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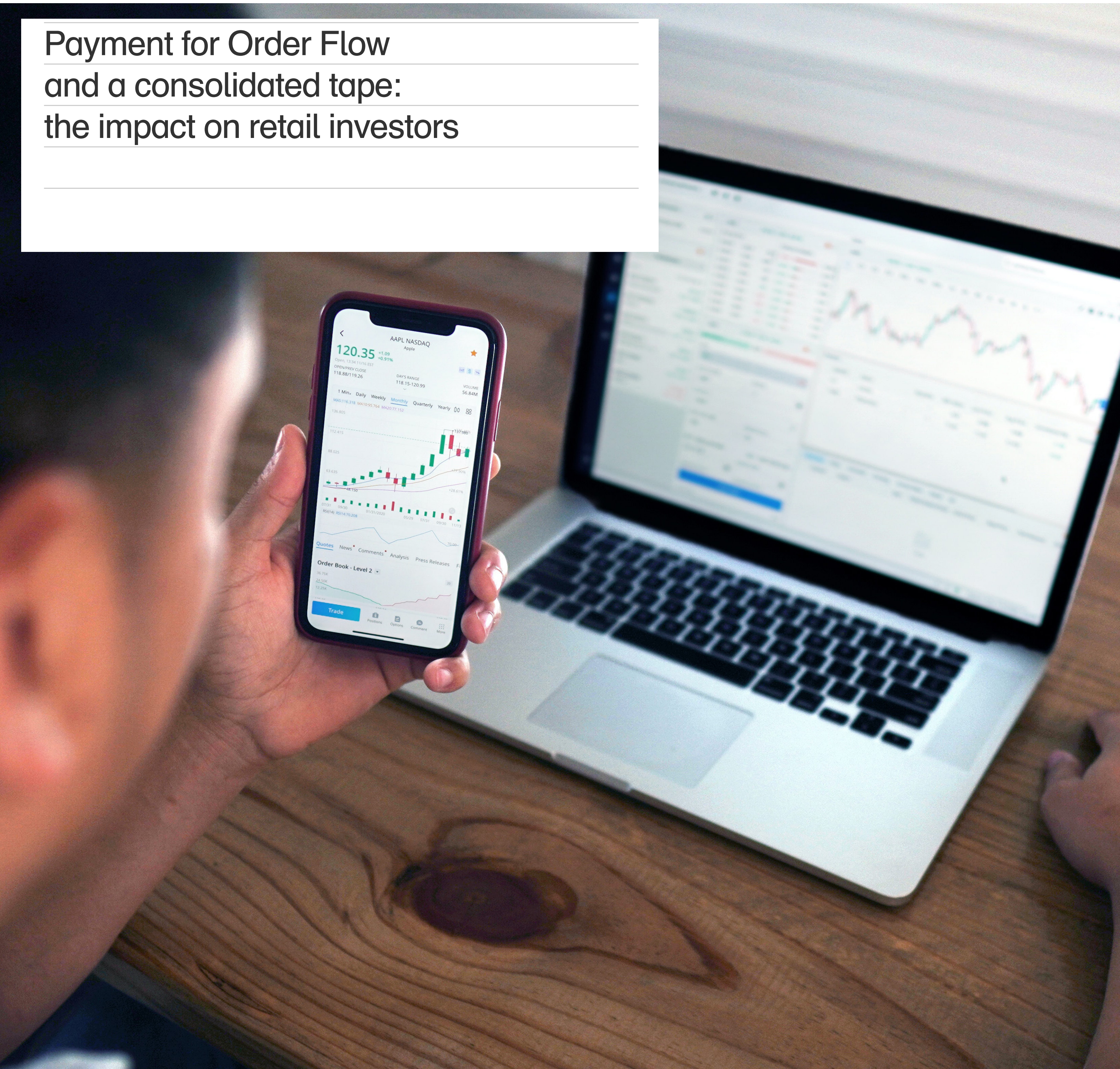
Payment for Order Flow and a consolidated tape: the impact on retail investors



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The European Commission is proposing to introduce a consolidated tape with data on fixed income and equity transactions to help retail (and institutional) investors achieve 'best execution'. It is also proposing to ban the practice of Payment for Order Flow (PFOF). What is PFOF, and what are the pros and cons of a consolidated tape for retail investors from a regulatory and economics perspective?

Some financial regulatory authorities in the EU have recently expressed concerns about the PFOF that retail brokers may receive from some trading venues. This follows the GameStop debacle in the USA in late 2020, along with the subsequent investigation by the US Securities and Exchange Commission (SEC), which highlighted the potential negative effects of PFOF.[1]

The European Securities and Markets Authority (ESMA) concluded in July 2021 that, in most cases, PFOF is not aligned with best-execution requirements under MiFID II,[2] and on 25 November 2021 the European Commission published a proposal to ban brokers from receiving PFOF.[3] PFOF is already banned in some financial centres.[4]

The Commission is also proposing to introduce a consolidated tape (a database with prices and volume data of fixed income and equities transactions in the EU) to assist retail investors in monitoring their brokers and achieving best execution.[5] While this proposal focuses on reporting real-time post-trade data, it also indicates that the Commission may consider expanding the tape at a later stage to include pre-trade data (on orders in the order book).

This article reviews the empirical evidence and examines PFOF and the pros and cons of a consolidated tape (with pre- and/or post-trade data) for retail investors from an economics and regulatory perspective.[6]

PFOF and internalisation of retail flow

PFOF is the practice whereby stockbrokers receive payments from trading venues (or wholesale brokers or market makers) to direct their client (mostly retail) order flow to those venues. Part of the PFOF may be used by retail brokers to offer their customers lower (or zero) trade commissions or additional (free) services.

Venues that offer PFOF typically focus on 'internalising' or segmenting retail flow; however, there are also venues that internalise or segment retail flow without offering PFOF. Internalisation (or segmentation) refers to the practice whereby brokers match trades through their own internal books against other clients' trades or on specific trading venues that focus on matching retail flow against orders from market makers.

Why would a retail broker use a venue that segments retail flow? Retail order flow is typically uninformed[7] and therefore less risky for market makers than trades from informed investors.[8] Retail trades can therefore attract better execution prices from market makers in venues that segment or internalise retail flow than in CLOBs (such as those operated by traditional exchanges) used by many types of trader and investor. As market makers on an anonymous CLOB (e.g. an exchange) cannot perfectly distinguish between types of trader, they will assess the overall risk of trading with informed traders. The higher the risk that they perceive, the less willing they will be to provide liquidity, or the higher the cost will be at which they will be willing to provide liquidity.

The regulatory concern about PFOF is that it may create a conflict of interest for the broker: rather than sending the orders to the exchange or venue that offers the best execution price for retail investors, the broker will have an incentive to favour venues that offer substantial PFOF but potentially worse execution prices, and the PFOF may not be 'passed on' (fully) to the retail investors (for example, in the form of lower explicit trading commissions). This means that there is a risk that PFOF will result in a worse deal for retail investors.

What are the outcomes for retail investors?

Recent studies have attempted to assess the impact of PFOF. A study by the Netherlands Authority for the Financial Markets (AFM) analyses detailed transaction data and shows that retail investors using trading venues that offer PFOF receive a worse price than could be obtained in the CLOB of Euronext.[9] Another study by the Spanish regulator, Comisión Nacional del Mercado de Valores (CNMV), finds similar results when analysing execution prices for Spanish shares.[10]

We note that the AFM and CNMV studies focus on the implicit costs[11] and do not take into account the potential reduction in explicit trading fees and the extent to which PFOFs may result in lower (or zero) commissions charged by the retail broker to their customers. Adding these elements would further enrich our understanding of the impact of PFOF on retail investors.

A recent study by the German supervisory authority, BaFin, does take into account explicit trading fees charged by venues (in addition to the implicit costs) but, similarly to the Dutch and Spanish studies, does not include the retail brokers' commissions charged to retail investors.[12]

Interestingly, BaFin's findings are different from those of the studies by the Dutch and Spanish authorities: it finds that German retail investors receive better deals (for small orders) when trading German shares on PFOF venues than when trading them on other venues such as Xetra, CBOE and Turquoise.[13]

However, the BaFin study does not give an overall assessment of whether PFOF is detrimental or beneficial to retail investors; further analysis would be required to determine this. As discussed above, PFOF venues internalise or segment retail flow and, since retail flow is uninformed, these venues may deliver better execution prices for retail investors than venues that do not segment trade flow (such as Xetra, CBOE and Turquoise in the case of German stocks); this is indeed what the BaFin analysis demonstrates. However, the question from a regulatory perspective is whether PFOF venues that internalise retail flow give retail investors a better or worse overall outcome than *non*-PFOF venues that *internalise retail flow* (i.e. excluding venues such as Xetra, CBOE and Turquoise that do not segment retail flow). In other words, can a good outcome be achieved for retail investors without PFOF to the retail broker, and therefore without creating a conflict of interest for retail brokers?

Banning PFOF

It is difficult for retail investors to assess whether their retail broker achieves best execution, and whether their retail broker's decision about which venue to use is distorted by PFOFs. It is also unlikely that, by providing retail investors with a consolidated tape, they would be able to work out which retail brokers do not achieve best execution (i.e. whether brokers favour venues that offer attractive PFOF but poor deals in terms of execution prices). Assessing best execution is highly complex and requires skills that are unlikely to be available to many retail investors.

Therefore, to avoid a conflict of interest for retail brokers, banning PFOF, as proposed by the Commission, could be a logical step to prevent harm to retail investors. This would mean that retail brokers recover their costs through commissions charged to their customers, and that their decisions about which trading venue to use would not be distorted by PFOF.

PFOF incentivises retail brokers to internalise or segment retail flow. We note that internalised retail trades might not contribute to the price formation process, in particular if there is no pre-trade transparency requirement for internalised trades. In addition, prices of internalised orders are often based on prices in the lit market (comprising exchanges and other trading platforms where orders are displayed), and internalised orders therefore effectively free-ride on the price formation process in the lit market. Thus, the internalisation of the retail order flow may worsen the price formation process in the lit market.

Consolidated tape with post- and pre-trade data?

A consolidated tape (with post-trade data) is unlikely to assist retail investors in achieving best execution, even after banning PFOF. Retail investors might not fully understand the concept of the implicit cost of trading and, if they do understand it, benchmarking these costs, even if they have access to the relevant data, is far from straightforward.

To assist retail investors, in addition to banning PFOF, regulatory and supervisory authorities may need to assess the execution practices of retail brokers in more detail and monitor their performance over time.[14]

In the case of *pre*-trade data, there is, in fact, a risk that having access to this data will be detrimental to retail investors. One of the concerns is that a real-time pre-trade consolidated tape would lead to the emergence of a distorted de facto 'reference price' benchmark. This de facto reference price may then be used as an execution benchmark and could confuse less sophisticated investors (i.e. retail investors). Concretely, this means that certain market participants will commit to matching the reference price for retail investors while internalising retail flows and exploiting arbitrage opportunities.

Using such a benchmark suffers from two limitations. First, the benchmark is attached to a place, which means that investors located far from the venue advertising the benchmark will suffer from latency issues. In turn, this implies that two investors may see two different best prices. Brokers may then exploit such misperception by providing a false sense of price improvement. In particular, small investors may think they have been provided with a price improvement relative to the benchmark that they can see, when in reality they have had access to stale information. Second, the benchmark does not specify the counterparty to the order. In particular, if a benchmark is based on a transaction with an institutional investor, it will not be useful for retail investors (retail and institutional investors do not carry the same risk and do not require the same level of market depth[15]). This can then be exploited by brokers who may offer retail and small investors what appears to be a price improvement, but which is based on a benchmark from a riskier order flow rather than the relevant benchmark for the retail flow.

Concluding remarks

To avoid a conflict of interest for retail brokers, banning PFOF could be a logical step to prevent harm to retail investors.

However, a consolidated tape with post-trade data, as proposed by the European Commission, is unlikely to assist retail investors in achieving best execution and preventing poor outcomes. Moreover, giving retail investors access to pre-trade data could result in a risk of detriment to retail investors.

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[1] Securities and Exchange Commission (2021), 'Staff Report on Equity and Options Market Structure Conditions in Early 2021', 14 October.

[2] See European Securities and Markets Authority (2021), 'ESMA warns firms and investors about risks arising from payment for order flow and from certain practices by "zero-commission brokers"', public statement, 13 July, ESMA35-43-2749, https://bit.ly/3N1pYij, accessed 16 June 2022.

[3] See European Commission (2021), 'Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) No 600/2014 as regards enhancing market data transparency, removing obstacles to the emergence of a consolidated tape, optimising the trading obligations and prohibiting receiving payments for forwarding client orders', COM(2021) 727 final, 25 November, https://bit.ly/3MUkwO0, accessed 16 June 2022.

[4] For example in the UK and in the Netherlands: see International Organization of Securities Commissions (2016), 'Report on Order Routing Incentives', December, p. 9; and Financial Services Authority (2012), 'Guidance on the practice of Payment for Order Flow', May.

[5] European Commission (2021), 'Proposal for a Regulation of the European Parliament and of the Council', 25 November, p. 5.

[6] Oxera was commissioned by Deutsche Börse, Euronext and Nasdaq to conduct this review.

[7] There is some debate in the academic literature regarding the nature of retail investors. We note that, in practice, retail investors can be a diverse group, and differ in terms of their knowledge and experience, level of information, and frequency, value and volume of trading. Certain types of sophisticated retail investor may exhibit trading behaviours that are similar to those of fundamental investors. As a result, it can be difficult to define precisely the characteristics that distinguish retail orders from institutional orders. Foucault et al. (2011) finds that retail trading activity increases the volatility of stock returns, which the authors interpret as retail investors behaving as 'noise traders'. Conversely, Kelley and Tetlock (2013, 2017) find evidence that some retail trading activity is 'informed'. See Foucault, T., Sraer, D. and Thesmar, D.J. (2011), 'Individual investors and volatility', *Journal of Finance*, **66**:1, pp. 1369–406; Kelley, E.K. and Tetlock, P.C. (2013), 'How wise are crowds? Insights from retail orders and stock returns', *Journal of Finance*, **68**:3, pp. 1229–65; Kelley, E.K. and Tetlock, P.C. (2017), 'Retail short selling and stock prices', *Review of Financial Studies*, **30**:3, pp. 801–34.

[8] If a trader is informed, they will buy from the liquidity provider when they believe the value of the asset is higher than the price quoted by the liquidity providers. Conversely, informed traders will sell to the liquidity provider when the value is lower than the quoted price. This means that the informed trader profits (on average) at the expense of the liquidity provider. As liquidity providers on an anonymous central limit order book (CLOB) cannot perfectly distinguish between types of trader, they will assess the overall risk of trading with informed traders. The higher the risk they perceive, the less willing they will be to provide liquidity, or the higher the cost will be at which they will be willing to provide liquidity.

[9] Authority for the Financial Markets (2022), 'Assessing the quality of executions on trading venues', January.

[10] Comisión Nacional del Mercado de Valores (2022), 'Payment for order flow: an analysis of the quality of execution of a zero-commission broker on Spanish stocks', March. Oxera has reviewed these studies at a high level only.

[11] Total costs of trading can be split into implicit costs (costs associated with liquidity, usually measured as the difference between the price paid and a 'benchmark' price) and explicit costs (fees associated with executing a trade, such as broker commissions, trading platform fees, clearing and settlement fees, and taxes).

[12] BaFin (2022), 'Studie zur Ausführungsqualität an ausgewählten deutschen Handelsplattformen', 11 April. Oxera has not reviewed the analysis in detail.

[13] We understand that the non-PFOF venues in BaFin's analysis include CLOB venues such as Xetra, CBOE and Turquoise, as well as some venues that segment retail flow (but do not offer PFOF).

[14] For example, in a recent review in the UK, the Financial Conduct Authority concluded that retail broker platforms did not have robust best-execution monitoring arrangements in place. Financial Conduct Authority (2019), 'Investment Platforms Market Study: Final Report', MS17/1.3, https://bit.ly/2U8HwNV, accessed 16 June 2022.

[15] Market depth refers to a market's ability to absorb relatively large market orders without significantly affecting the price of the security.