The Order Execution Quality Landscape:

Analysis of CFD Brokers in the European Union

The Second Markets in Financial Instruments Directive of the European Commission (2014) requires financial institutions to take all the sufficient steps to execute an order to obtain the best possible result for a client. The directive mandates compulsory reporting of **order execution quality**, RTS 27 and RTS 28, to improve price transparency, essential for efficient price discovery. Despite these requirements, there is no central database for order execution reporting in the European Union as of today. Therefore, consumers are not able to conveniently assess these discrepancies. The investors, namely non-sophisticated retail investors, are losing out on the chance to trade on the best terms.

Apart from everchanging market dynamics, brokers trade different assets, trade volumes, number of transactions and user accounts. As a result, the order execution quality differs among brokers in terms of speed and spreads. The objective of this project is to analyse the order execution quality of online CFD brokers operating in Europe. The client organisation provides a comprehensive ranking and review of brokers around the world. The client organisation indicated an interest in analysing the retail order execution landscape using RTS 27 MiFID II reporting. The client organisation has shortlisted 14 brokers and 7 assets. The results of this project could be used to **enrich the existing database and ranking**.

Contracts-for-Difference (CFDs) are derivative assets that allow traders to speculate on future price movements without owning the underlying securities. CFD is a contract between two parties to pay the difference between the asset's opening price and closing price. Unlike equity and bond trading, the contract is usually closed directly with the **broker** and thus, the terms are in the discretion of the issuing entity. CFDs do not have a fixed maturity date for settling the gains or losses and can be leveraged subject to margin. This allows the investor ("punters") to commit a minimum amount of money upfront. The investor selects the leverage (Pelster, 2024). If the price moves against the purchased position, the retail investors pay the provider. The investors may lose an unlimited amount of money, similar to shorting. The effective losses are composed of open-close price differences, spreads and swaps (Peshev, 2021). The punters are usually high-frequency traders as the median holding period is only two days and on average, they hold only three instruments in their portfolio at the time indicating low diversification

(Pelster, 2024). One of the roles of CFDs is market price discovery and market sentiment signalling (Lepone and Yang, 2013).

CFDs have gained popularity in the past decade. CFDs are the most common derivatives in the EU accounting for 57% of all derivative contracts (ESMA, 2018). In 2010, CFDs were estimated to account for 35% of the value of the London Stock Exchange in the United Kingdom (Arnold et al., 2022). Trading Contract-for-Difference directly is not permitted for US citizens (SEC vs Pool Ltd, 2018). The SEC considers CFDs as over-the-counter financial instruments; not compliant with US securities laws. In the EU, CFDs have been restricted namely in terms of reducing permissible leverage and protecting retail investors from extortionate losses (Pelster, 2024). The key reason is that ESMA (2018) estimates **74-89% of retail investors lose money**; approximately 80% according to FCA (2022).

1.1 Methods

In this project, a data pipeline has been built downloading and cleaning RTS 27 reporting data from brokers' websites, measuring the order execution quality using spreads and outlining general patterns. The statistical methods used include descriptive statistics, t-test, f-test, and regression models whilst testing for heteroskedasticity, multicollinearity and stationarity. The key learning point was using regular expressions for merging and cleaning semi-structured data. For this reason, each broker required a separate data pipeline hindering reproducibility.

Order execution quality can be measured using numerous metrics. In this project, the Best Bid and Ask Spreads and Average Effective Spreads were selected as dependent variables representing order execution quality and the cost charged by the provider (Dyhrberg et al., 2022).

Best Bid and Ask Spread = Best Ask – Best Bid

$$Effective \ spread = Trade \ size * (Trade \ price - (\frac{Bid + Ask}{2}))$$

* Buy scenario

Previous studies conducted in the United States found that the more liquidity traded by the broker, the lower spreads can be achieved due to more efficient order matching and more information available to the parties (Battalio et al., 2021). In this project, the liquidity, price, and brokers' characteristics, such as the number of users, minimum deposits and number of instruments traded, were used as independent variables.

1.2 Originality

Most of the previous studies assessing order execution quality focus on the US market and, specifically, market makers. However, US citizens are not permitted to trade the CFDs. In the EU, most of the available CFD trading literature discusses the policy context (Peridis and Héritier, 2021), fraud (Barnes, 2019) and gambling (Newall and Weis-Cohen, 2022) instead of comparing the market players or overall ecosystem analysis. Only a handful of studies discuss the order execution quality of CFD brokers focusing on retail investors (Peschev, 2021). The client organisation has analysed order execution quality in the past analysing different datasets. This is the first time that RTS 27 has been assessed in more detail by the firm. This Capstone project serves as a proof of concept for future research.

1.3 Findings

According to the preliminary results and previous studies, retail investors shall opt to invest with larger players to achieve better order execution quality. This is due to a higher number of users and liquidity traded leading to more information and hedging strategies available to the broker. These metrics are negatively correlated with spreads. For CFDs, one of the components of the spreads is the transaction cost and commission for the broker. The lower spread is considered favourable for the investor. The second finding is that black swan events tend to increase the spreads because of volatility in price and liquidity, compensating for the risk. The results are not conclusive due to noisy data. In future research, this could be improved by using benchmarks to standardize and clean the data and adding more brokers to smooth errors.

1.4 Limitations

During the project, the ESMA published a public statement number ESMA35-335435667-5871 on the 13th of February 2024 regarding deprioritisation of actions on the obligation to publish RTS 28 following previous deprioritisation of RTS 27 reporting. The reason to deprioritise reporting has been that the reports were "hardly read" and hard to compare. Based on the data exploration in this project, the RTS 27 may be valuable in capturing spreads. The key issues are constant updates and a lack of structure specifications. According to ESMA (2024), the next step is for each member state to transpose the order execution reporting into national law. Despite its merits, the previous reporting does not allow non-sophisticated investors to make more informed decisions. This data will be meaningless in the future if CFD brokers operating globally will have to adjust to the transposed reporting requirements of each member state.

1.5 Bibliography

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