1. Title:
Volatility, dark trading and market quality: evidence from the 2020 COVID-19 pandemic-driven market volatility


2. Authors:
Gbenga Ibikunle, University of Edinburgh, (gbenga.ibikunle@ed.ac.uk)
Khaladdin Rzayev, London School of Economics and Political Science (k.rzayev@lse.ac.uk)

3. Abstract:
We exploit the exogenous shock of the COVID-19 pandemic on financial markets and regulatory restrictions on dark trading to investigate how volatility drives dark market share and trader venue selection. We find that, consistent with theory, excessive volatility on lit exchanges is linked with an economically significant loss of market share by dark pools to lit exchanges. The dynamics of market share loss are driven by the cross-migration of informed and uninformed traders between lit and dark venues. Informed traders migrate from lit venues to dark venues when lit venues’ volatility becomes excessive, while uninformed traders, wary of the presence of informed traders in dark pools, shift their trading to lit exchanges rather than delay trading in a volatile market environment. The market quality implications of the cross-migration are mixed: while it improves liquidity on the lit exchange, it results in a loss of informational efficiency.

4. Data description:
We obtain intraday data from the Thomson Reuters Tick History (TRTH) v2 database for 110 stocks listed in European financial markets. We collect data from the main venues where our selected stocks are traded: 1) the main market where stocks are listed (for example, London Stock Exchange (LSE) for the UK stocks, Xetra for the German stocks, etc.); 2) Cboe Europe, which hosts the most liquid pan-European limit order books and dark pools, including BXE and CXE; and 3) Turquoise, hosting one of the most liquid dark pools in Europe, Turquoise Plato (formerly Turquoise Midpoint Dark). According to market data from Cboe Europe, the venues included in our dataset account for a daily minimum of 93% of the currency trading value for the stocks in our sample; hence, our data is representative in the cases of the stocks in the sample. The dataset contains standard transaction-level variables such as date, exchange time, transaction price, volume, bid price, ask price, bid size and ask size.

5. JEL codes
G12, G14, G15, G18

6. Keywords:
COVID-19, dark pools, volatility, liquidity, informational efficiency, market quality.