



AFM Market Watch

Short selling: quantifying the effects of a ban

July 2022, edition 6

1. Introduction

As described in the [first edition of Market Watch](#), the Netherlands Authority for the Financial Markets (AFM) decided in 2020 not to impose a ban on short selling in the Netherlands, as the Dutch markets seemed to be functioning in an orderly fashion. However, in some European markets, including France, the relevant authorities did decide that long-term short selling bans were necessary.

Now that the COVID-19 pandemic is subsiding, the time has come for an evaluation. To ensure effective supervision, it is important for regulators to measure and evaluate the impact of regulatory actions. For this reason, the AFM has conducted a joint study with the Autorité des Marchés Financiers (AMF) on the impact of the short selling ban imposed by the latter from 17 March 2020 until 18 May 2020.

Based on the joint study, the AFM concludes that, on the whole, the short selling restrictions during the pandemic did not have a positive effect on the microstructure and quality of the equity market. Moreover, the ban negatively impacted the efficiency of the market. For a more detailed explanation of the study methodology and results, we kindly refer you to the [paper](#).

In this edition of Market Watch we present the main findings of the study, including the implications for future supervision in light of developments regarding short selling as a result of the pandemic at the European level.

This edition consists of two parts: (i) a lead article about the short selling ban, and (ii) a facts & figures paragraph about the TTF gas futures market, for which the main activities take place on the ICE Endex platform in Amsterdam. The first section of the lead article describes the study methodology and results. In the second section of the lead article, we present our conclusion regarding the ban. The third section of the lead article focuses on important developments regarding short selling at the European level.

2. An econometric study

Research methodology

For our research we followed the methodology from Marsh and Payne (2012), who analysed the effects of a ban on short sales of shares in financial firms, introduced in late 2008, on the microstructure and quality of UK equity markets. This approach aims to measure the effects of an event by comparing a study group (i.e., the French market with a short selling ban) and a control group (the Dutch market without such a

ban). The French ban prohibited shorting shares admitted to trading on Euronext Paris, Euronext Growth Paris and Euronext Access (excluding market making activities).

To be able to perform a post evaluation, we collected all the relevant data in the period January-June 2020. Although the Dutch and French markets differ in size, it proved to be possible to compare the Dutch (no ban) and French (ban) equity markets because they operate within the same ecosystem (both are operated by Euronext) and have almost the same distribution of sectors and industries.

The AFM measured the effect of events on the equity market by looking at a range of market quality indicators. These include returns, volatility, volume, number of trades, trade size, aggressiveness, quoted spread, and bid and offer slippage, covering the entire equity market. The data used consists of intraday trades and quotes that the AFM and AMF received from Euronext for the period from 2 January to 15 June 2020. We only included stocks which are similar in terms of market capitalisation, short interest, industry sector and liquidity status.

Results of the study

For this Market Watch we will highlight three market quality indicators: asset returns, volatility and liquidity. To be able to conclude that the ban had a *positive* effect on the market, one would expect to find significant differences between the Dutch and French markets for asset returns and volatility. Conversely, one would expect *negative* impact to be reflected in significant differences for the liquidity market quality metric.

- Asset return is a relevant market quality metric for this study, since one of the reasons to impose a ban is to limit the downward price movement. We found that *both* markets showed an overall increase for asset returns, without any statistically significant difference between them.
- As regards the volatility market quality metric, the French equity market already showed a lower volatility prior to the ban. While the difference in volatility between the two markets continued, it did become smaller during the ban.
- With regard to market quality metrics that consider liquidity, we observed a greater decline in trading volumes for

French stocks due to a decrease in the number of transactions. In addition, the study revealed a dip in aggressive buy and sell orders (aggressive orders consume liquidity directly available in the market, as opposed to passive orders, which wait to find a counterparty), with a more noticeable effect on the French market.

- Furthermore, as regards the liquidity available at the best bid and offer prices between the French and Dutch markets, the study does not demonstrate any significant deterioration. However, available liquidity deeper in the orderbook was thinner in the French market. This reduction in available depth results in an increase in transaction costs for larger orders that go beyond the best prices in the orderbook (i.e., more slippage).

Analysis of Dutch and French SSR net short position (NSP) data

In addition to the econometric analysis of Euronext order data, we have analysed all Dutch and French SSR NSP data so as to obtain a more detailed view of the behaviour of position holders.

Although there was no obligation to unwind short positions during the ban on short selling in France, in Figure 1 we see a significant reduction in total net short value in France (from €18.3 billion at the start to €10.7 billion at the end of the ban) compared to the Netherlands (from €5.7 billion to €5.5 billion). At the end of March 2020, the total market capitalisation amounted to €3,300 billion on the French market and €850 billion on the Dutch market. This equals approximately 0.76% of the Dutch and 0.59% of the French market.

Figure 1: Total net-short value in NL and FR

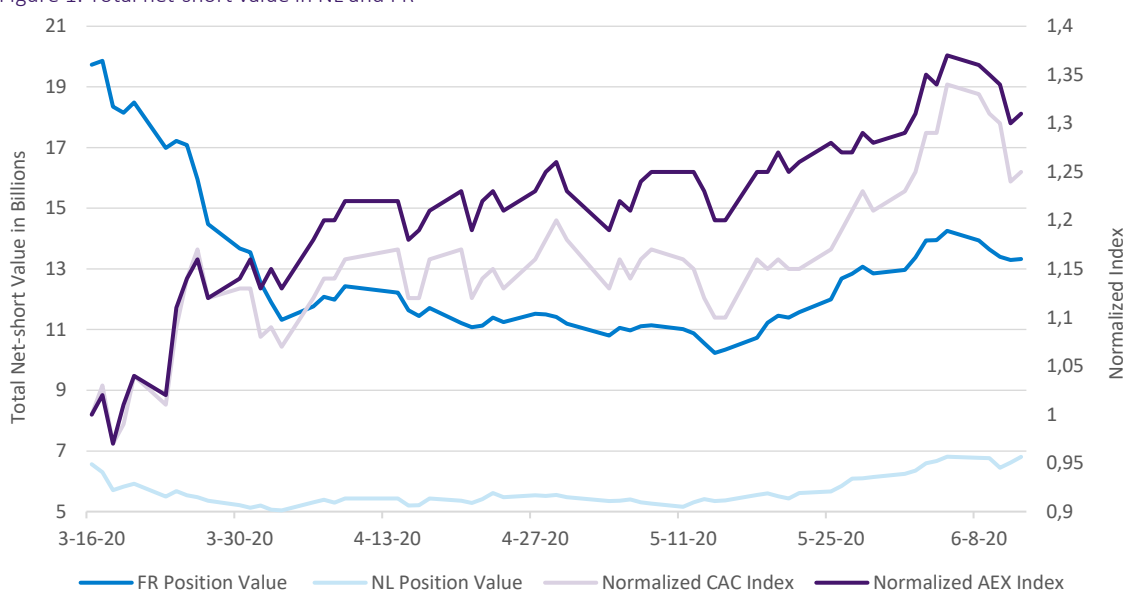


Figure 1 - Total net short value in France and the Netherlands

The diagram shows the total net short value in France and the Netherlands. The left y-axis displays the daily total net short value for each country, which is computed by aggregating the value of all the individual outstanding NSPs (with a threshold of 0.1%) in the respective national markets. The value of a given position is calculated by multiplying the shorted fraction of the outstanding float with the end-of-day market cap of the shorted company. The right y-axis shows the normalised national index as compared to first day in the series (i.e. index day n/ index day one). Since we calculate value using the end-of-day market cap of the shorted company, the total net short value of the French market can increase during the ban because of increasing stock prices. Later figures control for these fluctuations by using a constant market cap for each company. The figure does not consider the total size of the Dutch and French markets.

One of the main findings of this NSP data analysis is shown in Figure 2 (four sub-figures). The reduction in NSPs after the start of the ban occurred homogeneously across sectors and most of the shorted value in the market can be contributed to a handful of position holders that do not short individual stocks, but rather short entire markets. Figure 1 shows that there was no displacement effect from short value from France to the Netherlands as a result of the French short selling ban. Furthermore, the data demonstrates that the total net short value was highly concentrated in both markets. A comparison of Figure 1 and 2 shows that most short value in both the Netherlands and France was held by twenty position holders. Further analysis (not included in this Market Watch) slims this number

down to only a handful of position holders. These large position holders also decreased their NSPs homogeneously across sectors, indicating that they sought market-wide exposure instead of exposure in specific companies.

4. Impact on supervision

Based on the outcome of our joint study, the AFM concludes that the restrictions on short selling during the pandemic did not have a positive effect on the microstructure and quality of the equity market. Moreover, the ban negatively impacted the efficiency of the market. Hence, the AFM maintains its position that short selling bans should not be imposed lightly, particularly in light of the fact that under the SSR such a ban must be necessary to address the threat to financial stability or market confidence.

Any short selling restriction should be based on relevant data. This requires continuous real-time monitoring of the markets, as this provides a more comprehensive picture of their functioning. The NSPs reported by position holders are an important source of information in this regard. The analysis of the NSPs during the ban has shown that contrary to concerns, there was no observable displacement effect from France to the Netherlands. Furthermore, the data showed that the bulk of the short value could be contributed to only a handful of position holders.

Figure 2.1: FR – Total positionvalue per industry for the largest 20 positionholders

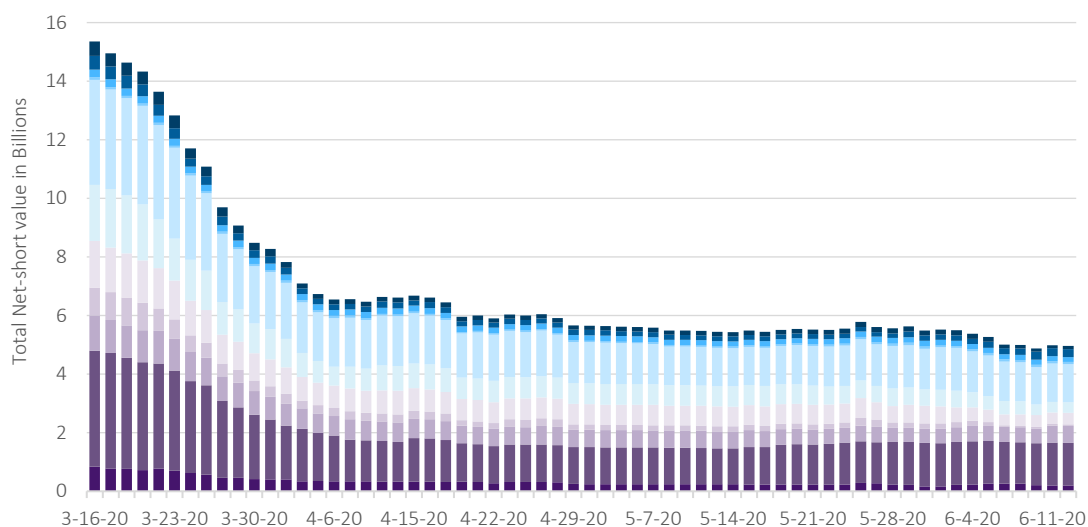


Figure 2.2: FR in % - Total positionvalue per industry for the largest 20 positionholders

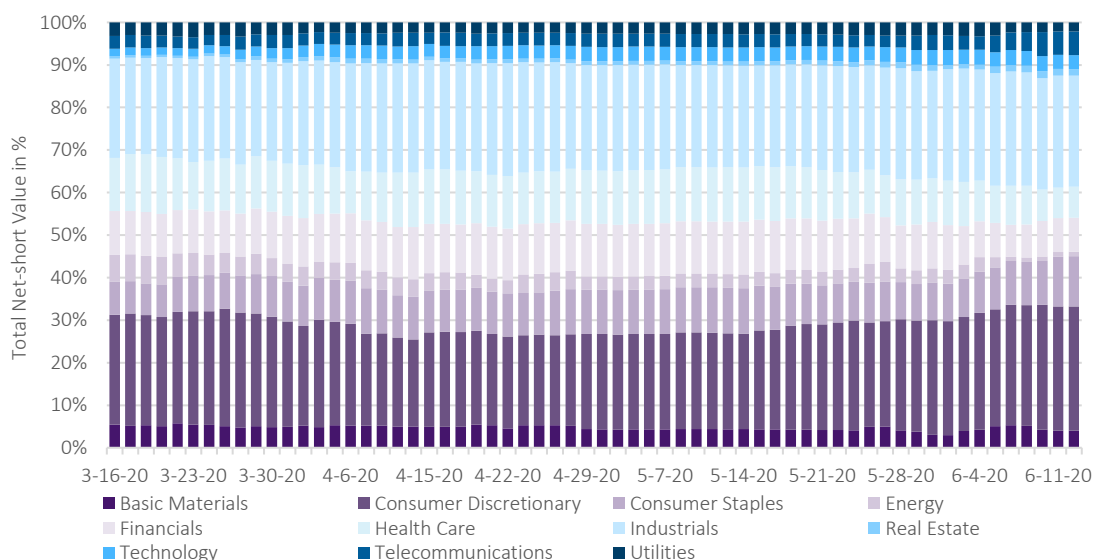


Figure 2 – Sectoral distribution of top 20 position holders in France and in the Netherlands

For Figures 2.1 and 2.3, which display the net short value in absolute terms, the y-axes display the total net short value of the twenty largest position holders in billions of euros, segmented by industry. This top 20 was selected by looking at the total net short value (French and Dutch markets together) of each position holder at the beginning of the ban. The underlying position holders are thus held constant for Figure 2. Figures 2.2 and 2.4 display the relative total position size per sector over time by showing it as a percentage of the total on the y-axis.

5. European cooperation

The SSR provides for a harmonised reporting and decision-making process for any short selling restrictions imposed by NCAs. However, quarterly reporting of short positions proved to be of limited value for quick intervention or

coordination, and the decision-making process does not facilitate a thorough assessment of a ban proposed by an individual NCA. Hence, in the aftermath of the pandemic, various improvements have been agreed to facilitate European cooperation regarding the supervision of short selling and the coordination by ESMA.

For example, ESMA started updating its systems to facilitate daily reporting by NCAs to ESMA which will allow improved monitoring of the markets and substantiated opinions about proposed short selling bans. This will also make it possible for ESMA to coordinate the exchange of information in times of crisis, ensuring that all NCAs have access to the same information. The analysis of NSPs has shown that position holders do not limit their operations to a single European market. This is why the AFM believes the central

Figure 2.3: NL - Total positionvalue per industry for the largest 20 positionholders

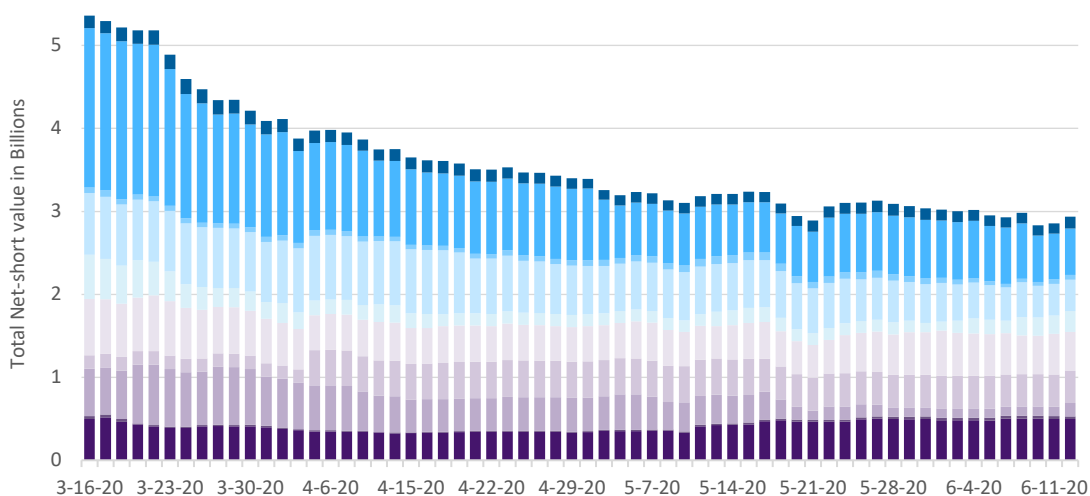
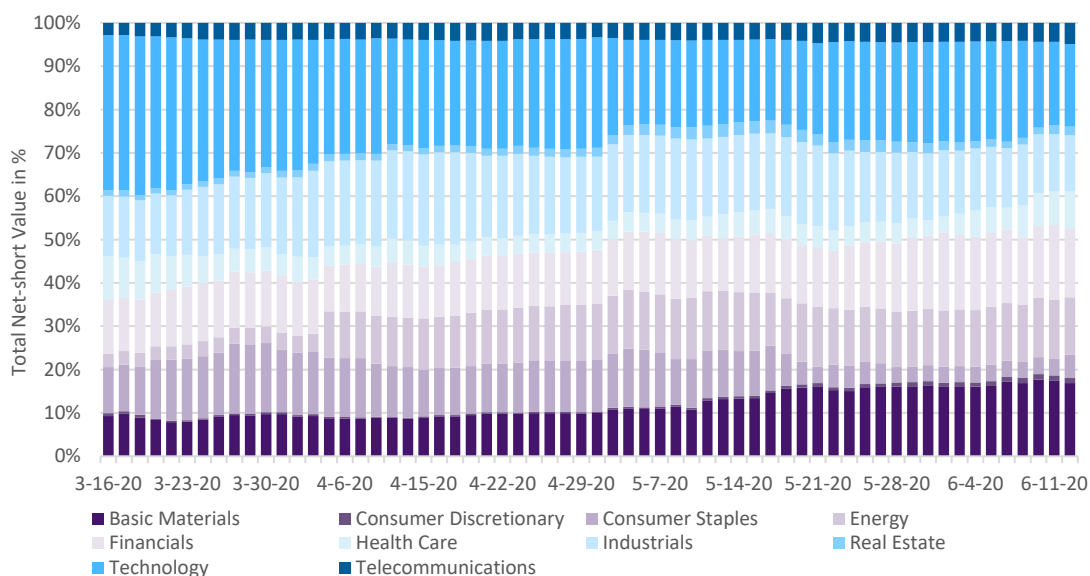


Figure 2.4: NL in % - Total positionvalue per industry for the largest 20 positionholders



database should also be accessible for NCAs for the purpose of regular supervision.

Besides the changes to the reporting system, there has also been a discussion about technical subjects ranging from the calculation of positions (with or without instruments like subscription rights and convertible bonds), the integration of short sell reporting in the European Single Access Point and the possibility to publish aggregated NSPs per issuer. For more information, please refer to the [ESMA's Final Report](#) on the review of the Short Selling Regulation.

6. Facts & Figures

Since the introduction of MiFID II in 2018, the AFM has seen the range of commodity supervision tasks increase. In particular, supervision of the TTF gas future contracts has taken a central role in the AFM’s multi-asset supervision – especially during the periods of steep price increases in European gas prices from the end of 2021 as depicted by Figure 3.

Whilst the price volatility has been notable, it is important to mention that the TTF gas market has matured in the four years since the introduction of MiFID II, with a growing number of participants and increased trade activity, as seen in Figure 4. Firstly, the number of daily position holders on ICE Endex has increased from 130 in January 2018 to 360 in June 2022. Secondly, the number of trades has increased from around 5,000 a day at the start of 2018 to more than 50,000 recently.

Next to having developed into a more mature market, ICE Endex has consistently remained sufficiently diverse and well balanced. A general trend regarding outstanding positions is that they have increased between 2018 and 2022.

Interestingly, Figure 5 shows a general trend that commercial undertakings have consistently held the majority of long positions, while financials have been more dominant in holding short positions.

Figure 3: TTF gas future price development (source: Refinitiv)

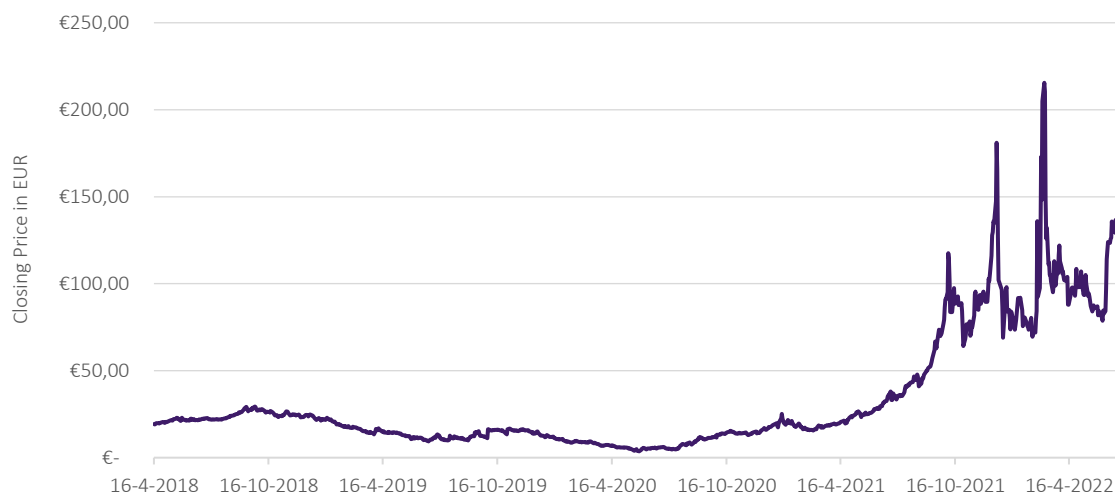


Figure 4: Number of traders by sector (source: ESMA, weekly position reports)

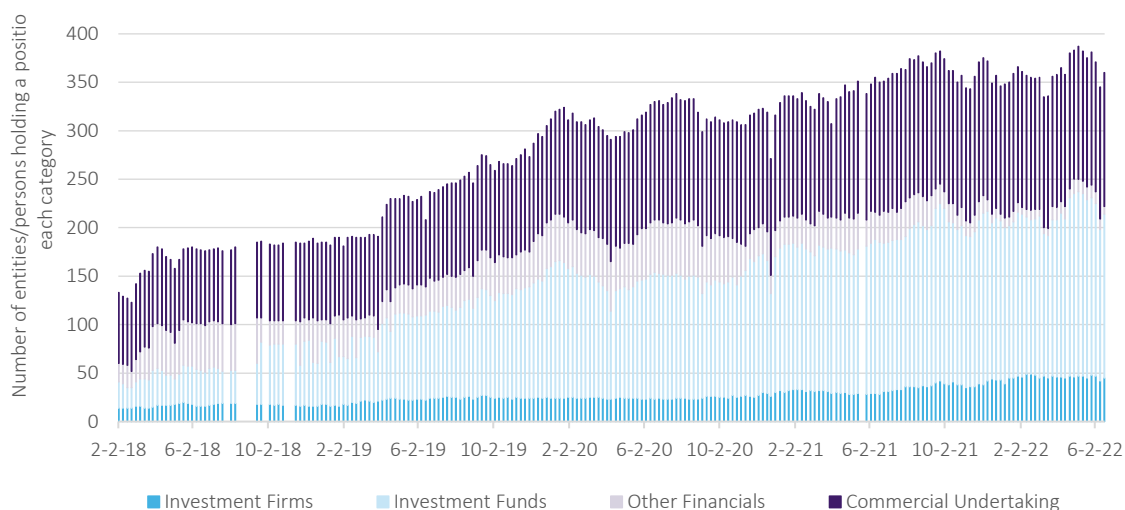
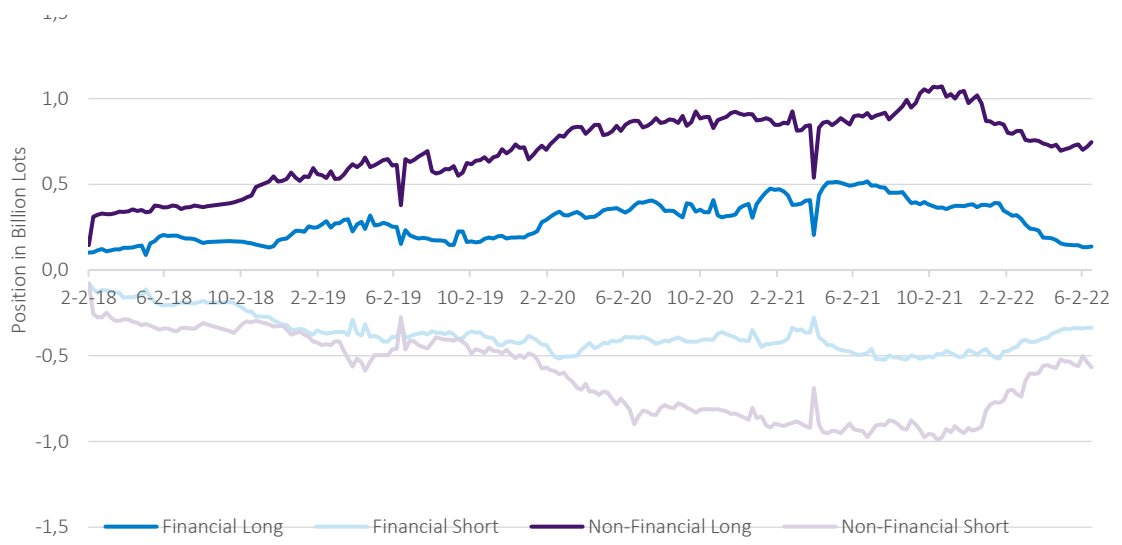


Figure 5: Positions by sector (source: ESMA, weekly position reports)





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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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