

Hudson River Trading Europe Ltd

MIFIDPRU Disclosures

30th December 2022

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1. Introduction

This document includes disclosures by Hudson River Trading Europe Ltd. (“HRTE” or the “Firm”) for the purpose of meeting public disclosure requirements specified in MIFIDPRU 8.1.

The Firm is regulated by the Financial Conduct Authority (“FCA”) and is authorised as a MIFIRPRU Investment Firm. The Firm is not part of a Group for the purposes of IFPR disclosure requirements. The principal activity of the Firm is dealing on its own account.

The disclosures presented in this document are applicable to the Firm’s regulatory positions as at 30th December 2022. 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.

2. Risk Management Objectives and Policies

The Board of Directors of HRTE (the “Board”) considers that risk management arrangements of the Company are appropriate and that they provide the Board with assurance that the risk management systems put in place are adequate with regard to the Firm’s profile and strategy.

Risk Management Framework

HRTE’s risk management framework is overseen by its Board and the policies to manage HRTE’s risks are approved by the Board. The responsibility of understanding the risks of the Firm and ensuring that they are appropriately managed is placed with the Board. The Board has a duty to the shareholders of the Firm to ensure that requisite systems, practices and culture are in place to manage all known risks to which the Firm is exposed.

The various elements of the Risk Management Framework as follows:

1. Governance: The Risk Committee chaired by a non-executive director has the overall responsibility for overseeing the risk management of the Firm. The Risk Committee meets quarterly where updates are given from relevant first line staff and MI is presented for tracking and discussion.
2. Strategy: The Board approves the strategic direction of the Firm. It considers input from the shareholders and makes sure that the goals are aligned with the rest of the group.
3. Risk Appetite: The objective of defining a clearly articulated risk appetite statement is to explicitly define the level and nature of risk that the Firm is willing to take in order to pursue the mission on behalf of shareholders, subject to constraints imposed by regulations and regulators.
4. Risk Definitions: The Risk definitions follow the prescribed approach under the IFPR and evaluate the impact of risk on the market, clients and the Firm.
5. Identify: A Risk Register is the starting point for identification of relevant risks to the Firm based on discussions with different stakeholders within the Firm.
6. Assess: Once risk identification is performed, the assessment of materiality of risk is performed.
7. Measure: Risk metrics are developed to measure the risk associated with each of the material risks. The Firm uses a grid which measures the probability of an event and the impact of the risk event and based on it assigns an inherent risk rating.
8. Mitigate: The Firm has developed controls for mitigation of the different types of risk identified in the process. The risk mitigation plans are communicated to the Risk Committee and Executive Directors on a regular basis and any deviations are escalated.
9. Monitor: The Firm has tools that allow for monitoring of different risk areas and flagging and escalating any breaches.

10. Report: The SMFs have a responsibility to report their findings to the Risk Committee and to notify the Risk Committee of any developments.
11. Risk Based Performance: The Firm follows regulatory guidelines in determining remuneration for their employees.
12. Risk Based Capital: The Firm deploys its allocated capital to different strategies that the Firm trades. The Firm deploys allocated capital in line with regulatory requirements for the associated risk.

Risk Appetite

The Firm has a defined Risk Appetite Statement which articulates the level of risk the Firm is prepared to accept in the pursuit of its business strategy, recognizing a range of possible outcomes as business plans are implemented. Risk appetite sets the 'tone from the top' and provides a basis for on-going dialogue between management and the Board with respect to the Firm's current and evolving risk profile, allowing strategic and financial decisions to be made on an informed basis.

There are a number of agreed parameters for Firm performance under varying levels of financial stress to cover areas of capital adequacy, liquidity, profitability, asset quality, as well as market and macro-economic indicators that are computed by the Firm's Chief Risk Officer and reported to both the Risk Committee and the Board.

Risk Identification

The risk identification process generates a comprehensive list of events and sources of risk that may impact the Firm's risk profile and may impede the achievement of overall strategic and business objectives. These events might prevent, degrade, delay and/or enhance the achievement of objectives. This process captures all significant risks and identifies potential threats at the earliest opportunity.

Techniques adopted by the Firm for risk identification include workshops, one-to-one interviews, portfolio analytics and environmental scanning (including industry loss event data). Identification of material risk is an integrated process involving the above-mentioned techniques as well as other business unit level initiatives. All identified risks are communicated to Senior Management for appropriate action.

The risk identification process also extends to the budgeted plans and strategic initiatives for the Firm. High risks that could effect the strategic course of the Firm are identified and mitigation plans are put in place to minimise the impact of realising such risks.

Material Risk Assessment

The Risk Committee has formally recognized certain risks that are continuously present in the Firm and which may materially impact the achievement of the Firm's objectives. Together, these risks account for the majority of the total risk faced by the Firm. These are collectively referred to as principal risk and are as follows:

1. Market Risk
2. Operational Risk
3. Outsourcing Risk
4. Credit Concentration Risk
5. Conduct Risk
6. Cyber Threats

Market Risk

Market Risk arises from the fluctuation in the prices of the underlying securities in HRTE's portfolio leading to mark-to-market losses in the portfolio. The Firm has a VaR measure and a measure similar to expected shortfall using a historical simulation based on 5 years of data. The holding period used for the measurements varies from 2 days to 10 days to provide a range of potential losses. This metric is used for internal monitoring purposes and not for any regulatory capital calculations or reporting purposes. There are similar factor based monitoring tools that the Firm deploys to measure the portfolio risk arising out of market factors.

The VaR measures are easily monitored via internal tools available to the relevant members of staff.

Operational Risk

Operational Risk arises from the loss of functionality of a process or system that results in financial losses for the Firm. There are two kinds of operational risk: (a) one that arises directly from trading systems (trading related operational risk; and (b) another that arises from legal, human and regulatory environments (non-trading related operational risk).

Since HRTE predominantly relies on technology for its trading, the Firm has an established IT Risk Register to capture risks arising out of its trading related process and activities. Additionally, the Firm is subject to an annual RTS6 self-assessment. As part of the RTS6 self-assessment, the Firm annually assesses its compliance with the provisions set out within the relevant regulation. This includes extensive evidencing by the Firm of all the required systems and processes.

All operational risks including those that arise from regulatory conduct are also captured in the Operational Risk Register.

Outsourcing Risk

The Firm has a number of intra-group outsourcing arrangements which are covered by the Outsourcing Framework & Policy. These arrangements are also described in the Outsourcing Register. The Firm has established Key Performance Indicators (KPIs) for each of the outsourcing arrangements. The KPIs are monitored by the Board on a quarterly basis. The Firm performs due diligence and a risk assessment prior to entering into new outsourcing arrangements or materially changing existing arrangements.

Credit Concentration Risk

The Firm doesn't conduct any OTC trading on a proprietary basis with counterparties, hence there is no significant counterparty exposure in the trading side of business. The Firm stores its liquid assets (cash) with its banking partners. Some of the cash is invested in a 'Long Portfolio' of securities which is held as part of the banking book. The Firm also has a loan facility where it provides a loan to its parent in order to better manage any excess cash amounts. All these facilities create non-trading book concentration and credit risk for the Firm, which are dealt with via additional own funds requirements.

Conduct Risk

The Firm has created a Conduct Risk Register which is part of the implementation of its conduct risk policy. Conduct risks are monitored by the Board on a quarterly basis.

Cyber Threats

The Firm has a NIST 800 framework that forms the building blocks of Cybersecurity for the Firm. The Firm performs vulnerability scans, penetration testing and other testing to protect the Firm from both internal and external threats. A discussion of Cybersecurity is a standing item on agenda for each meeting of the Board.

3. Governance Arrangements

The Board of Directors

Members of the Board are selected on the basis of merit, experience and, where applicable, actual assigned responsibilities within the Firm, taking into account judgement, character, expertise, skills and knowledge useful to the oversight of the Firms' business.

The Firm also takes into consideration the balance and interplay of knowledge, skills, diversity of viewpoints and experience of the Board and the Firm's Senior Management as a whole when looking to make appointments. This helps build effective, collegial and functioning governance arrangements which can be responsive to the needs of the Firm.

The Board is comprised of two Executive Directors and two Non-Executive Directors. The Executive Directors are appointed based on their skills, qualifications and experience whilst ensuring that they have appropriate time to devote to their responsibilities as a Board member. In assessing time commitments the commitments for other professional roles are considered. As at 31 December 2022, the Directors held the following directorship appointments:

Director	Directorship Type	Number of Directorships
Mr J. Carroll	Non-Executive	3
Mr A. Nunes	Executive	1
Mr S. Johnston	Chair	1
Mr S. Hegarty	Executive	1

Senior Management Team

The Senior Management Team has two individuals who sit on the Board.

Subcommittees of the Board

The Board has delegated responsibility for supervision of the Risk function of the Company to a sub-committee of the Board, who report to the Board at periodic meetings.

The Risk Committee is chaired by Mr. S. Johnston. The Committee has responsibility for the oversight and reporting to the Board on the current risk exposures of the Firm along future risk strategy. The Risk Committee takes into account the current and prospective macro-economic environment in preparing monitoring the Company's overall risk appetite and tolerance.

The Board formed a Nomination Committee who evaluates key executive hires and also sets procedures for promoting diversity in the management policy. The Nomination Committee will determine any diversity related objectives and targets.

4. Own Funds

The below information is set out as per the specification set out in MIFIDPRU 8.4.1 R.

Composition of regulatory own funds:

Composition of regulatory own funds			
	ITEM	Amount (GBP thousands)	Source based on reference numbers/ letters of the balance sheet in the audited financial statements
1	OWN FUNDS	283,387	
2	TIER 1 CAPITAL	283,387	
3	COMMON EQUITY TIER 1 CAPITAL	283,387	
4	Fully paid up capital instruments	227,672	Shareholders' Equity - Issued Capital
5	Share premium	2,246	
6	Retained earnings	53,886	Shareholders' Equity - Retained Earnings (excluding unaudited FY2022 profits)
7	Accumulated other comprehensive income		
8	Other reserves		
9	Adjustments to CET1 due to prudential filters	418	
10	Other funds		
11	(-)TOTAL DEDUCTIONS FROM COMMON EQUITY TIER 1		
19	CET1: Other capital elements, deductions and adjustments		
20	ADDITIONAL TIER 1 CAPITAL		
21	Fully paid up, directly issued capital instruments		
22	Share premium		
23	(-) TOTAL DEDUCTIONS FROM ADDITIONAL TIER 1		
24	Additional Tier 1: Other capital elements, deductions and adjustments		
25	TIER 2 CAPITAL		
26	Fully paid up, directly issued capital instruments		
27	Share premium		
28	(-) TOTAL DEDUCTIONS FROM TIER 2		
29	Tier 2: Other capital elements, deductions and adjustments		

Own Funds: reconciliation of regulatory own funds to balance sheet and the audited financial statements.

Free text. A non-exhaustive list of example features is included below.		
1	Issuer	Hudson River Trading Europe Ltd
2	Unique identifier (e.g. CUSIP, ISIN or Bloomberg identifier for private placement)	N/A
3	Public or private placement	Private
4	Governing law(s) of the instrument	England & Wales
5	Instrument type (types to be specified by each jurisdiction)	Ordinary shares issued fully paid
6	Amount recognised in regulatory capital (Currency in million, as of most recent reporting date)	229.92
7	Nominal amount of instrument	£1
8	Issue price	£1
9	Redemption price	N/A
10	Accounting classification	Ordinary Shares
11	Original date of issuance	18th March 2009
12	Perpetual or dated	Perpetual
13	Original maturity date	N/A
14	Issuer call subject to prior supervisory approval	N/A
15	Optional call date, contingent call dates and redemption amount	N/A
16	Subsequent call dates, if applicable	N/A
	<i>Coupons/dividends</i>	N/A

1	Issued Capital	227,672	OF1 Box 004
2	Share premium	2,246	OF1 Box 005
3	Translation reserve	0	
4	Retained earnings	96,580	OF1 Box 006
xxx	Total Shareholders' equity	326,498	

Own funds: main features of own instruments issued by the Firm:

Own funds: reconciliation of regulatory own funds to balance sheet in the audited financial statements			
Flexible template. rows to be reported in line with the balance sheet included in the audited financial statements of the investment firm. Columns should be kept fixed, unless the investment firm has the same accounting and regulatory scope of consolidation, in which case the volumes have to be entered in column (a) only.			
Figures should be given in GBP thousands unless noted otherwise.			
	a	b	c
	Balance sheet as in published/audited financial statements	Under regulatory scope of consolidation	Cross reference to template OF1
	As at period end	As at period end	
Assets - Breakdown by asset classes according to the balance sheet in the audited financial statements			
1	Property, plant and equipment	6,392	
2	Other non-current assets	11,617	
3	Deferred tax assets	2,550	
4	Current tax receivable	143	
5	Trade and other receivable	79,920	
6	Note receivable	173,538	
7	Financial assets at fair value through profit or loss	247,915	
8	Cash and cash equivalents	24,723	
xxx	Total Assets	546,797	
Liabilities - Breakdown by liability classes according to the balance sheet in the audited financial statements			
1	Other financial liabilities	22,871	
2	Trade and other payables	27,771	
3	Financial liabilities at fair value through profit or loss	169,657	
xxx	Total Liabilities	220,299	

17	Fixed or floating dividend/coupon	N/A
18	Coupon rate and any related index	N/A
19	Existence of a dividend stopper	N/A
20	Fully discretionary, partially discretionary or mandatory (in terms of timing)	N/A
21	Fully discretionary, partially discretionary or mandatory (in terms of amount)	N/A
22	Existence of step up or other incentive to redeem	N/A
23	Noncumulative or cumulative	N/A
24	Convertible or non-convertible	N/A
25	If convertible, conversion trigger(s)	N/A
26	If convertible, fully or partially	N/A
27	If convertible, conversion rate	N/A
28	If convertible, mandatory or optional conversion	N/A
29	If convertible, specify instrument type convertible into	N/A
30	If convertible, specify issuer of instrument it converts into	N/A
31	Write-down features	N/A
32	If write-down, write-down trigger(s)	N/A
33	If write-down, full or partial	N/A
34	If write-down, permanent or temporary	N/A
35	If temporary write-down, description of write-up mechanism	N/A
36	Non-compliant transitioned features	N/A
37	If yes, specify non-compliant features	N/A
38	Link to the full term and conditions of the instrument (signposting)	N/A

5. Own funds Requirements

In accordance with MIFIDPRU 8.5, as at December 30th 2022, the Firm held the following own funds requirements.

Assessment Type	Risk Category	Capital requirement
K-factor	k-AUM + k-CMH + k-ASA	0
	k-COH + kDTF	£3,219,148
	k-NPR + k-CMG + k-TCD + k-CON	£33,409,167
Fixed overhead requirement		£5,929,773

The Firm takes a multi-layered approach to assessing the adequacy of its own funds with regard to the overall financial adequacy rule. Firstly in the derivation of the own funds requirements the Firm takes a holistic view of the risks faced as part of its business model and assesses whether the k-Factor requirements are sufficient to cover those risks. Where gaps are identified, the Firm then takes an additional own funds requirement over and above the k factor requirement.

Once the total own funds threshold requirement has been decided, the Firm performs a series of stress tests on the business model and examines how these tests affect the capital and liquidity resources of the Firm. These tests are projected out over a 3 year period in order to evaluate the capability of the business to withstand the stress scenario over an extended period of time.

6. Remuneration policy and Practices

HRTE takes a risk-focused approach to remuneration which is consistent with and promotes effective risk management and helps ensure HRTE is not exposed to excessive risk. HRTE's remuneration practices are gender neutral and HRTE applies the principle of equal pay for male and female workers for equal work or work of equal value. The objectives of HRTE's financial incentives are to award individuals based on individual, team and company performance.

The Remuneration Committee consists of two non-executive board members and its role is to review the remuneration policy and design overall remuneration practices for HRTE. HRTE consulted with external legal advisors in the development of its remuneration policy.

All staff are eligible to receive variable remuneration. HRTE has remuneration policies and practices which promote sound and effective risk management and which are in line with the business strategy, objectives and long term strategy of HRTE. HRTE also ensures that individuals in control functions are independent from the business units they oversee, have appropriate authority and are remunerated in accordance with the achievement of objectives linked to their functions and in a way that does not promote excessive risk taking. HRTE ensures that the total variable remuneration awarded does not limit HRTE's ability to ensure a sound capital base.

For Material Risk Takers, HRTE must ensure that the assessment of performance is set in a multi-year framework in order to ensure that the assessment of performance is based on longer-term performance and that the payment of performance based remuneration is spread over a period that takes account of the business cycle of HRTE and its business risks. When assessing individual performance, financial as well as non-financial criteria are taken into account.

HRTE's objective is to be a conscientious market participant that complies with all applicable regulations. HRTE desires to grow its business while meeting this objective. HRTE's performance objectives for individual business units are set out in HRTE's remuneration policy and individual performance objectives are discussed with each employee quarterly.

HRTE has identified staff as Material Risk Takers in accordance with applicable regulations. HRTE uses the criteria set forth in SYSC 19G.5.3R to identify Material Risk Takers.

HRTE's compensation structure consists of fixed and variable compensation. "Remuneration" means any form of remuneration, including salaries, stipends, discretionary pension benefits and benefits of any kind. This policy applies to all aspects of remuneration including salaries, bonuses, long-term incentive plans, options, hiring bonuses, severance packages and pension arrangements. Fixed remuneration includes non-discretionary cash payments and benefits including health and dental coverage, pension and stipends. Variable remuneration consists of variable awards of cash and share linked instruments.

Compensation for HRTE's employees is decided by the applicable manager and may be overseen by the Remuneration Committee where applicable. Fixed basic remuneration is determined by various factors including level of professional experience and organisational responsibility within HRTE and is non-discretionary, pre-determined, non-revocable and not dependent on performance.

Additionally, for Material Risk Takers, at minimum, 50% of variable remuneration will be paid in Phantom Equity, which shall be subject to an appropriate retention policy designed to align the incentives of the individual with the longer-term interests of HRTE, its clients and its creditors, as applicable.

For Material Risk Takers, HRTE defers a minimum of 40% of variable remuneration over at minimum three (3) years. HRTE will consider factors such as the amount of variable remuneration to be deferred, the length of the deferral period and the speed of vesting. HRTE will consider its business cycle; the nature of its business and its risk profile; the activities and responsibilities of the staff member and how these may impact the risk profile of HRTE; whether the deferred variable remuneration is paid out in instruments or cash; the amount of variable remuneration; and the ratio of variable to fixed remuneration.

For Material Risk Takers, the first deferred portion of variable remuneration vests no earlier than 12 months after the start of the deferral period and all vesting of deferred variable remuneration will be pro rata over at minimum three years. The retention period is currently thirty days after vesting. The rationale for these policies is to have time to review the activities and responsibilities of the staff member and how they may impact HRTE. By deferring at minimum 40% of variable remuneration, we believe it discourages excessive risk taking. The vesting schedule is deemed sufficient based on the risks a Material Risk Taker can expose HRTE to and the retention period is set to ensure there is sufficient time to review whether a malus or clawback event has occurred.

Where the financial performance of HRTE is subdued or negative, total variable remuneration should generally be considerably contracted, taking into account both current remuneration and reductions in payouts of amounts previously earned or awarded. In certain circumstances HRTE applies malus or clawbacks paid variable remuneration. The situations of when HRTE applies malus and clawback are detailed in HRTE's remuneration policy.

HRTE ensures that guaranteed variable remuneration is not part of prospective remuneration plans for Material Risk Takers unless: (a) it occurs in the context of new Material Risk Takers; (b) HRTE has a strong capital base; and (d) it is limited to the first year of service.

Severance pay is at HRTE's absolute discretion. Any payments related to early termination of contracts will reflect performance achieved over time and will be designed in a way which does not reward failure or misconduct. Severance paid may be paid to Material Risk Takers subject to any maximum or additional criteria set forth by the Remuneration Committee or the Board.

Quantitative remuneration figures are annexed in Annex 1 and available upon request.

7. Investment Policy

Disclosures of the Investment Policy in relation to MIFIDPRU 8.7 are not relevant for HRTE as the Firm did not hold any position in shares that exceeded the 5% threshold of the available voting rights (either directly or indirectly).

ANNEX 1