



# Interpretations of market manipulation

Real-life examples

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## The Dutch Authority for the Financial Markets

The AFM is committed to promoting fair and transparent financial markets.

As an independent market conduct authority, we contribute to a sustainable financial system and prosperity in the Netherlands.

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## Interpretations by the AFM

By "interpretation", the AFM means a brief, written policy statement that elaborates its views on the compliance with specific Sections of Acts that the AFM supervises and/or on the AFM's powers. An interpretation is less extensive than a guideline.

The AFM publishes different interpretations to give market parties an understanding of its views on applicable laws and regulations. Through its contacts with different market parties (such as law firms), the AFM signals the issues that require interpretation.

This brochure includes the four interpretations that the AFM published earlier with regard to market manipulation.

## 1. Misleading orders and/or transactions

The AFM regularly observes actual orders and/or transactions that send wrong or misleading signals. In some cases parties successfully conduct such trading behaviour to systematically induce other parties to react by placing orders and/or transactions. This other party reacts by constantly placing orders at the same price level as those placed by the misleading party. At this price level, the misleading party can then trade more favourably at the expense of the reacting party.

### 1.1 Explanation through a real-life example

*As the AFM is bound by confidentiality, it cannot go into every detail about this real-life example. Hence, the names of the involved parties and financial instruments are not given in the example. The AFM has adopted appropriate measures to halt the type of conduct described.*

Consider the following situation. For a certain share, the best sell order in the market is at €11.00 and the best buy order at €10.85. One party, P, places a sell order at €10.99, thus improving the best sell order. Another party, X, reacts immediately to improve the market further with a sell price of €10.98. Party P improves the price again, and X's response is another improved price. This offering of increasingly lower (better) sell prices narrows the spread, and continues until party P places its final sell order at, say, €10.89. Party X again improves the price, this time to €10.88. Party P then enters a buy order to trade against party X's sell order at a share price of €10.88. As a result, instead of paying €11.00 per share, party P has paid €10.88. Party P now cancels its previous sell orders at €10.89 and above (or has already cancelled them).

Party P then enters buy orders at increasingly higher price levels, with party X reacting by doing the same. When party X has reached its highest level in following party P through its buy orders, party P then sells to party X. By this repetitive way of trading, party P will continue to make gains at the expense of party X.

This conduct, which is profitable for party P and loss-making for party X, can be repeated many times during a single trading day. A possible explanation for a counterparty continuing to follow and not immediately realising that it is being misled, lies in the fact that many parties use electronic trading algorithms. Up to a certain level these algorithms react in a standard and predictable way to the actions of other market parties.

The AFM has also observed behaviour occurring at the end of the situation, prior to a transaction between party P and party X, whereby X does not again enter an improved order price compared to party P's, but one that is the same as party P's. To illustrate the point using the above example, party P would enter a sell order at €10.89 per share that X does not improve on by offering a lower price, but reacts by entering a sell order also at €10.89. Party P then realises that party X is not willing to sell at a lower price. However, party P is first in line at that price in the order book through application of the so-called price-time priority rule. Price-time priority ensures that the best prices are first in line to be executed. If several orders have been entered at the same price,

the order submitted first has priority over the other orders at the same price, but submitted after the first order.

Party P then amends its sell order to €10.89, for example by increasing the size of the order. As a result, party P's order loses its priority relative to party X's order and is placed behind it. Next, party P enters a buy order at €10.89 for the part that X is offering to sell at that price. In this case it is even clearer that party P had no intention of selling at its entered lower prices, but actually wanted to buy at the aforementioned lower price.

The AFM is of the opinion that the trading conduct described above gives, or is likely to give, a false or misleading signal as to the supply of, demand for, or price of a financial instrument. Under the Market Abuse Regulation, this is a case of market manipulation, which is not allowed.

### Summary

Party P revealed itself as a seller that, according to the order book, was prepared to sell at a decreasing prices, but then bought at those lower prices whenever party X, the other party, followed the prices party P offered. Party P also applied this strategy in the opposite direction. That is, entering buy orders at increasingly higher prices, only to sell at the highest price entered by party X

Through its actions, party P gives misleading signals about the supply of, demand for, or price of a financial instrument. In the opinion of the AFM, party P entered orders purely to induce party X (or its trading algorithm) to match these orders or enter better orders at better prices.

Entering orders and/or executing transactions for the purpose of inducing or misleading other parties into offering more favourable prices and then taking advantage of the situation, goes against fair and orderly trading conduct.

The AFM considers the above trading conduct to be in violation of the prohibition of market manipulation as defined by the Market Abuse Regulation.

## 1.2 Indicators of market manipulation

Trading conduct is rarely identical. The examples provided are therefore not exhaustive, and only intended to illustrate the common characteristics of these types of manipulative transactions in financial instruments.

The more often, within a specific time frame, an investor executes orders and/or transactions that possibly could give a false or misleading signal, the stronger the suspicion of possible market manipulation. This suspicion becomes even stronger if a further investigation reveals that the party concerned also benefits from such behaviour. Factors such as frequency, time frame of the trading and any profit made are taken into account when assessing the evidence and significance of a possible violation of the prohibition of market manipulation. Annex I of the Regulation contains a non-exhaustive list of indicators of market manipulation.

The AFM will take appropriate actions if market manipulation is detected. The AFM can decide to report the offence to the Public Prosecution Service or impose an administrative fine.

## 2. Transactions aimed at influencing prices

An order can result in a (partial) transaction in a financial instrument (a share for example). If a partial transaction of limited value or size causes a change in the price of the financial instrument, this can be an indication of market manipulation.

According to the Market Abuse Regulation (Article 12(1)), market manipulation comprises the following activities: (i) gives or is likely to give, false or misleading signals as to the supply of, demand for, or price of, a financial instrument, or: (ii) secures, or is likely to secure, the price of one or several financial instruments at an abnormal or artificial level.

Given this definition, - and as stated above - transactions of limited value and/or size that cause a price change could represent market manipulation. The prohibition of market manipulation or the attempt to manipulate the market is laid down in Article 15 of the Market Abuse Regulation.

Obviously, it is not forbidden to place orders or execute transactions that influence prices. The majority of such actions will not be cases of market manipulation.

### 2.1 Explanation using real-life examples

Below are two examples of suspicious trading in the form of small orders resulting in transactions that influence prices.

#### Example 1

Suppose the last price of a share is €2.55 and the best sell order at the time is 500 shares at €2.63. The next sell order above is for 300 shares at €2.76. An investor now places a buy order for 5 shares, with a limit price of €2.63 a share. This buy order directly results in a transaction for 5 shares at this price, causing the price to rise from €2.55 to €2.63. The result is that the investor, by executing a transaction with limited value, realizes a price increase of 3.1%.

Suppose that a large part, namely 475 shares of the remaining 495 shares, is bought at €2.63. As a result, 20 shares remain unaffected in the order book at €2.63. Above the price of €2.63, there still is the sell order for 300 shares at €2.76. The aforementioned investor now places a market buy order for 25 shares. As a result, the investor buys the remaining 20 shares priced at €2.63 and also another 5 shares at the subsequent higher price level of €2.76, which is also the last price. Again, by executing a transaction of limited value, this investor has caused a relatively large price increase, from €2.63 to €2.76, in other words 4.9%. With these two small transactions, the investor has achieved a price increase from €2.55 to €2.76.

## Example 2

Suppose the last price of a share is €3.00. The best sell order is 300 shares at €3.02 and the best buy orders are 500 shares at €3.00 and 200 shares at €2.92. An investor now places a sell order for 501 shares at €2.92. The transaction is then executed for 500 shares at €3.00 and 1 share at €2.92. Due to the execution of a transaction of 1 share at a lower price level, the investor realizes a price decrease of 2.7%. Directly after this transaction a buy transaction is executed, involving the purchase of 200 shares at €3.02, which now becomes the last price. The same investor now reacts by placing a small sell order for 3 shares at €2.92. This results in an immediate price decrease from €3.02 to €2.92.

In both examples the AFM will investigate whether the actions of this investor involve structurally driving prices and hence give or are likely to give a false or misleading signal about the price of the instrument, or secure or are likely to secure the price at an abnormal or artificial level. The more often the investor acts in a way resembling the above examples, the stronger grows the suspicion of market manipulation.

This suspicion becomes even stronger if further investigation reveals that this party also has a motive for driving the price to a higher or lower level, or has benefited in any way from its actions.

## 2.2 Indicators of market manipulation

Trading conduct is rarely identical. The examples provided are therefore not exhaustive, and only intended to illustrate the common characteristics of these types of manipulative transactions in financial instruments.

The more often an investor places an order which results in a transaction limited in value and/or size, but which nevertheless causes a price change, the stronger the suspicion of possible market manipulation. This is the case for an investor who benefits in some way from the effect on the price as a result of these actions. For example, this is the case if the investor has entered into a position in the financial instrument or in a related derivative, such as an option. Factors such as frequency, time frame of the actions, profitability, absence of a valid economic reason and/or motive can be taken into account when assessing the evidence and significance of a possible violation of the prohibition of market manipulation. Annex I of the Regulation contains a non-exhaustive list of indicators of market manipulation.

The AFM will take appropriate actions if market manipulation is detected. The AFM can decide to report the offence to the Public Prosecution Service or impose an administrative fine.

### 3. Trading on market orders

There is a wide variety of traded financial instruments, some of them having limited liquidity. A consequence of limited liquidity could be large price swings when a market order is placed. This also applies to an order with a price limit that strongly deviates from the last price. For example, this is the case for a buy order with a very high limit, or a sell order with a very low limit. These orders can potentially be executed at a price that deviates considerably from the last traded price, possibly even close to the permitted threshold price<sup>1</sup>. This can be legitimate. After all, supply and demand determine prices on the market.

However, the AFM also observes situations where parties respond to market orders/orders having an unusual price limit by placing orders with the aim of trading favourably against the market orders (or with an unusual price limit).

According to the Market Abuse Regulation (Article 12(1)), market manipulation comprises the following activities: (i) gives or is likely to give, false or misleading signals as to the supply of, demand for, or price of, a financial instrument, or: (ii) secures, or is likely to secure, the price of one or several financial instruments at an abnormal or artificial level.

Given the aforementioned definition, responding to market orders/orders having an unusual price limit by placing orders with the aim to trade favourably against the market orders (or an with an unusual price limit) could indicate market manipulation. The prohibition of market manipulation or the attempt to manipulate the market is laid down in Article 15 of the Market Abuse Regulation.

#### 3.1 Explanation using real-life examples

Suppose the last price of a share is €100, and the order book is empty. The exchange has set the maximum deviation of a price for the share at plus or minus 10% of the most recent price. As such, all transactions in this share must be at a price within the range of €90 to €110.

An investor now places a market sell order for 50 shares in the order book, which is still empty, before the market opens for trading (at 8:50 a.m.). Although a seller generally benefits from receiving the highest possible price, this seller offers its shares against every price market parties are bidding. The market opens at 9 a.m. on the dot. Even if the market is not open yet for executing transactions, orders can nevertheless be placed. The exchange opens the order book for market parties to see the orders. It also gives a theoretical opening price (TOP) and a theoretical opening volume (TOV). The TOP is the price at which the majority of shares (TOV) would be traded if the market were to open at that point.

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<sup>1</sup> The maximum allowed deviation from the last price is expressed as a percentage. It is determined for each category of financial instrument by the exchange.

As mentioned above, the market sell order can be executed at prices between €90 and €110. The seller benefits from the highest possible price, whereas a buyer will want to pay the lowest possible price. The AFM observes cases where, in a similar situation, an interested buyer acts in such a way that, until shortly before the market opens, it seems to both the market and the seller that the latter will receive a good price. However, just before the market opens, the price changes less favourable for the seller.

A number of examples of manipulative and non-manipulative trading conduct are presented below. Each example is based on the above situation.

#### Example 1 (no false or misleading signal)

As a reaction to the entered market sell order, an investor enters a buy order for 50 shares at €90, prior to market opening. Based on the published TOP and TOV, market parties can see at once that, if the situation does not change, 50 shares will be traded at €90 when the market opens. Before the transaction is executed, market parties can still decide to enter a better bid until the market opens. If no better bids are placed, the buyer pays €90 a share. In this situation, the buyer has traded legitimately. The buy order gives no false or misleading signals, and was in line with the buyer's true intention.

#### Example 2 (no false or misleading signal)

As a reaction to the entered market sell order, the buyer can wait until the market is almost open, or is already opened, whereafter the buyer enters the order for 50 shares at €90. Other market parties have also had the opportunity to observe the market sell order and to react by entering a buy order. If that does not happen, the buyer has traded legitimately at the price of €90. The buyer's order does not send out a false or misleading signal.

#### Example 3 (false or misleading signal)

As a reaction to the entered market sell order, the buyer can enter an order for 50 shares at, for instance, €104 prior to market opening. The market parties observe that an acceptable price is being bid for the shares (given the last price of €100). Accordingly, they might not see any reason to place a competitive order (i.e. at a higher price). However, just before the market opens, the buyer lowers the buy limit of the order from €104 to €90. Hence, when the market opens, the transaction is not executed at the earlier price bid of €104, but at €90.

The buyer showed apparent willingness to the market to buy at €104. Eventually, the shares were bought at the much lower price of €90, through the order being amended just before the market opened. In the opinion of the AFM, such trading conduct sends a false or misleading signal about the price of the share. This is because the first order entered did not represent the buyer's real intention, presumably being entered to mislead other market parties.

#### Example 4 (false or misleading signal)

As a reaction to the market sell order that has been entered, the buyer can enter a market buy order for 50 shares and a buy order for 1 share limited at €90, both prior to market opening. The theoretical price now becomes €100 (two market orders, i.e. the market sell order for 50 shares is matched by the market buy order for 50 shares at the last price, €100). However, just before the market opens, the buyer reduces the market buy order from 50 to 49 shares. As a result of the buy-order for 1 share with a limit price of €90, all the 50 shares are traded at €90 (the market buy order for 49 shares and the limited buy order at €90 for 1 share) instead of at the earlier price bid of €100<sup>2</sup>. In the opinion of the AFM, this trading conduct sends a false or misleading signal about the price of the share.

Examples 3 and 4 describe situations where a false or misleading signal is sent. For the sake of simplicity, the examples assume a virtually empty order book. Nevertheless, similar situations can also occur when order books are fuller. In essence, the buyer amends the order just before the market opens, thus sending a false or misleading signal. This makes it a possible case of market manipulation. Obviously, market manipulation can also occur in the opposite situation. For example, before the market opens, a seller indicates willingness to sell shares at a relatively low price. Then just before the market opens, this seller amends the sell order to show a relatively high price. In the opinion of the AFM, this trading conduct also sends a false or misleading signal.

In addition, the AFM wants to draw attention to the entering of market orders and orders with highly unusual limits. In particular, financial instruments with limited liquidity expose investors to the risk of unfavourable executions.. Accordingly, the AFM emphasizes the importance of setting realistic limits for orders, especially for financial instruments with limited liquidity. This provides investors with self-protection against possibly (unexpected) unfavourable execution.

### 3.2 Indicators of market manipulation

Trading conduct is rarely identical. The examples provided are therefore not exhaustive, and only intended to illustrate the common characteristics of these types of manipulative transactions/orders in financial instruments.

The more often an investor responds to a market order/order with an unusual price limit, aimed to trade favourably against the market order (or an order with an unusual price limit), the stronger the suspicion of possible market manipulation. Factors such as frequency, time frame of the trading and any profit made are taken into account when assessing the evidence and significance of a possible violation of the prohibition of market manipulation. Annex I of the Regulation contains a non-exhaustive list of indicators of market manipulation.

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<sup>2</sup> For a Euronext auction (the opening auction in this situation), the basic rule of the auction system is that the price established during the auction is, basically, the price at which the largest number of shares can be traded. For the case in point, 49 could be traded at €100, but 50 can be traded if the price is €90. Hence, the price at the end of this auction is €90.

The AFM will take appropriate actions if market manipulation is detected. The AFM can decide to report the offence to the Public Prosecution Service or impose an administrative fine.

## 4. Manipulation by using wash trades

*(Published in January 2016)*

Wash trades are transactions involving no change of ownership and/or market risk, or for transferring them to co-conspirators (other than in the case of repos and securities lending). For more information see Annex 1 of the MAR under A, point c.

The AFM observes transactions in financial instruments that involve no actual change of market risk and/or ownership. In many cases these transactions are between parties that are related and/or are collaborating.

According to the Market Abuse Regulation (see Article 12(1)), market manipulation comprises the following activities: (i) gives or is likely to give, false or misleading signals as to the supply of, demand for, or price of, a financial instrument, or: (ii) secures, or is likely to secure, the price of one or several financial instruments at an abnormal or artificial level.

Given this definition – and as stated above – transactions involving no change of ownership and/or market risk, or for transferring them to co-conspirators (other than in the case of repos and securities lending) could be possible cases of market manipulation. The prohibition of market manipulation or the attempt to manipulate the market is laid down in Article 15 of the Market Abuse Regulation.

### 4.1 Explanation using real-life examples

Below are two real-life examples where the AFM considers that false or misleading signals are (likely) being sent about the supply of, demand for, or price of options or the underlying securities. According to the AFM, both are examples of wash trades.

#### Example 1

Suppose that party A receives a discount from its clearing member on the total cost of processing (option)contracts if a certain threshold value is exceeded. Party A has almost reached this threshold close to the end of the period. In order to exceed the threshold, party A trades a number of out-of-the-money<sup>3</sup> option contracts on the expiration day at a price of €0.01. The trades are made with party B, a related and/or collaborating party. The number of option contracts traded is large enough so that the total trading volume of party A will exceed the clearing member's threshold. Due to this transaction, party A receives a discount on the total costs the clearing member charges for processing party A's total trading volume.

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<sup>3</sup> An option is out-of-the-money if the price of the underlying security stays above the exercise price in the case of a put option, or under the exercise price in the case of a call option.

## Example 2

Suppose that X, a listed company, announces a dividend payment. Party A trades call options - that have party X's share as their underlying security - with party B, a related and/or collaborating party. The trades are executed before the ex-dividend date. Due to this transaction, no change of market risk occurs for these parties. Party A's risk exposure is fully hedged by party B. Consequently, the entire position is risk-free.

Parties A and B have carried out this transaction with the aim of taking a short position in the open interest<sup>4</sup> in the call options, or increasing the existing short position. Their intention is to make the largest possible financial gain. They can realise this gain because not all the in-the-money call options<sup>5</sup> are exercised prior to the dividend payment (i.e. ex-dividend) for the underlying security of the option contracts.

## 4.2 Indicators of market manipulation

Trading conduct is rarely identical. The examples provided are therefore not exhaustive, and only intended to illustrate the common characteristics of these types of manipulative transactions in financial instruments.

The more often an investor enters an order and/or executes a transaction which gives or is likely to give a false or misleading signal, the stronger the suspicion of possible market manipulation. This is certainly the case if further investigation shows that the involved party also gained from this behaviour. The number of misleading orders and/or transactions, the time frame in which they took place, and the financial gain, if any, they produced are factors in evaluating the evidence. Based on this data, the AFM determines the significance of the possible violation of the prohibition of market manipulation. Annex I of the Regulation contains a non-exhaustive list of indicators of market manipulation.

The AFM will take appropriate actions if market manipulation is detected. The AFM can decide to report the offence to the Public Prosecution Service or impose an administrative fine.

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<sup>4</sup> Open interest expresses the number of open positions in an option series or option class (or in futures).

<sup>5</sup> A call option is in-the-money if the exercise price of the option is lower than the price of the underlying security.

## 5. Questions

The AFM is the contact point for questions about market abuse. More information is available on [www.afm.nl](http://www.afm.nl) under the heading "Market Abuse".

For questions and consultations, you should send an email to [marketsupervision@afm.nl](mailto:marketsupervision@afm.nl), or call the monitoring team on +31 (0)20 797 3777.

Please note that telephone calls with the monitoring team are recorded for supervisory purposes.

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