allowed to ask the non-defaulting clearing members for an additional payment to cover losses. This additional payment cannot exceed the amount of the pre-funded default contribution of the clearing member at the time of the event of default. The number of assessments that can be made is 2 per default.

ICNL mitigates credit risk by having established a tight control structure. These controls consist of several elements and procedures, e.g.:

- Strict acceptance and minimum capital requirement criteria for clearing members have been defined in the **ICNL Rulebook**.
- Daily margining as well as intraday margining based on market (price) developments and the ICE Risk Model. The credit risk of ICNL is managed day-to-day by the ICNL Risk Management department which is responsible for the monitoring of exposures against limits.
- ICNL may prescribe position limits to its clearing members. These include but are not limited to limits on the maximum number of open positions in option contracts in the accounts of a clearing member with ICNL (open position limit). A special procedure is dedicated to these position limits. If limits are applied, this will be published in a Circular.
- Buy-in rules laid down in the **ICNL Rulebook** and **Delivery Procedures** enhance the Clearing Members' settlement discipline. The Operations department of ICNL is responsible for monitoring and ensuring the settlement discipline of the Clearing Members.
- Should a Clearing Member become insolvent, ICNL has financial resources which can be tapped in case of a Clearing Member's default. E.g. the so-called Guarantee Fund is established into which all Clearing Members contribute. The functioning and the purpose of the Guarantee Fund and other financial resources are described further below, and in the **ICNL Rulebook**. The ICNL Risk Management department is responsible for monitoring the contributions of the clearing members to the Guarantee fund.

- Should a Clearing Member become insolvent, the **Default Management Framework** must be followed. The default procedure is tested on a regular basis. The results of the test are reported to our regulators.

In case collateral or default contributions are placed with collateral agents / third parties (like for example ABN AMRO Clearing Bank N.V.) a clearing member should make its own assessment of the creditworthiness of the entity in question and operational risks that could arise.

2.3 Market Risk

In order to minimise market risk for ICNL, a stringent set of policies and procedures has been adopted to monitor the clearing members' positions on an intraday and daily basis. Being a guarantor towards its clearing members requires ICNL to have 'state-of-the-art' market risk systems and controls in place.

Thus the functioning of ICNL depends on the soundness and quality of the risk management methodology used to calculate collateral haircuts and margin requirements for open positions in financial instruments of the clearing members. For this purpose, ICNL uses the ICE Risk Model. This Model calculates the market risk of positions of clearing members on an intraday and end-of-day basis. ICE Risk Model calculates the maximum theoretical loss on a portfolio by applying 16 scenarios with shifts in price and volatility. The resulting profit and loss figures are recalculated every 5 minutes. Stock and options prices feed into the system on near-to-real-time basis. The ICE Risk Model methodology is described in detail in the ICE Risk Model Method Description document. In accordance with REGULATION (EU) No 153/2013 article 27 the amount of margin reduction that is applied is not greater than 80% of the difference between the sum of margins for each product calculated on an individual basis and the margin calculated based on a combined estimation of the exposure for the combined portfolio.

Through the ICE Risk Model being a dynamical model, and through its **Margin Testing Policies**, ICNL regularly monitors that the level of margin requirements reflects current market conditions. Should the results of this monitoring result in a revision of parameters of the margin model, ICNL will take into account any potential procyclical effects of such revision. The ICE Risk Model is regularly reviewed following the **Model Validation Policy**.

ICNL has in place **Margin Testing Policies** with guidelines for stress tests, sensitivity testing and reverse stress tests in order to ensure that collateral, Guarantee Fund contributions and other financial resources provide sufficient coverage under the various scenarios considered. If the results of any of these tests reveal insufficient coverage, then ICNL will increase overall coverage of its financial resources to an acceptable level by means of a (additional) margin call.

2.4 Liquidity Risk

For each client account a concentration risk charge and a liquidity risk charge is calculated. These figures are not included into the haircut / initial margin calculation. These measures are monitored separately and if required, Risk Management can call for additional collateral based on the calculated amounts. ICNL assesses its own liquidity position on a daily basis. Several

stress scenarios are applied in order to verify if the financial resources are sufficiently large to cope with changing market circumstances. The above measures add to the stability of the CCP.

2.5 Operational Risk

ICNL assigns a weighting to each operational incident depending on how critical a system is for ICNL's operations, expected financial losses and accessibility and system functionality at the time of the incident. There are procedures in place defining the exact timelines with measures to be taken if an incident occurs. These procedures also outline which stakeholders at which time should be contacted. The regulators receive on a monthly basis an overview of all the incidents that have taken place. And in case of an incident that has been assigned the highest weighting (or the two categories below that when clients are directly impacted), the regulators are informed immediately.

Each incident is analysed in order to determine which follow-up measures are required. The proposed measures are recorded and the progress on implementation is subsequently monitored regularly.

3 Financial Resources of ICNL

In order to cover for possible losses resulting from a clearing member's default a guarantee fund has been established. The contribution that clearing members have to make to the fund is the summation of 1) the base deposit and 2) a guarantee fund add-on. This amount is calculated by taking the maximum, over a period of 60 days, of the daily two largest uncollateralized positions after extreme-but-plausible stress scenarios have been applied and multiplying this amount by 1.1 (intraday factor).

The Guarantee Fund add-on is introduced in order to take into account the outcome of stress circumstances. EMIR requires in article 43 that the guarantee fund and the other financial resources shall at all times enable the CCP to withstand under extreme but plausible market conditions the default of at least the two clearing members to which it has the largest exposures.

The extreme-but-plausible market conditions are incorporated into the calculation by using the ICE Risk Model generated haircut figure corresponding with a market move of 25% across the whole portfolio of equities. Please note that these values are set at the discretion of ICNL and will be reviewed regularly. ICNL Risk Management monitors on a daily basis if the fund is large enough to cover such a situation and, if not, proposes remedial actions.

Next to Guarantee Fund contributions, ICNL's financial resources consists of collateral posted by clearing members, ICNL's skin-in-the-game (see document Amount of dedicated own resources as published on our website) and ICNL's equity. ICNL's equity is used to absorb losses resulting from winding down or restructuring of ICNL, operational risks, legal risks and credit and market risk not covered by collateral. ICNL Risk Management monitors, based on prescribed EMIR and Basel calculation methods, if ICNL's equity is still sufficiently large.

3.1 The Application of the Guarantee Fund and the Financial Resources of ICNL

Should a Clearing Member default, the following financial resources can be used to cover a possible loss from this default (listed in the order of use):

A. The collateral that the Clearing Member has deposited.

B. The contribution of the Clearing Member to the Guarantee Fund;

C. The own dedicated resources of ICNL;

D. The contributions of other Clearing Members to the Guarantee Fund;

E. A second contribution from other Clearing Members to the Guarantee Fund limited to the amount of the respective contribution at the time when the default occurred;

The actual handling of a default is described in the ICNL Rulebook and the Default Management Framework.