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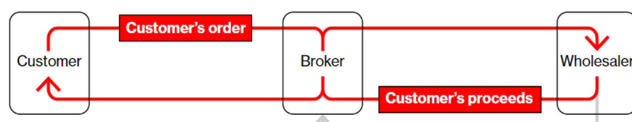
Payment for Order Flow (PFOF) and Broker-Dealer Regulation

Policymakers have scrutinized certain rebates that brokerage firms receive for executing retail investor stock trades, with particular attention to payment for order flow (PFOF). PFOF raises issues related to potential conflicts of interest, retail investor financial inclusion, market competition, and market transparency. This In Focus explains PFOF, the broker-dealer regulatory framework governing it, related policy debates, and legislative actions.

What Is PFOF?

PFOF is fee income received by a brokerage firm in the form of rebates for routing buy or sell orders from retail stock investors to a wholesaler (also called market maker), who takes the other side of the order (**Figure 1**). The wholesalers typically execute the orders in house in an *internalization* process, which fills the orders with the firm's own inventory of stocks. The internalization allows wholesalers to make money through *spreads*, the difference between purchase price and sale price. PFOF was pioneered in the 1990s by Bernard Madoff, who at the time had a stellar reputation but was later convicted of financial crimes. Although there were no indications that Madoff's use of PFOF was illegal or unethical, the practice's origin may have somewhat tarnished PFOF's reputation.

Figure 1. Payment for Order Flow Process



Source: SEC.

Notes: In executing customer orders, the broker has to fulfill "Best Execution" obligations.

While PFOF is generally a fraction of a cent per trade, cumulatively, it can result in significant earnings for brokerage firms due to high transaction volume. For example, the 12 largest U.S. brokerages earned a total of $3.8 billion in PFOF revenue in 2021. Robinhood, an online investment platform, alone collected $974 million, representing approximately half of its revenue. In the previous year, about 75% of Robinhood's revenue came from PFOF. In aggregate, brokerages routed more than 90% of marketable orders of retail national market system stocks to a concentrated group of six wholesalers in 2022. The top three wholesalers—Citadel Securities (41%), Virtu Financial (26%), and G1 Execution Services (16%)—handled more than 80% of U.S. retail equity market orders at one time.

Zero-Commission Trading

Over the past four decades, retail investor trading commission fees reportedly went from about $200 per trade in the 1980s to $40 in the 1990s (when PFOF first started), and eventually reached zero in the 2010s (though there are debates about hidden costs, discussed later). Major discount brokerages such as Charles Schwab, E*Trade, Robinhood, and TD Ameritrade (which merged with Charles Schwab in October 2020) manage a significant amount of retail trades. By various accounts, PFOF has played a significant role in enabling zero-commission trading, as the discount brokerages could still make a profit from PFOF revenue, which has helped drive the recent surge in retail trading since the COVID-19 pandemic.

Broker-Dealer Regulatory Framework

Because retail investor PFOF is generally executed through broker-dealers, a broad array of Securities and Exchange Commission (SEC) and Financial Industry Regulatory Authority (FINRA) rules and regulations governing broker-dealers generally apply to transactions involving PFOF. The main requirements to highlight include best execution and information disclosure.

Best Execution

The duty of best execution requires a broker-dealer to execute customers' stock trades at the most favorable terms under prevailing market conditions. The brokerages must evaluate the orders from all customers and periodically determine which competing markets and market intermediaries offer the most favorable terms for execution. The brokerages must consider *price improvements*, which is the opportunity (but not the guarantee) for an order to be executed at a better price than the current quote. Because transaction timing is also a key consideration, the brokerages must also consider the trade-off between price improvements and the extra time it takes to seek better pricing. The SEC has no existing rules on best execution, but FINRA has a best execution rule (Rule 5310), which was first established in 1968 by its predecessor, the National Association of Securities Dealers. In addition, broker-dealers have a best execution duty derived from certain legal principles and fiduciary obligations, which are enforced through antifraud provisions of securities regulation.

Disclosure and Transparency

Under SEC Rule 606(a) of Regulation National Market System (NMS), broker-dealers must provide quarterly, aggregated public disclosure of their practices in the routing and handling of "held orders" requiring prompt execution at

the best possible price. Under Rule 606(b) of Regulation NMS, upon a customer's request, a broker-dealer must generally provide customer-specific disclosures related to the routing and execution of the customer's exchange-listed securities submitted on a "not held" basis that gives the broker-dealer both time and price discretion during the prior six months. Under Rule 607 of Regulation NMS, a broker-dealer must, upon opening a new customer's account, provide annual descriptions of the terms of any payments received for order flow and any profit-sharing arrangements that may influence a broker-dealer's order routing decision.

Policy Debates

PFOF's opponents are concerned about the practice's potential adverse effects on market competition and trading order execution quality for retail investors. Proponents argue that PFOF does not negatively affect price execution and that eliminating it could reduce retail investor participation and introduce new risks and uncertainties in trade execution.

Market concentration and competition. As previously discussed, the market for retail order routing is highly concentrated among several large wholesalers. Some commentators worry that the market is opaque and not as fair and competitive as it could be for retail investors.

Zero-commission trading and retail investor inclusion. Zero-commission trading significantly increased retail investor participation in stock trading. Supporters of PFOF argue that the practice benefits investors by subsidizing low- or zero-commission rates and other services, allowing more people to invest their savings in stocks.

Investor protection offered through best execution requirements. Some commentators argue that with existing best execution requirements, brokerage firms have to seek the best execution terms for orders irrespective of PFOF. Thus, they assert that concerns over best execution are not warranted provided that existing *best execution requirements* guard the transactions from conflicts of interest and mandate transaction due diligence. In addition, they emphasize that marketable retail orders that involve PFOF must be executed at the national best bid or offer price or at a price that improves it. However, others are concerned that broker-dealers may not pass PFOF rebates to their clients and that they may have incentives to send retail orders to rebating market makers that are the most beneficial to them instead of the clients. This creates potential conflicts over their duty of best execution. PFOF has been banned in the United Kingdom, Australia, and Canada due to such conflict-of-interest concerns. Also, the European Union has reached a provisional agreement to ban PFOF.

PFOF and price execution quality. Policymakers have debated (1) whether PFOF creates a hidden cost for retail investors by leading to the execution of trades at a worse price (i.e., a higher price when buying and a lower price when selling) for them, and (2) if so, how large it is. Academic and other research has not formed a consensus regarding whether PFOF would improve or harm price execution. One study has found that the shift to PFOF-facilitated zero commissions was beneficial to retail investors in terms of their overall costs of trading. In contrast, another study found that retail trades executed at the best-quoted prices surged after the United Kingdom effectively banned PFOF. Other research found that PFOF-facilitated zero commissions led to overall improvements in market quality, but retail investors received less price improvement per share. A 2022 study of 85,000 simultaneous market orders with five brokers concluded that PFOF does not appear to harm price execution. The SEC's analysis as part of a rulemaking process (discussed below) indicates that replacing the current PFOF model with a new order-competition model could generate $1.5 billion in annual savings for retail investors, but multiple commentators challenged the SEC's estimates. That said, even under the larger estimates of potential hidden costs, the decline in overall retail investor trading costs under zero-commission trading is evident. As discussed previously, commission costs went from $40 in the 1990s to $0 now, and hidden costs from a potential reduction of execution quality are generally not believed to be of that magnitude. For example, in December 2020 the SEC charged Robinhood with failure to disclose its receipt of PFOF for routing customer orders and noncompliance with the duty of best execution. An analysis cited in the SEC order indicates that for orders of more than 100 shares, the execution loss was $5 per order. The execution loss increased to $15 for orders exceeding 500 shares. Although not a perfect example about the hidden costs of PFOF—especially given Robinhood's alleged failure to satisfy the duty of best execution—the $5 to $15 per-order estimated costs to investors provide some sense of the estimated costs of PFOF charged by Robinhood at one time. (Robinhood's chief counsel stated that the firm's historical practices do not reflect its current operations.)

SEC Market Structure Reform Proposals

On December 14, 2022, the SEC proposed multiple rules and amendments to reform the equity market structure. This initiative includes proposals that would require certain retail orders to be put up for auction at securities exchanges or other trading venues before they could be executed internally by any trading venues that restrict order-by-order competition. If implemented, the rule may reduce the attractiveness of PFOF to wholesalers. The SEC also proposed a new rule on Regulation Best Execution for the first time. (Recall that FINRA already has a best execution rule.) The rule aims to strengthen broker-dealer best execution practices, including those governing PFOF. For more details, see CRS In Focus IF12336, *SEC-Proposed Regulations to Reform Stock Trading*.

Legislative Proposals

The SEC may (under its existing authorities to regulate aspects of securities trading) change PFOF-related regulation without a specific congressional mandate. The Investor Freedom Act of 2021 (S. 3102, 117th Congress) would have prevented the SEC from doing so by amending the Securities Exchange Act of 1934 to explicitly prohibit the SEC and certain other organizations from restricting PFOF. Other proposals, such as H.R. 4617 (117th Congress), would have required the SEC to conduct a study on PFOF from the perspectives of conflicts of interest, price execution, disclosure, and other investor protection measures. The bill would have also directed the SEC to

implement rules consistent with the results of the study, including potentially prohibiting or limiting PFOF.

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