HUDSON RIVER TRADING EUROPE LTD.

Pillar 3 Disclosures

2018

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Introduction

This document includes disclosures by Hudson River Trading Europe (“HRTE”, “the Firm”) for the purpose of meeting requirements under Pillar 3 requirements of the EU Capital Requirements Regulation (“CRR”).

HRTE is a €730,000 full scope IFPRU investment firm, authorised and regulated by the UK Financial Conduct Authority (“FCA”). HRTE is not part of a Group for the purposes of CRR disclosure requirements and is regulated by the FCA on a ‘solo’ basis.

The principal activity of HRTE is proprietary trading on a latency sensitive basis. The Firm conducts these activities on a number of cash market and derivatives trading venues.

The prudential framework for IFPRU firms consists of three “Pillars”:

- Pillar 1 sets out the minimum capital requirements for the Firm;

- Pillar 2 deals with the Internal Capital Adequacy Assessment Process (“ICAAP”) and the Supervisory Review and Evaluation Process (“SREP”) through which the Firm and the FCA satisfy themselves regarding the adequacy of capital; and

- Pillar 3 includes disclosure requirements which will allow market participants to assess key pieces of information on a firm's capital resources, risk exposures and risk assessment process.

The Pillar 3 disclosures presented in this document are applicable to the Firm’s regulatory position in 2018. This document has been prepared solely for the purpose of presenting the Pillar 3 disclosures that apply to the Firm and are not subject to omission due to non-applicability, or non-materiality, proprietary or confidentiality of information as per CRR Article 432. The disclosures in this document have been verified internally but have not been audited by the Firm’s auditors.

This document is updated on at least an annual basis.

Risk Exposure Overview

Credit Risk

Credit Risk is the risk to the Firm that one of its clearing firms or banking partners becomes insolvent and that the Firm's capital held at that institution is put at risk.

Credit risk is principally controlled by defining exposure levels to banking partners, and checking the creditworthiness of such banking partners. In order to measure and manage this risk and the capital requirement associated with it, the Firm calculates an amount of capital that must be held outside each institution for risk mitigation purposes.

Counterparty and Settlement Risk

Counterparty & Settlement Risk is the risk faced by the Firm due to the failure of a trading partner to which the Firm has exposure in the form of unsettled transactions, or that a trade entered by the Firm fails to settle and the Firm has to cover the transaction at a later date at an un-favourable price. In order to measure and manage risk from unsettled trades, the Firm monitors risk exposure to each trading counterparty where there is a material chance of this occurring. The financial risk of all unsettled trades against each of these counterparties is calculated and monitored daily.

Concentration and liquidation risk

Concentrated Position Risk is the risk that the Firm's portfolio of financial instruments is not adequately diversified. Liquidation Risk, a related risk, is when a position, irrespective of size relative to the Firm's overall holding, becomes illiquid in the marketplace preventing the Firm from being able liquidate in a timely manner. All positions are monitored in real time by both the trading team and independently by risk.

The Firm also acknowledges that due the distribution of assets at a small number of clearing firms there could be a capital concentration risk. This has been addressed in the credit risk section of this document. As per the IFPRU large exposure rules, should 100% of the Firm's own funds reside at a single counterparty it will inform the FCA.

Operational Risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Given the nature of technology used by the Firm for its trading activities and the large number of markets, countries and asset classes the Firm trades, Operational Risk is a significant consideration within the Firm's business. For Risk Management purposes, Operational Risk has been broken down in to multiple risk types and specific risk factors / scenarios.

Operational risks are summarized in the ORSA. The firm has taken the approach that where each risk type has been identified, a probability and impact score have been assigned to this risk. The Firm's systems controls and procedures that help mitigate this risk are then outlined. The Firm then takes a view on how these systems controls and procedures have potentially reduced the probability of the event occurring and also the impact of that event should it still occur.

These remaining impacts and associated probabilities are then used to define a capital charge that needs to be taken against the remaining risk. The sum of these individual charges will become the Firm's Pillar II op risk charge.

The Firm employs many systems and controls that when all combined help to mitigate the various forms of operational risk. The high level descriptions of specifically which controls and systems help mitigate which risks are contained within the ORSA.

Given that market access-related risk represents a significant operational risk to the Firm, below is a detailed description of some of the controls the Firm has in place to help mitigate this risk. Where relevant they will also be referenced in the ORSA.

The Firm makes use of an extensive pre and post trade proprietary risk system to help mitigate operational and market access risks.

The objective of the risk software is to systematically limit the financial exposure of the Firm that could arise as a result of market access. In particular, the controls and surrounding procedures have been designed in order to:

- Prevent the entry of erroneous orders that exceed appropriate pre-set thresholds in aggregate for the Firm
- Prevent the entry of erroneous orders, by rejecting orders that exceed appropriate price or size parameters, on an order by order basis over a short period of time.
- Ensure all activity is conducted in an orderly manner as not to disrupt markets.

The controls are implemented through the Risk layer which every order passes through prior to being sent to a trading venue.

Market Risk

Market Risk refers to capital loss due to movement in market prices of financial instruments contained within the trading book of the Firm. Specifically, the risks that arise from the fluctuations in values of, or income from, assets or exchange rates.

The Firm uses a variety of metrics both in real time and T+1 to track exposure to market risk. These are monitored in real time by trading, support and risk teams, and the systems are designed to alert in real time both audibly and visually where limits are breached or in specific cases where limits have been approached but not breached.

Regulatory Risk

Due to the diverse and highly regulated nature of its business the Firm faces the risk that its earnings, capital, and reputation may be damaged as a result of a failure to comply with the increasing array of regulatory requirements. Additionally, the Firm faces the risk that a change in the regulations of any given sector, geography or asset class may make the business less profitable or potentially remove the business activity entirely.

The firm considers regulatory risk as a part of its ORSA, and each risk is defined with the mitigation technique described, and an amount for each risk calculated.

Group Risk

Group risk is the risk that the financial position of a firm may be adversely affected by its relationships (financial or non-financial) with other entities in the same group or by risks which may affect the financial position of the whole group.

The Firm does not deem this to represent a significant risk to its business model.

Interest Rate Risk

As per IFPRU 2.2.8 the Firm's assesses that both its trading and non-trading book are not significantly interest rate sensitive. The concept of re-pricing assets and liabilities or the risk arising from hedges as defined in IFPRU 2.2.8 are not relevant for the Firm's non trading book. Products within the trading book that are interest rate sensitive are not held in such sizes where the risk present would pose a significant threat to the capital base of the Firm.

As with all positions the capital required for market risk purposes of interest rate sensitive products is calculated and monitored in real time.

Leverage Risk

The Firm does not transact in any contracts that contain significant levels of leverage. Therefore it does not deem leverage risk to pose a significant threat to is business model.

Securitisation Risk

The Firm does not engage in any forms of securitisation from either its trading or non-trading book and therefore deems securitisation risk as per IFPRU 2.2.8 not to be a risk consideration.

Pension Obligation Risk

The Firm does not offer any defined benefit pension schemes to employees, all pension contributions are paid by the Firm as part of monthly payroll, hence pension risk exposure is considered to be negligible and no additional capital charge is taken

Business Risk

As part of the ICAAP process the Firm has set out to identify all types of risk faced by the Firm as part of its day to day activities. For each identified risk the Firm has outlined how its systems controls and procedures, both within risk and outside of risk help to mitigate these risks. It has then taken a capital charge as appropriate to protect against the remaining residual risk of occurrence that still exists of any given event defined throughout this document and specifically the ORSA.

Given the extensive nature of this review, the Firm does not deem it necessary to take an additional capital charge to cover business risk as per IFPRU 2.2.8 (7).

Residual Risk

The Firm is not making use of any credit risk mitigation techniques that fall under the definition as per IFPRU 2.2.8 (2) and therefore will not take any additional capital charge under this risk category.

Pillar II

Under Pillar II, firms are required to undertake a regular assessment of the amounts, types and allocation of capital that they consider adequate to cover the level and nature of risks to which they are, or might be, exposed. This Internal Capital Adequacy Assessment Process ('"ICAAP") may lead to firms identifying risks that are inadequately covered under Pillar 1 or not covered at all.

HRTE has carried out its internal capital adequacy assessment ensure it holds sufficient internal capital against relevant risk exposures. The Firm's ICAAP forms an integral part of the Firm's risk management processes. The ICAAP is updated at least annually, or when a material change in the business occurs, and is reviewed and approved by HRTE's Board of Directors.

Capital Adequacy

The table below summarises the own fund requirements with respect to the key risk categories mentioned above.

Risk Category		**Capital Requirement**	
Credit Risk		£	945,187
Counterparty & Settlement Risk		£	150,000
Market Risk		£	25,000,000
Operational Risk		£	12,524,379
Buffers		£	6,498,280
Total Capital Requirement		£	45,117,845

Remuneration

HRTE is subject to the IFPRU Remuneration Code. The Firm has identified itself as a Proportionality Level Three Investment Firm and has adopted a proportionate approach to its Remuneration Policy. Where appropriate, the Firm has not included certain provisions of the Remuneration Code in accordance with the applicable FCA Proportionality Guidance.

The Firm operates a risk-focused remuneration policy, which is consistent with and promotes effective risk management and does not expose the Firm to excessive risk.