Consultation Paper

Review of certain aspects of the Short Selling Regulation
Responding to this paper

ESMA invites comments on all matters in this paper and in particular on the specific questions summarised in Annex 1. Comments are most helpful if they:

1. respond to the question stated;
2. indicate the specific question to which the comment relates;
3. contain a clear rationale; and
4. describe any alternatives ESMA should consider.

ESMA will consider all comments received by 19 November 2021.

All contributions should be submitted online at www.esma.europa.eu under the heading ‘Your input - Consultations’.

Publication of responses

All contributions received will be published following the close of the consultation, unless you request otherwise. Please clearly and prominently indicate in your submission any part you do not wish to be publicly disclosed. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure. A confidential response may be requested from us in accordance with ESMA’s rules on access to documents. We may consult you if we receive such a request. Any decision we make not to disclose the response is reviewable by ESMA’s Board of Appeal and the European Ombudsman.

Data protection

Information on data protection can be found at www.esma.europa.eu under the heading ‘Data protection’.

Who should read this paper?

All interested stakeholders are invited to respond to this consultation paper. This consultation paper is primarily of interest to issuers of financial instruments admitted to trading or traded on a trading venue, investment firms, market makers, primary dealers, persons who engage in short sales or transactions resulting in net short positions. Responses are also sought from
any other market participant including trade associations and industry bodies, institutional and retail investors, consultants and academics.
# Contents

References and abbreviations .................................................................................. 7

2 Executive Summary ............................................................................................... 11

2. Introduction ........................................................................................................... 13

3 Emergency measures adopted under SSR ......................................................... 15

3.1 Long term bans: empirical analysis of the impact of the bans adopted after the COVID-19 outbreak .............................................................. 15

3.1.1 Legal Framework/background ....................................................................... 15

3.1.2 Impact analysis - main findings ...................................................................... 17

3.1.3 Conclusions ................................................................................................... 20

3.2 Long term bans: relevant competent authority .................................................. 21

3.2.1 Legal framework ............................................................................................ 21

3.2.2 Analysis .......................................................................................................... 23

3.2.3 Proposed amendment to the SSR .................................................................. 25

3.3 Long term bans: prohibitions under point a and b of Article 20(2) .................. 26

3.3.1 Legal Framework ............................................................................................ 26

3.3.2 Analysis .......................................................................................................... 27

3.3.3 Proposed amendments to SSR ....................................................................... 27

3.4 Long term bans: scope of the ESMA Opinion ................................................... 27

3.4.1 Legal Framework ............................................................................................ 27

3.4.2 Analysis .......................................................................................................... 28

3.4.3 Proposed amendments to SSR ....................................................................... 28

3.5 Long-term bans: scope of the measure in relation to indices, baskets of instruments and ETFs ................................................................. 29

3.5.1 Legal Framework ............................................................................................ 29

3.5.2 Analysis .......................................................................................................... 29

3.5.3 Proposed amendments to SSR ....................................................................... 30

3.6 Review of the conditions for RCAs to adopt emergency measures and ESMA intervention powers under Article 28 SSR ............................... 30

3.6.1 Legal Framework ............................................................................................ 30

3.6.2 Analysis .......................................................................................................... 32

3.6.3 Proposals ....................................................................................................... 33

3.7 Short term bans: procedure for issuing short term bans and ESMA mediation powers 35
3.7.1 Legal Framework

3.7.2 Analysis

3.7.3 Proposed amendments to SSR

4 Review of SSR regarding the requirements for the calculation of NSPs, the ‘locate’ rule and the list of exempted shares

4.1 Calculation of NSPs in shares: subscription rights

4.1.1 Legal framework

4.1.2 Analysis

4.1.3 Proposed amendments to the SSR

4.2 Rules against uncovered short sales in shares

4.2.1 Introduction

4.2.2 Legal Framework

4.2.3 Weakness of the third party’s commitment under Article 12(1)(c) SSR

4.2.4 Absence of a Level 1 record-keeping obligation in relation to ‘locate’ arrangements

4.2.5 Lack of harmonised sanctions for ‘naked’ short selling

4.3 List of exempted shares

4.3.1 Legal Framework

4.3.2 Analysis

4.3.3 Proposed amendments

5 Transparency of net short positions

5.1 Article 6(2) SSR Publication Threshold

5.1.1 Legal framework

5.1.2 Analysis

5.1.3 Proposed amendments

5.2 Publication of aggregated net short positions on shares

5.2.1 Legal framework

5.2.2 Analysis

5.2.3 Proposed amendments

5.3 Centralised notification and publication system

5.3.1 Legal framework

5.3.2 Analysis

5.3.3 Proposed amendments

6 Outdated References

6.1.1 Analysis and Proposed amendments to the SSR
Annexes ................................................................................................................................................. 66

7.1 Annex 1 ........................................................................................................................................... 66

7.2 Annex 2: Impact analysis of the 2020 short selling bans ............................................................ 67

7.2.1 Introduction .................................................................................................................................. 67

7.2.2 Effects of the ban on market quality ......................................................................................... 68

7.2.3 Differentiated effects across sectors ......................................................................................... 82

7.2.4 Possibility of a displacement effect ......................................................................................... 83

7.2.5 References .................................................................................................................................. 87

7.2.6 Annex ........................................................................................................................................... 88
## References and abbreviations

### Legislative References

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
</table>

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GDPR Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) 7

Implementing Regulation 827/2012 Commission Implementing Regulation (EU) No 827/2012 of 29 June 2012 laying down implementing technical standards with regard to the means for public disclosure of net position in shares, the format of the information to be provided to the European Securities and Markets Authority in relation to net short positions, the types of agreements, arrangements and measures to adequately ensure that shares or sovereign debt instruments are available for settlement and the dates and period for the determination of the principal venue for a share according to Regulation (EU) No 236/2012 of the European Parliament and of the Council on short selling and certain aspects of credit default swaps


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7 OJ L 119, 4.5.2016, p. 1–88
European Parliament and of the Council with regard to regulatory technical standards for the reporting of transactions to competent authorities\textsuperscript{13}

SSR

Regulation (EU) No 236/2012 of the European Parliament and of the Council of 14 March 2012 on short selling and certain aspects of credit default swaps\textsuperscript{14}

Abbreviations

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<th>Abbreviation</th>
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<tr>
<td>CDS</td>
<td>Credit Default Swap</td>
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<td>CP</td>
<td>Consultation Paper</td>
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<td>CSD</td>
<td>Central Securities Depository</td>
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<td>EC</td>
<td>European Commission</td>
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<td>EEA</td>
<td>European Economic Area</td>
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<td>ESMA</td>
<td>European Securities and Markets Authority</td>
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<td>ETF</td>
<td>Exchange-Traded Fund</td>
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<td>EU</td>
<td>European Union</td>
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<td>FIRDS</td>
<td>Financial Instruments Reference Database System</td>
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<td>FX</td>
<td>Foreign Exchange</td>
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<td>GBP</td>
<td>British Pound Sterling</td>
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<td>GDR</td>
<td>Global Depository receipt</td>
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<td>ISIN</td>
<td>International Securities Identification Number</td>
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<tr>
<td>MMoU</td>
<td>Multilateral Memorandum of Understanding</td>
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<td>MTF</td>
<td>Multilateral Trading Facility</td>
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<td>NSP</td>
<td>Net Short Position</td>
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<td>NCA</td>
<td>National Competent Authority</td>
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<td>OTC</td>
<td>Over-the-Counter</td>
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<td>OTF</td>
<td>Organised Trading Facility</td>
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<td>Q&amp;A</td>
<td>Questions and Answers</td>
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<tr>
<td>RTS</td>
<td>Regulatory Technical Standards</td>
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<td>RCA</td>
<td>Relevant Competent Authority</td>
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<tr>
<th>SRO</th>
<th>Self-regulatory Organization</th>
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<td>TOTV</td>
<td>Traded on a Trading Venue</td>
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<td>UK</td>
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2 Executive Summary

Reasons for publication

In this CP ESMA undertakes a systematic review of the provisions of the SSR. During the COVID-19 crisis, RCAs adopted a number of emergency measures, consisting both of short- and long-term bans. Evidence from the crisis proved how widespread emergency situations might unfold very quickly requiring immediate responses. In such instance, the measures adopted by RCAs were not only more numerous, but also differed in scope with respect to most emergency measures previously taken by RCAs under SSR. ESMA has analysed the impact of such measures and proposes in this CP targeted amendments to the SSR, which aim, among others, at facilitating the operation of the SSR in any future emergency circumstances.

Additionally, ESMA in light of the episodes of high volatility which took place in the US markets and elsewhere in respect of the so-called “meme stocks”, has considered the possibility of similar phenomena developing in European markets and is re-assessing in light of such occurrences the relevant SSR provisions.

 Stakeholders are invited to provide feedback on the proposals presented in this CP. The input from stakeholders will help ESMA to finalise the review of the SSR and propose targeted improvements in light of the experience gathered in light of recent events and more generally since the entry into force of SSR.

Content

The CP focusses on three main areas of the SSR. Section 3 presents an empirical analysis of the impacts of the short selling bans adopted during the COVID-19 crisis and proposed improvements to the current legislative provisions which govern emergency measures (i.e. long term bans, short term bans and ESMA powers to issue emergency measures). The proposed amendments aim at clarifying the interpretation of certain provisions and overall ensuring the procedure for the issuance of short and long-term bans is sufficiently flexible for RCAs to tackle emergency situations. Section 4 proposes a review of the current framework for the calculation of NSPs, the locate rule and the list of exempted shares. In this section several proposed amendments are presented, including a clarification of how subscription rights should be treated in the calculation of NSPs, proposals to strengthen the existing rules against uncovered short sales and proposed amendments to the list of exempted shares. Section 5 presents a review of the framework for transparency and publication of NSPs, discussing the merits of keeping the current publication threshold in light of recent market turmoil events and possible improvements to the system for publication and disclosure to the public of NSPs.

Next Steps
ESMA will consider the feedback it receives to this CP and expects to publish a final report to the EC in early 2022.
2. Introduction

5. The SSR entered into force in November 2012 with the aim of creating a common regulatory framework regarding the requirements and powers with respect to short selling. The need to establish such common regulatory framework emerged in the aftermath of the financial crisis, where EU Member States adopted highly diversified measures to restrict or ban short selling as such practice could aggravate the downward spiral of shares’ prices and lead to systemic risks.

6. More specifically, the SSR was introduced with a threefold aim: (i) ensuring direct and uniform application throughout the EU of obligations on private parties to notify and disclose NSPs, (ii) fostering greater coordination and consistency between Member States when taking measures in exceptional circumstances and (iii) prohibiting uncovered short sales. Such coordination is achieved also by granting ESMA the power to coordinate measures taken by competent authorities and, in some instances, to take measures itself.

7. In January 2017 ESMA received a mandate from the EC to deliver Technical Advice on some aspects of the SSR. ESMA delivered such Technical Advice in December 201715. The Advice had a focus on three elements of the SSR: the exemption for market making activities; the procedure for imposing short-term restrictions on short selling; and the method of notification and disclosure of NSPs. At this point in time no measures have been taken yet in response to the ESMA Technical Advice.

8. ESMA deems it appropriate to perform a further review of SSR provisions, broadly focusing on three areas: (i) an empirical analysis of the impacts of the short selling bans adopted during the COVID-19 crisis and proposed improvements to the current legislative provisions which govern emergency measures (i.e. long term bans, short term bans and ESMA powers to issue emergency measures); (ii) a review of the current framework for the calculation of NSPs, the locate rule and the list of exempted shares; (iii) a review of the framework for transparency and publication of NSPs.

9. A review of the SSR is considered particularly relevant at this stage for several reasons. Firstly, the COVID-19 crisis brought evidence of how widespread emergency situations might unfold very quickly requiring immediate responses. During this crisis, RCAs and ESMA adopted a high number of emergency measures, which differed in scope with respect to emergency measures previously taken by RCAs under SSR. In fact, since the entry into force of the SSR, the long-term bans issued usually affected one or a basket of instruments, whilst during the COVID-19 crisis the measures introduced by different RCAs affected a large number of shares or even all issuers listed on multiple venues, including the main RMs of several countries.

10. Additionally, as a response to the selling pressure and volatility which affected financial markets during the COVID-19 crisis, ESMA issued a decision to lower the 0.2% notification

threshold set out in Article 5(2) of SSR in shares admitted to trading on a regulated market, to 0.1% of the issued share capital for a period of three months. Such decision was renewed three time in the course of 2020 and followed by an ESMA Opinion to the EC in May 2021, recommending lowering the threshold for notifications to 0.1% on a permanent basis. The aim of this measure is to increase the transparency of NSPs for RCAs and address the market developments and the changes in market structure which took place in the aftermath of the crisis.

11. Based on the experience and data gathered during the COVID-19 crisis events, ESMA has gathered evidence which allows to evaluate the effects of the short selling bans and their implications on market quality. Such evidence, presented in Section 3 and further detailed in Annex II of this CP, has enabled ESMA to effectively assess potential improvements of the SSR, aiming at aligning certain provisions and overall simplifying the conditions to be met when RCAs or ESMA should issue emergency measures. Based on the experience of the crisis, ESMA believes it would be beneficial to address the proposed changes in a timely manner.

12. ESMA’s attention towards a review of the SSR has also been driven by the events which took place in the US markets and elsewhere in respect of the so-called “meme stocks”. Large purchases of shares and call options in so-called meme stocks combined with very high short positions created the conditions for sharp price increases leading to a ‘short squeeze’. In light of these events and the increased role that the use of social media can play in financial markets, ESMA takes this opportunity to consult on the rules encompassing the publication of NSPs and the rules prohibiting uncovered short sales in shares.

13. With respect to the current rules encompassing the publication of NSPs, in 2017 ESMA had already consulted and analysed the effects of the 0.5% public disclosure threshold. In Section 4 of this CP, ESMA has undertaken a further empirical analysis based on the evidence which was gathered in the course of 2020 and concluded that disclosed NSPs remained relatively stable, also during the COVID-19 outbreak. Based on the results of this analysis ESMA discusses the benefits and shortcomings of disclosure of NSPs, and the need for possible amendments in Section 4.

14. With respect to the ‘locate rule’ currently envisaged in the SSR, in Section 4 of this CP, ESMA discusses three potential shortfalls in the EU rule against ‘naked’ short selling: the low level of commitment of third parties providing certain locate arrangements, the absence of a true record-keeping requirement for locate arrangements and the lack of harmonisation of the sanctions applicable to the infringement of the ‘locate rule’.

15. Additionally, with respect to SSR scope and definitions, it should be noted that since the entry into force of MiFID II in January 2018, several references currently contained in the SSR appear to be outdated as they refer to MiFID I legal provisions.

16. Other topics which are discussed in this CP are the methodology for calculation of NSPs in shares, addressed in Section 4, and the possibility of creating a centralised publication system for NSPs, addressed in Section 5. With respect to the methodology for the
calculation for NSPs in shares, ESMA considers the possible merits of including subscription rights in such calculations. With respect to the creation of a centralised notification and publication system, ESMA follows up to the proposals initially discussed in the 2017 Technical Advice and considers the benefits which could arise for stakeholders and the wider public.

3 Emergency measures adopted under SSR

3.1 Long term bans: empirical analysis of the impact of the bans adopted after the COVID-19 outbreak

3.1.1 Legal Framework/background

17. Articles 20 and 23 of SSR set out the framework under which RCAs may prohibit or restrict NSPs and short-selling practices.

18. More specifically, SSR provides RCAs with the possibility to make use of two different types of restrictions i.e., long-term and short-term bans. While the short-term ban aims at preventing a disorderly decline in the price of the instrument, the long-term ban aims at mitigating the effects of adverse developments which constitute a serious threat to financial stability or can undermine market confidence.

19. In detail, Article 20 of SSR provides that an RCA may impose long-term bans, consisting in prohibiting or imposing conditions to any persons entering into a short sale. The prohibition may also apply to any persons entering into any other transaction which has the effect of conferring a financial advantage on the natural or legal person in the event of a decrease in the price or value of another financial instrument.

20. Article 20(1) of SSR states that such measure can be taken by RCAs only where the following conditions are met: (i) there are adverse events or developments which constitute a serious threat to financial stability or to market confidence in the Member State concerned (or in one or more other Member States); and (ii) the measure is necessary to address the threat without having a detrimental effect on the efficiency of financial markets.

21. In addition, pursuant to Article 24 of SSR, long-term bans can last for a period not exceeding 3 months and may be renewed for further periods not exceeding another 3 months when the conditions which have led to the ban in first place continue to apply.

22. For long-term bans, Article 27 of SSR mandates ESMA to issue an opinion on whether it considers the measure necessary to address the exceptional circumstances, within 24 hours of the notification made by an RCA. Since 2012, ESMA has issued more than
30 opinions (including both introductions and renewals) with one being a negative opinion.

23. With respect to short-term bans, Article 23 of SSR foresees that those may be imposed by RCAs where the price of a financial instrument on a trading venue has fallen significantly during a single trading day in relation to the closing price on that venue on the previous trading day. In this case, the RCA may prohibit or restrict persons from engaging in short selling of that financial instrument in the relevant trading venue to prevent a disorderly decline in the price of the instrument.

24. Article 23(2) of SSR also states that this measure shall apply for one trading day following the one in which the price fall described in the previous paragraph occurs. The ban can nonetheless be extended when certain conditions set out in SSR are met but, in any case, it should not exceed three consecutive trading days. No ESMA opinion is required in this case.

25. Since the entry into force of SSR in 2012, a long-term ban has been issued 16 times, excluding renewals. Furthermore, the measure usually affected one or a basket of instruments except on three occasions: (i) the measure introduced by the Comisión Nacional del Mercado de Valores (CNMV) in 2012 which affected all shares listed on a Spanish official secondary market for which the CNMV was considered the competent authority, (ii) the measure introduced by the Hellenic Capital Market Commission (HCMC) in 2015 which affected all shares admitted to trading of the Athens Exchange and the MTF of “EN.A”, as well as all related instruments; and (iii) the measures introduced by 6 different RCAs at the beginning and during the COVID-19 crisis which affected a large number of shares traded on different EU RMs and MTFs.

26. The long-term bans mentioned in the previous paragraph were renewed at least once, with the exception of the one issued by CNMV in 2012 as well as those issued by HCMC in 2012 and August 2015.

27. With respect to short-term bans, since the entry into force of SSR, few RCAs have activated this measure. This also includes the Commissione Nazionale per le Società e la Borsa (CONSOB) and the Comissao do Mercado de Valores Mobiliarios (CMVM) and affected a few different companies traded on the Italian MTA and on Euronext Lisbon.

16 The ESMA negative opinion is available here.
17 SSR and Delegated Regulation (EU) 918/2012 set the thresholds to identify a significant drop in the price falls for shares and other types of financial instruments.
18 Those countries are Austria, Belgium, France, Greece, Italy and Spain.
19 More precisely, the prohibition applied to shares admitted to trading on: Euronext Brussels and Euronext Growth Brussels for which the FSMA is the RCA; on the regulated market of the Vienna Stock Exchange for which the FMA is the RCA; on Euronext Paris, Euronext Growth Paris, Euronext Access Paris for which the AMF is the RCA; on the Italian MTA regulated market for which CONSOB is the RCA; on the regulated market of the Athens Stock Exchange for which HCMC is the RCA; and BOLSA DE MADRID, S.A., BOLSA DE BARCELONA, S.A., BOLSA DE VALENCIA, S.A., BOLSA DE BILBAO, S.A. and Mercado Alternativo Bursátil, S.A for which CNMV is the RCA.
28. Short-term bans were also adopted by four RCAs20 in the context of the COVID-19 crisis as explained in the following paragraph. In such cases, the RCAs concerned notified ESMA about their decision at the latest two hours after the end of the trading day and ESMA immediately informed the RCAs of the trading venues that trade the same financial instrument. When a short-term ban is adopted, it only applies to the jurisdiction of the RCA of the trading venue/s where the significant fall in price took place, whereas the other RCAs in which the same financial instrument is traded may: (i) agree with the measure and adopt similar restrictions in their own jurisdictions; (ii) not disagree with the measure and take no action in their own jurisdictions; or (iii) oppose the measure.

29. Focussing on the measures taken in the context of the COVID-19 outbreak, on 13 March 2020 Italy and Spain issued a short-term ban on all shares admitted to trading on RMs and MTFs. On 17 March Spain issued a long-term ban while Italy, France and Belgium issued short-term bans. Finally, on 18 March Belgium, France, Italy, Austria and Greece also issued long-term bans which lasted, taking into account the renewals, until 18 May 2020.

30. Those bans were triggered mainly by a threat to market confidence due to severe losses on the stock markets but also by possible potential negative effects on financial stability.

3.1.2 Impact analysis - main findings

31. ESMA has carried out an impact analysis of the long-term bans adopted during the first wave of the COVID-19 pandemic in 2020, with the aim to assess their impact on market quality, looking at liquidity, returns, and volatility indicators, as well as the possibility of a displacement effect between countries and to assess the effects of the bans on the financial sector compared to the industrial one.

32. The analysis has been conducted at European level, taking into account all EEA30 countries as well as the UK21. The main findings of ESMA’s impact analysis, as well as other recent publications on the effect of the 2020 bans, are summarised below and reported in detail in 7.2 Annex 2.

33. Most of the academic literature on short selling states that, under efficient market conditions, short sellers are informed traders and constraining short sales can reduce market liquidity. However, the literature also states that predatory short selling can contribute to the decline of stock prices and thus be responsible for a higher probability of default, especially for financial stocks and during crisis periods.

20 Belgium, France, Italy and Spain.
21 Since the data used in the analysis are encompassing the years 2019 and 2020, i.e. before the end of the Brexit transition period, and the amount of trading activities in the UK allow for increasing accuracy of the analysis during the matching process, UK shares are included in the matching process and in the regressions as a control group.
34. Focusing on the 2020 European bans, Lopez and Pastor (2020) analysed the differences in market quality between the ES IBEX35 (subject to short selling restrictions) and the DE DAX30 (not subject to short selling restrictions). The results are not clear-cut: whereas they identify a significant and negative impact of the ban on bid-ask spreads, which persisted once the ban was lifted, the ban also seemed to have improved the depth of IBEX35 constituents, based on the Amihud illiquidity indicator. The authors do not find further evidence that the securities subject to the ban experienced a decrease in their trading volume or volatility, and no significant impact of the ban on prices, CDS spreads. In addition, no specific link with financial stocks was observed.

35. Siciliano and Ventoruzzo (2020) analysed the impact of the bans on 15 selected EU countries; their results estimate a significant increase of bid-ask spreads, but in contrast to Lopez and Pastor (2020), also a small decrease of liquidity based on the Amihud illiquidity indicator, with more pronounced effects for financial stocks.

3.1.2.1 Effects of the ban on market quality

36. ESMA’s impact analysis intends to estimate whether, and to what extent, long term bans contributed to the widespread and steep increase in bid-ask spreads and volatility in stock markets observed during the market reaction to the first wave of the COVID-19 pandemic. The estimation relies on a difference-in-difference regression combined with matching techniques.

37. This empirical approach, extensively used in the economic studies of regulatory changes, is designed to measure the effect of a ‘treatment’, here the short selling ban, on a set of shares through the comparison of the behaviour of the treated group and a control sample (i.e. shares not subject to a short selling ban), before and after the short-selling ban.

38. The difference-in-difference model estimates the impact of the bans on four main variables of interest: two variables to assess the liquidity of the equity market (bid-ask spreads and the Amihud illiquidity indicator), abnormal returns (to represent the evolution of prices) and a volatility measure.

39. The ESMA analysis covered 2,464 European stocks between 13 January 2020 (i.e., two months before the bans) and 30 June 2020, and the final sample after the matching process relies both on ESMA databases and market data.

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22 informe Ventas en corto 23072020.pdf (cnmv.es)
23 However, since this result is surprising and not in line with the literature, the authors point out that further research on this issue can be useful, especially since Amihud levels for Spanish securities were higher than their German control group - a difference that could have been caused by country risk.
24 To increase the robustness of the analysis, sample matching is added as a pre-analysis step: the goal is to balance the treated and the control groups to correct for endogenous selection on observed variables. Moreover, multi-country evidence from analysing all European banning jurisdictions, rather than individual country data, should be less affected by idiosyncratic effects arising from other country-specific policy interventions that occurred during the crisis period.
40. Consistent with prior theoretical and empirical work, the short selling bans imposed during the crisis are associated with a liquidity deterioration (as measured by bid-ask spreads and the Amihud illiquidity indicator). Separating our dataset by stock characteristics, we observe that the deterioration of liquidity is more pronounced for large-cap stocks, highly fragmented stocks and for stocks with listed derivatives. However, using two different measures of volatility\textsuperscript{25}, the analysis highlights that shares in banned countries exhibited a lower degree of volatility during the ban period, implying an average decrease of between -6\% and -10\%, while the effects on abnormal returns do not appear significant.

\subsection*{3.1.2.2 Effects across sectors}

41. ESMA also completed the market quality analysis to assess whether sectoral dynamics influenced the effects of the bans, focussing on the financial and industrial sectors. All in all, the results do not appear to be entirely conclusive to claim the presence of a “sectorial effect”.

42. Contrary to other crises which were of a financial nature, the financials subset did not seem to behave entirely differently than the whole sample during the Covid-19 crisis. This might be explained by the fact that this crisis impacted both the financial sector and the real economy from the outset, which were also both supported by accommodative monetary policies and fiscal support at EU and national levels.

\subsection*{3.1.2.3 Possibility of a displacement effect}

43. ESMA also carried out an exploratory analysis to gauge the possibility of a shift in building NSPs from banning jurisdictions to non-banning ones (i.e. a ‘displacement’ effect) and the potential extent of such phenomenon.

44. First, the evolution of NSPs in our matched sample shows a large increase before the introduction of restrictive measures across Member States. By design, in countries with bans, NSPs started to decrease after their introduction. The increase of NSPs in non-banning jurisdictions also slowed down significantly from mid-March after the introduction of bans in other jurisdictions (with an increase of 15bp from March to May 2020, when the observed increase from February to March was 27bp), suggesting there was no clear displacement effect of short selling bans or reversal of NSPs towards non-banned shares.

45. Additionally, the activity of short sellers was examined with publicly disclosed position data, with the purpose of understanding whether the bans impacted the behaviour of short sellers. A decrease in the total number of publicly disclosed NSPs can be observed both in countries with and without bans. The number of active short sellers\textsuperscript{26}.

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\textsuperscript{25} Annex 2 of the CP.

\textsuperscript{26} “Active short sellers” are those short sellers with NSPs at or above 0.5\% of the issued share capital of an issuer that have published their position.
dropped from 99 (174) to 86 (170) in banning (non-banning) countries, a percentage decline of -13% (-2%).

46. Finally, to check for further short selling pattern, position holders were grouped according to their historical behaviour between January 2020 and the enactment of the ban. Holders that detain 50% (or more) of their positions in banning countries before the ban did not relevantly modify their shorting activity, and on 18 May 2020 still held 58% of their positions in banning jurisdictions, compared to 63% on the day of the ban enactment. Investors who were not active short sellers before the start of the ban had no choice but to take short positions in non-banning jurisdictions; thus, for these investors the ban acted as a constraint on their short selling preferences: as soon as the bans ended, their exposure to banning jurisdictions started to increase. In conclusion, the analysis of publicly disclosed data on NSPs does not point towards a major displacement effect of bans.

3.1.3 Conclusions

47. What emerges from the ESMA impact analysis is that the European long-term bans of 2020 had mixed effects, since they entailed a deterioration of market liquidity but also diminished the volatility of the concerned shares. Consistently with past opinions on proposed long-term bans27, ESMA is of the view that the restrictions on acquiring and increasing NSPs, together with their described impact on volatility can contribute to preventing that increasing NSPs exacerbate disorderly downward price spirals. Moreover, ESMA is of the view that those impacts were particularly relevant in the context of the stressed market conditions with limited accurate and reliable information experienced after the COVID-19 outbreak.

48. Therefore, ESMA considers that the current framework supports RCA’s capacity to address concerns on financial stability and shall therefore remain available to RCAs in case of developments impacting the resiliency of financial markets.

49. However, it is noted that the overall framework would benefit from some operational improvements which are presented in the following sections.

Question 1: Does ESMA’s analysis confirm the observation that you made in your perimeter of competency? Please provide data to support your views.

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27 For all, see ESMA opinion on AMF’s proposed renewal of their short selling ban (15 April 2020)
3.2 Long term bans: relevant competent authority

3.2.1 Legal framework

50. The identification of the RCA is of relevance for the application of several provisions contained in the SSR, like notifications and emergency measures.

51. In respect of emergency measures, the determination of the RCA is particularly important to identify the scope of a national ban and whether the consent from another RCA has to be sought in the adoption process.

52. During the adoption of SSR emergency measures linked to the COVID-19 pandemic, ESMA noted that the current definition of RCA in the SSR can be subject to different readings, creating uncertainties over the instruments covered by a ban and the necessary steps for its adoption.

53. First, the RCA definition contains a reference to MiFID I delegated regulation which appears to be outdated in the light of the transition to MiFID II.

54. Furthermore, in case of ban of short positions on a share that can be built through a variety of instruments (as opposed to the case of a simple short sale ban on a specific instrument), the current definition may not be seen as clear in determining the RCA for the instruments considered in the calculation of the NSP on that share.

55. More in detail, Article 2(1) letter (j) of the SSR provides different criteria to identify the RCA for the application of SSR according to the financial instrument considered.

56. Article 2(1)(j)(v) of SSR, stipulates that with respect to instruments other than sovereign debt, like shares, depository receipts and derivatives, including index related derivatives, the RCA is to be determined in accordance with the criteria contained in Delegated Regulation 1287/2006.

57. Delegated Regulation 1287/2006 is a level two measure supplementing MiFID I on the obligations to report transactions under Article 25(3) of that Directive.

58. In particular, Article 2(7) of Delegated Regulation 1287/2006 identifies the RCA for a financial instrument as the competent authority of the most relevant market in terms of liquidity for that financial instrument.

59. With the application of MiFID II / MiFIR regime, Article 26(1) and (2) of MiFIR replaced Article 25(3) of MiFID I on the obligations to report transactions. Under the current

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28 Point (i)-(vii) of SSR list the criteria to identify the RCA for different type of sovereign debt and other financial instruments.
30 The criteria for the determination of the most relevant market in terms of liquidity are provided by Chapter III of the same Delegated Regulation.
regime, obligations to report transactions described in MiFIR are supplemented by RTS 22.31.

60. As a result, Article 16 of RTS 22 laid down the current rules for determining the most relevant market in terms of liquidity.

61. Delegated Regulation 1287/2006 under MiFID I and RTS 22 under MiFID II partly differ in the criteria to be applied to identify the most relevant market in terms of liquidity. For example, with respect to shares, Delegated Regulation 1287/2006 identified the most relevant market as the place of first admission to trading, whereas RTS 22 uses for the same aim the highest turnover, giving preference to RMs first and then MTFs.

62. Pursuant to Article 27 of MiFIR and Article 4 of MAR, the national competent authority for the most relevant market in terms of liquidity for transaction reporting purposes is published by ESMA in the FIRDS section of its website32.

63. In its Q&A 4.10 of November 2018 on the identification of the RCA33, ESMA clarified that despite the formal reference in SSR to the Delegated Regulation 1287/2006 supplementing MiFID I has not being changed, such references should be read as referring to the RTS 22.34

64. As a result, the RCA for instruments listed in Article 2(1)(j)(v) of SSR coincides with the competent authority of the most relevant market in terms of liquidity for transaction reporting as identified pursuant to RTS 22 and as displayed in the FIRDS section of ESMA website.

65. In respect to emergency measures, the Articles from 18 to 23 of SSR provide RCAs with different powers that can be deployed in exceptional circumstances.

66. In particular, Article 20(2) of SSR grants RCAs the power to ban short sales and transactions that may have as an effect to confer a financial advantage in the event of a decrease in the price or value of another financial instrument.

67. Such emergency measures, also referred to as bans, apply directly to those instruments for which the authority adopting the ban is the RCA.

31 Article 26(1) MiFIR establishes a reporting obligation for investment firms and requires RCAs to take arrangements to ensure that the competent authority of the most relevant market in terms of liquidity for the financial instruments receives the details of transactions in financial instruments. Paragraph 9 of Article 26 MiFIR confers to ESMA the task to develop RTS specifying the criteria for defining a relevant market in accordance with paragraph 1, which served as a legal basis for the Delegated Regulation 2017/590 (RTS 22).

32 Therefore, the notification of NSPs in shares (Article 5 SSR) and the public disclosure of significant NSPs in shares (Article 6 SSR) have to be submitted to the national competent authority of the jurisdiction that appears in FIRDS as "Upcoming RCA".


34 ESMA’s reding was based inter alia on i) rules of succession of laws and legal certainty; ii) reading of the reference to Delegated Regulation 1287/2006 in Article 2(1)(j)(v) of SSR as a dynamic reference; and iii) the specific obligation provided by Article 94 MiFID II to construct references to MiFID I as references to MiFID II or to MiFIR.
68. Pursuant to Article 22 of SSR, where an authority is not the RCA for a financial instrument which it wishes to include within the scope of the ban, the consent from the RCA has to be sought.

3.2.2 Analysis

69. Despite having already clarified in its Q&A on the RCA that references to the MiFID I framework in the RCA definition should be read as referring to MiFID II, ESMA was made aware that the outdated reference to the old MiFID I framework could be misleading with respect to the RCA determination.

70. In particular, for derivatives based on an index composed of shares all of which are traded on a particular regulated market, the application of the outdated reference to MiFID I would lead to a different result. The same would be true in the case of depository receipts.

71. Additionally, following the adoption of SSR emergency measures linked to the COVID-19 pandemic, ESMA noted another aspect connected to the definition of RCA for the purpose of the adoption of emergency measures that may be subject to different readings.

72. One reading would be to determine the RCA for the emergency measure on a per-instrument basis, i.e. in relation to each instrument included in the calculation of the NSP.

73. Under this approach, if an authority adopts a ban on NSPs in respect of a share, it will need to seek the consent from the RCA for those instruments that are included in the calculation of the NSP in that share for which the authority adopting the ban is not the RCA.

74. Another reading would be to determine the RCA for the emergency measure on a “share-based approach”, i.e. considering the share as the only target of the measure, with all the instruments used in the calculation of the NSPs automatically included in the scope of the ban.

75. Under this approach, the RCA competent for the instrument target of the ban (typically a share) has the competence to include in the ban also all the instruments considered in the calculation of the NSP for the target instrument.

35 In that case, the RCA for such instruments under Delegated Regulation 1287/2006 would be the competent authority supervising the market of the shares composing the index, whereas under RTS 22 the RCA for the instruments would be the competent authority of the market where the instrument was first admitted to trading. Differently, for any derivative based on multi-country indices like the Eurostoxx, the application of MiFID I and MiFID II would lead to the same result in terms of RCA.

36 Delegated Regulation 1287/2006 would apply as criterion for identification of the RCA the place of first admission to trading, whilst RTS 22 uses the highest turnover, giving preference to RMs first and then to MTFs.
76. In practical terms, the difference between the two approaches would be relevant whenever the RCA for the share is not the RCA for the other instruments included in the calculation of the NSP for that share.

77. For instance, we can consider the case of RCA A, supervising the most liquid market for share X, that intends to adopt an emergency measure for that share, thereby prohibiting transactions which result in opening or increasing a NSP on share X.

78. For derivatives on indices that include that share, pursuant to RTS 22 the RCA is the one supervising the market where the derivative was first admitted to trading. Under the per-instrument approach, if that market does not coincide with the most liquid one for the share X, the RCA for the index-based derivatives would not be RCA A (referred to as NCA B from this point). Therefore, the effectiveness of the ban in relation to those derivatives would be conditional upon RCA B’s consent.

79. On the contrary, following the share-based approach, the ban adopted by RCA A would be applicable to the index-based derivatives without the need to request RCA B’s consent.

80. On the same line, under the share-based approach, other related instruments such as GDRs would be automatically caught by the ban, without any consent needing to be requested even where the RCA for the GDR is not the RCA for the share.

81. The determination of the RCA on a per-instrument approach is grounded on the definition of RCA provided by Article 2(1)(j) of SSR, which determines the RCA for a broad range of different financial instruments.

82. Contrastingly, the shared based approach is based on the objective of the ban, i.e. the prevention of a disorderly decline in the price of a financial instrument.

83. In that sense, its success depends on its capacity to capture all financial instruments which confer a financial advantage in the event of a decrease in the price or value of the ‘target’ share.

84. ESMA is of the view that considering the objective of the emergency measures, the correct approach to be applied in this context is the shared-based approach, whereby the RCA is to be determined only in relation to the share on which the ban on a NSP is adopted.

85. ESMA considers that the ‘financial instruments’ referred to both in Articles 20 and 22 of SSR are the very target of the ban (e.g. shares), and that for any ban to be efficient entering into NSPs via any kind of instrument needs to be addressed by the ban.

86. A ban leaving out some instruments transactions in which are able to affect the value of the target share would result in rendering a ban ineffective.
87. This reading is supported by the fact that Article 20(2)(b) of SSR covers any transaction which "creates, or relate to" a financial instrument. The reference to potentially any transaction able to confer a financial advantage in the event of a decrease in price of the share suggests that the EU legislator wished to give RCAs broad intervention powers in order to effectively address the risks calling for the exceptional measure.

88. In this context, the consent required under Article 22 of SSR is meant to prevent an RCA from adopting bans on short positions over shares for which it is not the RCA. In the same view, such obligation does not require the consent of other RCAs to a ban on short positions when the authority adopting the ban is not competent for the derivatives determining the NSP over the targeted shares.

89. Furthermore, it is worth noting that the per-instrument approach is grounded on the criteria for the identification of the RCA provided in the RCA definition, which follows the rules to identify the competent authority for transaction reporting purposes under MiFIR.

90. However, the range of instruments through which an NSP can be created is much wider, as it includes instruments that may not be subject to transaction reporting.

91. For instance, when banning NSPs on a share, the RCAs intend to include also transactions in instruments for which there is no competent authority under the transaction reporting regime, such as non-listed investment funds, non-EEA derivatives over EU shares, equity swaps, spread bets and put options having EU shares as an underlying.

92. Additionally, from a practical perspective, the use of the FIRDS database - necessary to identify the RCA under the per instrument approach - would not allow the RCA adopting a ban to trace back all potential instruments included in the calculation of the NSP in that.

93. Therefore, under the per-instrument approach, uncertainties could also arise about the RCAs to whom the request for consent should be addressed. Moreover, RCAs would have to continually monitor whether new instruments included in the calculation of the NSP in the banned share are created in other jurisdictions and uploaded to the FIRDS database, in order to seek new consent(s) whenever another authority is the RCA. This would imply a risk of omitting requests for consent and having newly issued financial instruments which are not covered by a ban, ultimately undermining SSR’s objectives to capture all financial instruments which confer a financial advantage in the event of a decrease in the price or value of the ‘target’ share.

3.2.3 Proposed amendment to the SSR

94. Firstly, ESMA proposes to amend Article 2(1)(j) SSR by replacing the reference to Delegated Regulation 1287/2006 with a reference to RTS 22 for the sake of legal clarity.
95. Secondly, considering that the correct approach to identify the RCA relation to emergency measures is the share-based one, ESMA proposes a clarification in Article 2(1)(j) of SSR to specify the definition of RCA in the context of emergency measures.

96. More specifically, whilst the definition currently contained in Article 2(1)(j) of SSR should apply in general to the SSR provisions not relating to emergency measures, in the specific context of emergency measures, ESMA proposes to make it explicit that the RCA that is competent for the ‘target’ financial instrument is also competent for all those instruments which confer a financial advantage in the event of a decrease in the price or value of the ‘target’ instrument.

97. This provides additional legal certainty that an RCA can issue a ban for a target financial instrument with effects on all the instruments used in the calculation of NSPs for that target instrument. Such comprehensive approach vis-à-vis the scope of the ban could be subject to potential exclusions or limitations in relation to indices, baskets of instruments and ETFs, which ESMA expressly considered in Section 3.5.

Question 2: What are your views on the proposed clarifications?

3.3 Long term bans: prohibitions under point a and b of Article 20(2)

3.3.1 Legal Framework

98. RCAs can adopt measures under Article 20 of SSR which are often referred to as long term bans. In light of the evidence gathered since the entry into force of the SSR, ESMA believes that there is merit in clarifying the reading of such provisions in order to allow RCAs the possibility to be flexible in the issuance of long term bans.

99. Under Article 20 of SSR, RCAs can prohibit or impose conditions for natural or legal persons to enter into (i) a short sale or (ii) transactions other than a short sale which provide a financial advantage to the person if there is a decrease in the price or value of another financial instrument.

100. Article 1(2) of SSR specifies that Article 20 shall apply to all financial instruments as defined in Article 2(1)(a) of SSR, these being the instruments listed in Annex I C of MiFID [37]. Furthermore, Article 20(3) specifies the scope of the emergency measures under Article 20 of SSR, clarifying that they might apply to all financial instruments, a specific class of financial instruments or a specific financial instrument. RCAs also have the right to determine exceptions where such measures might not apply, e.g. in relation to market making and primary markets activities.

[37] See Section 6 for the need to update outdated references including the reference to Annex I Section C of MiFID I.
3.3.2 Analysis

101. The current drafting of Article 20(2)(a) and (b) of SSR implies that long-term bans can target either short sales or transactions, other than a short sale, which provide a financial advantage to the person if there is a decrease in the price or value of another financial instrument.

102. In this respect ESMA notes that RCAs should have the possibility to be flexible in adopting long term bans, by modulating their measure from a simple ban on short selling all the way through the spectrum to a ban on entering into new or increasing existing NSPs.

103. Whilst of the view that under Article 20(2) of SSR RCAs can already choose between one of the two options contained in point a) or b) of that Article or opt for both, ESMA was made aware of an alternative reading whereby point a) and b) could be seen as alternatives.

3.3.3 Proposed amendments to SSR

104. ESMA proposes to clarify that, where the relevant conditions contained in Article 20 of SSR are met, RCAs may adopt either one or both of the measures contained in point (a) and (b) of Article 20(2) of SSR. ESMA believes that such clarification confers to the RCAs the flexibility which is necessary to address emergency circumstances.

Question 3: Do you agree with the proposed clarification?

3.4 Long term bans: scope of the ESMA Opinion

3.4.1 Legal Framework

105. When an RCA adopts emergency measures under selected SSR provisions, the RCA is expected to notify ESMA within a set timeframe before the measures take effect. Further to the evidence gathered from the COVID-19 events, ESMA believes that it is worth revisiting the current requirements for ESMA after receiving such notification. This section focusses on the opinion ESMA is required to publish within 24 hours of reception of such notifications, and on the feasibility within such timeframe to carry out a thorough analysis of the circumstances which have occurred.

106. Article 26 of SSR states the duty for RCAs to notify ESMA and other RCAs before imposing or renewing any measure under Article 18, 19, 20 or 21 of SSR and before imposing any restriction under Article 23 of SSR. Article 26(3) establishes a timing framework for notifications, stating that notification of measures under Article 18, 19, 20 or 21 of SSR shall be made not less than 24 hours before the measure is intended to take effect or renewed. In exceptional circumstances, where the 24 hours’ notice is not possible, the measure can be notified within a shorter time frame.
107. Article 27 of SSR establishes ESMA’s duties after receiving a notification under Article 26 of SSR. Article 27(2) establishes that when ESMA receives a notification, within 24 hours from reception, should issue an opinion which specifically establishes (i) if ESMA believes adverse events or developments which constitute a serious threat to financial stability or to market confidence in on or more Member States have occurred, (ii) if the measure proposed by the RCA is appropriate to address such threat and (iii) if the proposed duration of the measure is justified.

108. In that opinion, ESMA is also expected to indicate whether it believes that any other competent authority should also take any relevant measure to address the threat. The opinion has to be published on ESMA’s website. Whenever an RCA intends to adopt a measure contrary to ESMA’s opinion (or declines to take a measure contrary to an ESMA Opinion), within 24 hours should publish a notice on its website explaining the reasons for doing so. In the latter circumstances, ESMA is expected to evaluate if it should exercise its intervention powers as per Article 28 of SSR.

3.4.2 Analysis

109. As highlighted above, ESMA upon receiving a notification under Article 18, 19, 20 or 21 of SSR is expected to publish on its website an opinion within 24 hours. Such opinion should discuss, among other matters, the existence of the factual events which led to the measure.

110. Due to the short timeframe within which ESMA is mandated to issue such Opinion, it should be noted that ESMA does not have the time to conduct an in-depth assessment of the events which occurred and of the possible impacts of such events. Hence, ESMA needs to rely on the factual basis and in-depth analysis provided by the RCA at the time of notification.

3.4.3 Proposed amendments to SSR

111. As proven by the recent events of market turmoil developing in several EU Member States due to the COVID crisis, ESMA believes that the 24 hours deadline set out in the regulation for the publication of ESMA’s opinion is challenging.

112. At the same time, ESMA acknowledges the exceptional nature of the circumstances where ESMA is required to adopt its opinion, which often require RCAs to take action in a very narrow timeframe.

113. In light of such considerations, ESMA recommends amending the relevant SSR provisions by stating that ESMA’s assessment and the relevant Opinion will mainly rely on the factual events and representations outlined by the RCA in its notification and will consider further sources only when available and their assessment is compatible with the short deadline. Any ESMA analysis on the facts upon which the emergency measure is proposed would not be compatible, in the majority of cases, with the 24 hours deadline for adopting the Opinion.
3.5 Long-term bans: scope of the measure in relation to indices, baskets of instruments and ETFs

3.5.1 Legal Framework

114. Indices, baskets of instruments and ETFs are currently included in the calculation of the NSP in a share to the extent to which the underlying shares are included in the indices, baskets of instruments and in the ETF.

115. Therefore, unless expressly exempted by an RCA, those instruments are included in the scope of long-term bans under Article 20 of the SSR by virtue of the financial advantage conferred in the event of a decrease in price or value of the associated financial instrument38.

3.5.2 Analysis

116. ESMA considers that there are two aspects that need to be examined in relation to indices, baskets and ETFs in the context of long-term bans under Article 20 of the SSR.

117. The first aspect relates to whether it would be appropriate to exclude such instruments from the scope of the bans. ESMA has been made aware that those instruments may be used for hedging market-wide risk and/or for taking positions on broader market movements. As such, there is an argument that those instruments would less likely be used by market participants to take an NSP in a single share.

118. In addition, one could argue that the inclusion of such instruments was designed for the purposes of the calculation of NSPs in the context of transparency obligations under the SSR, whilst there would be little merit in including them within the scope of an emergency measure. This is confirmed by the fact that historically RCAs have often limited or excluded those instruments from the scope of the bans that were adopted since the application of the SSR.

119. The second aspect is linked to the determination of the RCA for the purposes of restrictive measures as described in Section 3.2. As different RCAs may issue a ban targeting one or more shares included in those instruments at the same time, following the share-based approach in the determination of the RCA for the shares included in indices, baskets and ETFs, more than one ban may apply to the same instrument at the same time.

120. This is due to the fact that all the related instruments that are included in the calculation of the NSP for the target share would be captured by the ban (with no consent required where the RCA of the target share is not the RCA for the related instruments), making the

38 See Article 3(1)(b) and 3(3) of the SSR as well as Articles 5 and 6 supplemented by Annex I and Annex II of Delegated Regulation No. 918/2012.
same index, basket or ETF potentially subject to a different restrictive measure, whose scope may vary or even conflict with the other(s).

### 3.5.3 Proposed amendments to SSR

121. ESMA is considering proposing that indices, baskets and ETFs should be excluded from the scope of the long term bans. Such exclusion would also work for – and align with – ESMA’s reading in respect of the determination of the RCA for emergency measure purposes as set out in Section 3.2.

122. Alternatively, ESMA would suggest the introduction of a percentage–based weighting approach, whereby indices, baskets and ETFs should be excluded from the scope of the long-term bans only when the banned instruments do not exceed a percentage of the overall components.

123. Without prejudice to the above proposals ESMA is considering whether it is also worthwhile clarifying that any trading in indices, baskets and ETFs, in a manner that clearly demonstrates that it is intending to circumvent the ban, should be prohibited at all times.

**Question 4:** What are your views regarding the exclusion or, alternatively, a percentage–based weighting approach, for indices, baskets and ETFs in the context of long – term bans?

### 3.6 Review of the conditions for RCAs to adopt emergency measures and ESMA intervention powers under Article 28 SSR

#### 3.6.1 Legal Framework

124. As stated in Paragraph 18, under Article 20 of SSR, RCAs can prohibit or impose conditions to natural or legal persons entering into short sales or increasing their NSPs where:

   a. “there are adverse events or developments which constitute a serious threat to financial stability or to market confidence in the Member State concerned or in one or more other Member States; and

   b. the measure is necessary to address the threat and will not have a detrimental effect on the efficiency of financial markets which is disproportionate to its benefits” [emphasis added]39.

125. The above conditions are identical to those contained in Article 18, 19 and 21 of SSR in relation to RCAs’ power to respectively require exceptional disclosure from holders of NSPs, to require notification of significant changes in the fees from entities lending

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39 Article 20(1) of SSR.
financial instruments, and to prohibit or limit the possibility of entering into sovereign credit default swaps transactions. Article 18 of SSR (Notification and disclosure in exceptional circumstances) provides RCAs, if circumstances identical to those of Article 20 of SSR materialise, the power to require natural or legal persons who have NSPs in relation to a specific financial instrument or class of financial instruments to notify it or to disclose to the public details of the position where the position reaches or falls below a notification threshold fixed by the competent authority.

126. Article 28 of SSR gives ESMA intervention powers which are comparable to the RCAs’ ones under Articles 18 and 20 of SSR. Such powers respectively substantiate the right to require natural or legal persons to notify to the relevant RCA or disclose to the public details of their NSPs and to prohibit or impose conditions on short selling or increasing NSPs in a given financial instrument.

127. ESMA’s powers under Article 28 of SSR can be exercised only when:

a. the measures “address a threat to the orderly functioning and integrity of financial markets or to the stability of the whole or part of the financial system in the Union and there are cross-border implications; and

b. no competent authority has taken measures to address the threat or one or more of the competent authorities have taken measures that do not adequately address the threat” [emphasis added]40.

128. ESMA, when exercising such direct powers, needs to take into account the extent to which the measure:

a. “significantly addresses the threat to the orderly functioning and integrity of financial markets or to the stability of the whole or part of the financial system in the Union or significantly improves the ability of the competent authorities to monitor the threat;”

b. does not create a risk of regulatory arbitrage;

c. does not have a detrimental effect on the efficiency of financial markets including by reducing liquidity in those markets or creating uncertainty for market participants, that is disproportionate to the benefits of the measure”41.

129. Measures imposed by ESMA under Article 28 of SSR prevail over any previous measure taken by an RCA under Articles 18 and 20 of SSR.

130. Article 24 of the Delegated Regulation 918/2012 specifies the cases of adverse events or developments for RCAs to adopt restrictive measures under Articles 18 to 21 of SSR42 and what should be considered as a threat to the orderly functioning and integrity of

40 Article 28(2) of SSR.
41 Article 28(3) of SSR.
42 See Article 24(1) of Delegated Regulation 918/2012.
financial markets or to the stability of the financial system for ESMA to adopt its intervention powers under Article 28 of SSR\(^43\).

### 3.6.2 Analysis

131. The intervention powers conferred to ESMA by Article 28 of SSR are comparable to the powers conferred to RCAs by Articles 18 and 20 of SSR. However, the current drafting of such provisions is not fully aligned and the conditions to adopt the relevant measures differ.

132. In particular, for RCAs to activate the powers contained in Article 18 and 20 of SSR, the following conditions are to be met:

   a. adverse events or developments representing a serious threat to financial stability or market confidence;

   b. the measure is necessary to address the threat and does not have a detrimental effect on the efficiency of financial markets (which is disproportionate to its benefits).

133. Differently, for ESMA to exercise its intervention powers as per Article 28 of SSR, the following conditions are to be met:

   a. threat to the orderly functioning and integrity of the financial market or financial stability;

   b. cross-border implications;

   c. no competent authority has taken adequate measures.

134. Additionally, when adopting a measure under Article 28 of SSR, ESMA should also consider if the measure:

   a. significantly addresses the threat;

   b. does not create a risk of regulatory arbitrage;

   c. does not have a detrimental effect on the efficiency of financial markets including by reducing liquidity in those markets or creating uncertainty for market participants, that is disproportionate to the benefits of the measure.

135. On the one hand the conditions for RCAs to activate their powers are stricter, as they require the presence of a serious threat, compared to the mere threat for ESMA’s powers.

136. One the other hand, the conditions for ESMA to activate its powers are more stringent compared to the RCAs’, e.g. as the measure should “significantly” address the threat and

\(^{43}\) See Article 24(3) of Delegated Regulation 918/2012.
there should be cross border implications and no regulatory arbitrage nor adequate measure adopted at national level. Additionally, RCAs’ powers can be activated in presence of a threat to market confidence, whilst that is not the case for ESMA to activate its own intervention powers.

137. Whilst the additional conditions about the presence of cross border effects and the absence of adequate measure at national level and regulatory arbitrage seem coherent with the role of ESMA in the European supervisory landscape, the other differences do not seem to be justified in relation to measures whose scope is overlapping in substance.

138. Moreover, the experience gathered in the use of the above powers has highlighted some limits in relation to the cases contained Article 24(1) and the clarifications provided in Article 24(3) of Delegated Regulation 918/2012.

139. In particular, many of the provisions contained in Article 24 of Delegated Regulation 918/2012 are drafted in relation to financial institutions, market infrastructures and clearing settlement systems, while there is no reference to other types of issuers that, either for their size and systemic importance of for business specificities, may nonetheless raise supervisory concerns in case of a sharp decline in price or accumulation of NSPs in their financial instruments.

140. Additionally, ESMA noted that some of the adverse events mentioned in Article 24 of Delegated Regulation 918/2012 are connected to natural disasters or terrorist attacks, while other types of adverse scenarios such as the recent outbreak of the COVID-19 pandemic and the disruptions caused by the measures adopted by the governments to tackle the consequences of the pandemic are not explicitly mentioned.

3.6.3 Proposals

141. ESMA is of the view that the conditions set forth in Article 18 to 21 of the SSR for RCAs to adopt their powers should not be different from those for ESMA to activate its intervention powers under Article 28 of SSR. ESMA’s powers should retain some additional conditions connected with its specificities in the European supervisory landscape.

142. Therefore, ESMA is of the view that the conditions for ESMA to activate its intervention powers under Article 28 of SSR should be aligned with the ones for RCAs to adopt their national measures, i.e.:

a. presence of adverse events or developments representing a serious threat to financial stability or market confidence;

b. the measure is necessary to address the threat and does not have a detrimental effect on the efficiency of financial markets which is disproportionate to its benefits.

143. As additional conditions, ESMA should be able to activate its intervention powers if:
a. there are cross-border implications;

b. no competent authority has taken adequate measures;

c. the measure does not create a risk of regulatory arbitrage.

ESMA measures under Article 28 of SSR should continue prevailing over any previous measure taken by an RCA.

144. Furthermore, ESMA is of the view that the conditions set forth in Article 24(3) of Delegated Regulation 918/2012 in relation to ESMA’s powers under Article 28 of SSR should be deleted and instead the list of events contained in Article 24(1) of Delegated Regulation 918/2012 (currently relating to RCAs’ powers) should apply also to ESMA’s powers under Article 28 of SSR. This is because Article 24(3) of Delegated Regulation 918/2012, whilst adopting a slightly different wording, does not seem to provide any substantial addition compared to those included in Article 24(1) of the same Delegated Regulation.

145. Additionally, capitalising on the previous years’ experience in the application of the SSR, ESMA is of the view that the list of adverse events and developments currently contained in Article 24(1) of Delegated Regulation 918/2012 should be amended to include additional types of adverse events or developments in relation to:

a. issuers other than those operating market infrastructures, clearing settlement systems and financial institutions that, either because of their size, systemic importance, interconnections or business specificities, may also raise supervisory concerns in case of a sharp decline in price or accumulation of NSPs in their financial instruments;

b. new typologies of adverse events such as pandemic or widespread epidemic that either for their direct implications or as a result of the measures adopted by the governments to contain them may involve unusual volatility and downward spirals in financial instruments.

**Question 5:** Do you agree with the proposed alignment of the conditions to adopt measures under Article 20 and Article 28 of SSR?

**Question 6:** do you agree with the proposed amendments to Article 24 of Delegated Regulation 918/2012?
3.7 Short term bans: procedure for issuing short term bans and ESMA mediation powers

3.7.1 Legal Framework

146. In 2017 ESMA advised the EC to review the procedure for the issuance of short-term bans, proposing, among other amendments, that only the RCA of the most relevant market in terms of liquidity for an instrument should be empowered to adopt a short-term ban which would be applicable to all Member States. Currently, ESMA believes that is necessary to revise such procedure, especially taking into account the newly introduced duty for ESMA to undertake a mediation process to settle eventual disagreement among RCAs. In fact, the recent amendments to ESMA mediation procedure appear to make the procedure not suitable to apply to emergency circumstances.

147. Article 23 of SSR attributes powers to RCAs to temporarily restrict short selling of financial instruments in case of a significant fall in price, as detailed in Article 23(5) of SSR. Such powers are limited to cases in which the price of a financial instrument on a trading venue has fallen significantly during a single trading day compared to the closing price on the same venue on the previous trading day. The measures under Article 23 of SSR can be applied for one trading day after the significant fall in price has materialised and can be extended for a maximum of two trading days, where relevant conditions apply.

148. Where an RCA intends to adopt a short selling ban under Article 23 of SSR, the RCA should inform ESMA within two hours of the end of the trading day. ESMA, in turn, should inform the other RCAs supervising venues which trade the same financial instrument. Where the latter RCAs disagree with the initial decision to restrict or prohibit short sales of the relevant instrument, ESMA should exercise mediation powers.

149. ESMA’s mediation powers are detailed in Article 23(4) of SSR and prescribe ESMA to attempt conciliation among the relevant authorities before midnight of the same trading day. Where it is not possible to reach an agreement within the conciliation phase, ESMA may take a decision, as per Article 19(3) of the ESMA Regulation, before the opening of the next trading day.

3.7.2 Analysis

150. In 2017 ESMA issued Technical Advice to the EC on proposed improvements to the SSR. On that occasion ESMA undertook an in-depth analysis of the procedure for imposing short-term restrictions under Article 23 of the SSR. Such analysis encompassed (i) an evaluation of cases in which short term bans had been adopted, (ii) evidence on the crossing of the thresholds which identify a significant drop in price and (iii) the effects of short-term bans on prices, volatility and liquidity.

151. Considering the results of such analysis and the feedback received from market participants, ESMA provided the advice of amending the procedure under Article 23 of the SSR. ESMA proposed that only the RCA of the most relevant market in terms of liquidity
for the instrument should be empowered to adopt a short-term ban that is effective in all Member States, with an extended scope to cover not only short selling but also NSPs. Additionally, it was proposed that the other RCAs should not have any power to oppose the short-term measure.

152. The revised procedure proposed by ESMA envisaged that the RCA of the most relevant market in terms of liquidity informs ESMA and all other RCAs of its intention to adopt a short-term ban. The RCA adopting the short-term ban should then liaise with ESMA to ensure coordinated publication of the information concerning the short-term ban on the adopting RCA’s and ESMA’s website. The ban would be effective in all Member States upon publication on the website of the adopting RCA.

3.7.3 Proposed amendments to SSR

153. ESMA reiterates its 2017 Technical Advice, recommending, among other things, to amend the procedure to issue short term bans.

154. However, in January 2021 ESMA’s mediation procedure has been amended\(^\text{44}\) to take into account the changes introduced by Regulation (EU) 2019/2175. Therefore, should the 2017 advice not translate in an amendment of the Article 23 SSR, ESMA believes that an amendment of the mediation procedure proves necessary following the changes in the ESMA’s mediation procedure.

155. In fact, the new binding mediation procedure includes some changes, among which the appointment from ESMA Chair of an ad-hoc mediation panel through a call for participation, in case the conciliation phase does not succeed. Such additional step clearly requires further time to be implemented and makes it even more challenging to apply the mediation procedure as it stands to the emergency situation envisaged in Article 23 of the SRR. In fact, the limited number of hours within which mediation should be attempted under Article 23 of SSR is incompatible with the mediation procedure envisaged in the ESMA Regulation.

156. ESMA believes the SSR should be amended following the recommendations put forward in the 2017 Technical Advice. Such recommendations encompassed several aspects of the procedure for the issuance of short term bans, including:

a. the review the current procedure under Article 23 of the SSR, to provide that only the RCA of the most relevant market in terms of liquidity for the instrument can adopt a short-term ban that is effective in all Member States;

b. a proposed procedure for the issuance of the ban which envisages that the RCA should inform ESMA and all other RCAs of its intention to adopt a short-term ban. The RCA adopting the short-term ban should then liaise with ESMA to

ensure coordinated publication of the information concerning the short-term ban on the adopting RCA’s and ESMA’s website;

c. the proposal that other RCAs should not have any power to oppose the short-term measure and that the ban should be effective in all Member States upon publication on the website of the adopting RCA;

d. the proposal to change the scope of the short term from a ban on short selling on a trading venue into a ban on entering into or increasing NSPs. Additionally, the scope of short term bans would be limited to shares and sovereign debt instruments.

157. Alternatively, should the EC not take onboard ESMA’s 2017 advice, a revision of the mediation procedure as described in current Article 23 of SSR should nonetheless take place, to make it compatible with the ESMA’s new general mediation procedures.

**Question 7:** Do you agree with the proposed amendments to the SSR and, more specifically, the mediation procedure under Article 23 of SSR?
4 Review of SSR regarding the requirements for the calculation of NSPs, the ‘locate’ rule and the list of exempted shares

4.1 Calculation of NSPs in shares: subscription rights

4.1.1 Legal framework

159. Currently, in the calculation of NSPs in shares, investors have to include long and short positions in all classes of shares issued by the listed company (e.g. common stock, preferred, saving, etc.) including positions held through any instruments listed in Annex I, Part 1, of Delegated Regulation No. 826/2012 (e.g. derivatives, depositary receipts, etc.).

160. However, instruments that relate to unissued share capital, like subscription rights, are not included in the above-mentioned list by virtue of the fact that they give a claim to shares that are not issued yet and are hence not considered within the meaning of Article 3(2)(b) of the SSR.

4.1.2 Analysis

161. Currently, subscription rights are not included in the calculation of NSPs for shares. As stated above, this is primarily because subscription rights refer to shares yet to be issued, while Article 3 of the SSR mentions instruments referring to the “issued share capital” for the purposes of the calculation of NSPs.

162. ESMA previously considered whether an amendment to the SSR would be appropriate so as to include subscription rights in the calculations of NSPs in shares.

163. Firstly, in its 2013 Technical Advice, in paragraph 40, ESMA highlighted that, if an investor has a flat net position composed of a long position in a subscription right and a short position in the related shares, he could nevertheless have to report the short leg of its position to CAs and to the market, when the reporting levels are reached. This could be considered as potentially misleading for both the market and the issuers. At that point, it had already been brought to ESMA’s attention, that this could lead to the notification and publication of a “technical” NSP (i.e. a virtual NSP, as the short leg of the position is offset by a long position in subscription rights), which would not represent genuine positions.

164. After consideration of the arguments made by market participants for that matter, ESMA concluded that long positions in subscription rights and convertible

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45 See also Article 7(1)(b) of CDR 918/2012 as well as Q&A 6.3, p.21 of ESMA SSR Q&A.
bonds should remain excluded from the calculations. However, ESMA recommended to amend Delegated Regulation No. 826/2012 so that investors have a possibility to flag such positions in their notifications and disclosures of NSPs. Specifically, ESMA’s view was that, without challenging the method of calculation, this technical amendment to the reporting and disclosure forms would allow for commonly used shorting strategies to be visible to competent authorities or the market; this is of particular importance when companies are raising capital and thus more likely to be subject to short selling.

165. ESMA reconsidered the matter for the purposes of its 2017 Technical Advice and reiterated the same point and conclusion in its Final Report47.

166. Since then, ESMA has continued to be made aware of the fact that this remains an issue for certain market participants. This point has also been accompanied by the argument that, from an economic standpoint, subscription rights could be deemed equivalent to call options, which are currently included in the calculation of NSPs48.

4.1.3 Proposed amendments to the SSR

167. Given the feedback received, ESMA is considering whether the approach vis-à-vis subscription rights is appropriate and would like to publicly consult about the possibility to amend the SSR to allow for their inclusion in the calculation of the NSP: this could be achieved by a change in the Level 1 text of the SSR (Article 3(4)) together with an amendment to Article 7(b) of Delegated Regulation 918/2012.

**Question 8:** What are your views on ESMA’s proposal to include subscription rights in the calculation of NSPs in shares?

4.2 Rules against uncovered short sales in shares

4.2.1 Introduction

168. One of the key requirements introduced by the SSR is that all short sales of shares must be covered, i.e. naked short selling in shares is banned. The SSR requires short sellers to enter into different types of arrangements before entering into a short sale transaction, to ensure that they have the securities they wish to short sell available at settlement time. To that end, the SSR offers three possibilities: borrowing the shares (or alternative equivalent provisions), having another absolutely enforceable claim to obtain the ownership of the shares or entering into an arrangement with a third party to ‘locate’ the shares and have a reasonable expectation that shares will be available for settlement when due (please refer to the next section for more details on the current legal framework of this so-called ‘locate rule’).

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47 See ESMA/70-145-386 Technical Advice on the evaluation of certain elements of the Short Selling Regulation, para. 293
48 Options, as referred to in Article 5(2) and Annex I, Part 1 of Delegated Regulation 918/2012
169. After nine years in force, ESMA believes that several aspects of the locate rule could be revisited to reinforce some of its key elements.

170. Given the potential impact of ‘naked’ short selling strategies and how they are addressed by the existing regulatory framework, the need to address the ‘locate’ rule becomes even more relevant in the aftermath of the January 2021 events on the US market, where large purchases of shares and call options in so-called meme stocks, combined with very high short positions created the conditions for sharp price increases leading to a ‘short squeeze’ in some of these shares.

171. Since 2005, the U.S. Regulation SHO (Rule 203(b)(1) and (2) on Locate Requirement) generally prohibits a broker-dealer from accepting a short sale order in any equity security from another person, or effecting a short sale order in an equity security for the broker-dealer’s own account, unless the broker-dealer has borrowed the security, entered into a bona-fide arrangement to borrow the security, or has reasonable grounds to believe that the security can be borrowed so that it can be delivered on the date delivery is due before effecting a short sale order in any equity security. This “locate” must be made and documented prior to effecting the short sale. Rule 203(b)(2) provides an exception to the locate requirement for short sales effected by a market maker in connection with bona-fide market making activities.

According to SEC data published at the end of January 2021, $359 Million of GameStop shares failed to be delivered (representing more than 2 million shares). Although, as recalled by the SEC, “fails-to-deliver can occur for a number of reasons on both long and short sales” and although “fails-to-deliver are not necessarily the result of short selling and are not evidence of abusive short selling or “naked” short selling”, one can ask the question whether the existing locate rules are sufficiently strong.

172. Although no event of such magnitude seems to have occurred in the EEA during the same period, the following has been observed:

   a. NSPs in EU shares were moderate in January 2021: only 85 EU issuers had NSPs above 5% of their issued capital with a total market capitalisation of EUR 301 billion, while only 20 of them had NSPs above 10% (the largest one being 16%), with a total market capitalisation of EUR 71 billion.

   b. According to data gathered on settlement fails in EEA CSDs between December 2020 and March 2021, it appears that the settlement fails rate by volume increased on 25 January, due to failures to deliver in two shares with NSPs above 10% in January, and that the settlement fails rate by value
increased between 29 January and 5 February in respect of three similar types of ISINs. Please see the chart below:

Although these increases could be purely circumstantial, and that further analysis needs to be conducted to evidence a direct link with uncovered short sales, it cannot be excluded that such outcome could be due to uncovered short selling and failure to comply with the locate rule.

173. ESMA therefore believes that a review of the rules for locate arrangements could indeed help in reducing the risk of ‘short squeezes’ in the EEA in the future.

4.2.2 Legal Framework

174. Recital (18) SSR states that in order to reduce the potential risk of settlement failure and volatility, it is appropriate to place proportionate restrictions on uncovered short selling of such instruments.

175. To that end, Article 12(1) of the Regulation requires that a natural or legal person may only enter into a short sale of a share admitted to trading on a trading venue where one of the following conditions is fulfilled:
(a) the natural or legal person has borrowed the share; or has made alternative provisions resulting in a similar legal effect;
(b) the natural or legal person has entered into an agreement to borrow the share or has another absolutely enforceable claim under contract or property law to be transferred ownership of a corresponding number of securities of the same class so that settlement can be effected when it is due;
(c) the natural or legal person has an arrangement with a third party under which that third party has confirmed that the share has been located and has taken
measures vis-à-vis third parties necessary for the natural or legal person to have reasonable expectation that settlement can be effected when it is due.

176. The condition in point (c) above has been specified in Article 6 of Implementing Regulation 827/2012 and through dedicated ESMA Q&As. This article identifies three categories of locate arrangements, which must be properly evidenced before a short sale of shares can be undertaken:
   a. Standard locate arrangements and measures;
   b. Standard same day locate arrangements and measures;
   c. Easy to borrow or purchase arrangements.

177. As this last category of arrangements is the lightest locate requirement, as it suffices to obtain a locate confirmation, an ‘easy to borrow or purchase confirmation’ and the instructions to cover in case of failure to deliver by the short seller, it only applies to shares meeting certain liquidity requirements.

178. When drafting the ITS, ESMA took note that the MiFID definition of ‘liquid shares’ might be too limited and suggested to widen the scope to shares which are constituents of a main national index and underlying of a derivative contract admitted to trading on a trading venue.

179. As a consequence, Article 6(4) of Implementing Regulation 827/2012 covers two types of ‘liquid shares’: shares that meet the liquidity requirements established in Article 22 of Commission Regulation (EC) No 1287/2006 and “other shares that are included in the main national equity index as identified by the relevant competent authority of each Member State and are the underlying financial instrument for a derivative contract admitted to trading on a trading venue”.

180. As indicated in other section of this CP, such reference to Delegated Regulation (EC) 1287/2006 should be substituted by Article 2(1)(17) of MiFIR, which provides for the current definition of a liquid market. It is further specified in Delegated Regulation (EU) 2017/567 that establishes the following cumulative parameters to consider a share as liquid: - the free float; - the average daily number of transactions; - the average daily turnover; and - whether the instrument is traded on a daily basis.

181. In addition, Article 1(6) of Delegated Regulation (EU) 2017/567 establishes that the RCA of a Member State may designate additional shares as ‘liquid’ when less than five shares are considered to have a liquid market in accordance with the parameters described above.

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51 See as well Q&A 10.13 in ESMA Q&As on the SSR
182. Finally, to evidence the agreement, contract or claim representing the locate arrangement, the third party must provide it to the short seller in a durable medium\textsuperscript{53}.

183. As described above, the EU regulation is not dissimilar to the US one in this aspect: Article 12 SSR foresees that a natural or legal person may only enter into a short sale when the share has been located by a third party and measures vis-à-vis the third party have been taken to have a reasonable expectation that settlement can be effected when it is due.

184. However, this rule presents certain potential weaknesses, in particular:

a. The risk of the third party not properly locating the shares and/or providing the shares when requested, given the low level of commitment expected from third parties under Article 12(1)(c) SSR despite this risk being limited by the fact that these third parties are regulated and supervised entities\textsuperscript{54}. One of the reasons for that is the complexity of the rule that foresees different scenarios that entitle that low level of commitment and are difficult to supervise.

b. There is no explicit record-keeping obligation in Level 1 in relation to locate arrangements, which also complexifies supervision in this respect.

c. The SSR does not provide for specific and harmonised sanctions to be imposed in case of a breach of Article 12 SSR. That has led to diverse sanctioning regimes across the different Member States, which might not be sufficiently discouraging in certain jurisdictions.

185. Further to the analysis detailed below, ESMA is considering a number of potential amendments to the EU rule against 'naked' short selling, which are detailed below: reinforcing the commitment of third parties providing certain locate arrangements, imposing a record-keeping requirement for locate arrangements at Level 1 and improving the sanctions regime applicable to infringements of the locate rule.

4.2.3 Weakness of the third party’s commitment under Article 12(1)(c) SSR

4.2.3.1 Analysis

186. The low level of commitment required from the third-party can be illustrated in several ways:

a. Recital (19) of the SSR specifies that the third-party confirmation essentially relates to the assessment by the third party of its ability to make the shares available for settlement. Whereas it does not necessarily imply that the shares

\textsuperscript{53} Articles 5(2) and 6(5) of Implementing Regulation 827/2012.

\textsuperscript{54} As per Article 8 Implementing Regulation 827/2012.
are already available to that third party at the time of the location confirmation, nor does it seem to require a firm commitment from that third party to make the shares available as necessary.

b. In line with that, ESMA notes that the language used in Article 12(1)(a) and (b) of the SSR significantly differs from the language used under letter (c): whereas in the first two cases the SSR refers to legally enforceable claims, letter (c) only refers to “have a reasonable expectation that the settlement can be effected when is due”\textsuperscript{55}.

c. A particular source of concern is that these third parties can distribute ‘easy to borrow or purchase lists’ as if they were genuine “easy to borrow or purchase confirmations” to several short sellers without taking into account the overall amount to be delivered on a given settlement date. This could eventually lead, in case of coexistence of several short selling strategies coinciding in time and target, to a ‘drought’ in the relevant shares on the relevant date, creating the conditions for a ‘short squeeze’\textsuperscript{56}.

d. ESMA also notes that the locate confirmations for all types of locate arrangements are heavily dependent on the market conditions prevailing at the time the confirmations were provided and that, on this basis, a third party with the obligation to deliver shares under a locate confirmation could argue that the market conditions have changed before the settlement date to avoid the delivery.

e. Finally, ESMA notes the diversity of the specific conditions applying to each of the three types of locate arrangements, depending on the short seller’s strategy or the liquidity of the shares complexifies the rule and its supervision, while, from a preliminary analysis, it appears that one type of arrangement (the ‘standard locate arrangements’) is the most frequently used.

4.2.3.2 Proposal: Reinforcing third parties’ commitment

187. ESMA considers that the language used in Article 12(1)(c) of the SSR does not provide the highest level of legal certainty in terms of the effective availability of the shares at the delivery date.

188. As a consequence, ESMA’s preliminary view is that the language used in Article 12(1)(c) of the SSR should be revised to ensure that the locate arrangements adequately address the risk of non-delivery at the settlement date, and not just provide a ‘reasonable expectation’ that settlement can be made when it is due.

\textsuperscript{55} See SSR recital (19) as well
\textsuperscript{56} ESMA already revised its own Q&A on the matter, to clarify that an “easy-to-borrow or purchase” list of shares is not an “easy to borrow or purchase confirmation” unless it is complemented for each of the shares with an assessment of the maximum amount of shares affected by the possible short sale; the market conditions at the time of providing the list, including the liquidity of the shares concerned; and any other information available on the supply of the shares. Moreover, the above assessment has to be reviewed regularly to consider the relevant quantity and any change in the market conditions.
Article 6 of Implementing Regulation (EU) 827/2012 should also be amended to make clear that the confirmations provided by the third party must contain a commitment to make the shares available for settlement in due time, taking into account the amount of the possible sale and indicating the period for which the share is located, irrespective of the market conditions.

189. An additional strengthening of the commitment of the third parties indicates addressing the complexity of the current framework. ESMA understands that a simplified uniform regime applicable across the board for all types of shares, including the liquid ones, would be beneficial.

190. ESMA’s preliminary view is that Article 6 of Implementing Regulation (EU) 827/2012 should refer to a unique type of locate arrangements which, based on the current ‘standard same day locate arrangement’ requirements, would only include the following elements:
   a. locate confirmations: a confirmation provided by the third party prior to the short sale being entered into that it firmly commits to make the shares available for settlement in due time taking into account the amount of the possible sale, and which indicates the period for which the shares are located;
   
   b. instructions in the event of failure to cover: an undertaking from the natural or legal person that in the event that executed short sales will not be covered on the settlement day, the natural or legal person will promptly send an instruction to the third party to procure the shares to cover the short sale to ensure settlement in due time.

191. It should be noted that such simplification of the rule would render unnecessary the reference in Article 6(4) of Implementing Regulation (EU) 827/2012 to “shares included in the main national equity index that are also the underlying for a derivative contract admitted to trading on a regulated market”, as a broad universe of liquid shares already benefits from this regime and also RCAs have the capacity to designate additional shares as ‘liquid’ in case less than five shares meet the requirements, in accordance with Article 1(6) of Delegated Regulation (EU) 2017/567.

Question 9: Do you agree with this proposal to reinforce the third-party’s commitment? If not, please elaborate. If yes, would you either (A) keep the three types of locate arrangements, but increase the level of commitment of the third party to a firm commitment for all types of arrangements, or (B) simplify the regime to keep only one type of firm locate arrangement?
4.2.4 Absence of a Level 1 record-keeping obligation in relation to ‘locate’ arrangements

4.2.4.1 Analysis

192. Although Article 6(5) of Implementing Regulation 827/2012 provides that “the arrangements, confirmations and instructions referred to in paragraphs 2, 3 and 4 shall be provided in a durable medium by the third party to the natural or legal person as evidence of the existence of the arrangements, confirmations and instructions”, ESMA notes that, as opposed to the obligation to keep records of gross positions which establish a significant NSP for five years\(^{57}\), there is no equivalent obligation in relation to the arrangements set out in Article 12 SSR.

193. ESMA published a Q&A recommending a five-year period to retain the evidence of the agreement\(^{58}\) because neither Article 12 SSR nor Articles 5, 6 and 7 of Implementing Regulation 827/2012 specify the obligation to retain the data or the length of time for retaining the relevant evidence back in 2013 and considers that this recommendation should be embedded in the SSR.

194. Additionally, ESMA has carried out an internal fact-finding exercise that demonstrates that RCAs usually carry out supervision of Article 12 SSR and Article 6 of Implementing Regulation 827/2012 on an ‘ex post’ case-by-case basis, mostly in case of settlement fails. That circumstance renders it critical to have records of the short selling activity and more specifically of compliance with Article 12 SSR.

4.2.4.2 Proposal: imposing an explicit record-keeping obligation in relation to ‘locate’ arrangements

195. ESMA understands that the lack of an explicit requirement in Level 1 to record and store all the documentation regarding the requirements set out in Article 12 SSR may seriously undermine the capacity of RCAs to monitor their effective fulfilment with the subsequent risk for the integrity and orderliness of the market. Those records become even more relevant in a situation where most RCAs monitor breaches of Article 12 SSR on an ex-post basis, mostly where a settlement failure has taken place.

196. The current lack of an explicit requirement in Level 1 indicates a severe divergence between the relevance of Article 12 SSR and the RCAs powers to monitor and enforce its requirements.

197. As a consequence, ESMA’s view is that Article 12 SSR should include the obligation of natural and legal persons entering a short sale to keep the records of their arrangements for five years.

\(^{57}\) Article 9(1) second paragraph SSR.

\(^{58}\) Q&A 10.4.
Question 10: Do you agree with this introducing a five-year-long record-keeping obligation for locate arrangements? If not, please justify your answer.

4.2.5 Lack of harmonised sanctions for ‘naked’ short selling

4.2.5.1 Analysis

198. As regards ‘naked’ short selling, the SSR only determines that Member States shall establish their own rules on penalties and administrative measures applicable to SSR infringements. The list of links to these measures is available on the ESMA website.59

199. However, a majority of Member States do not establish a specific sanction for the infringement of Article 12(1) of the SSR, but instead have just a generic reference to infringements of the SSR.

200. More in detail, from the information reported by the Member States for the register, it becomes clear that:

a. Whereas most Member States establish a range for the sanctions that can be imposed to natural and legal persons, their amounts are very diverse, ranging from a minimum sanction of EUR 332 for natural persons to a maximum of EUR 100 million or ten times the amount of any profit potentially made for regulated and unregulated legal entities;

b. A great dispersion is also observable between the average and the median sanctions. As regards the minimum sanctions, while the average is EUR 194,142,34, the median is significantly lower (EUR 1,750). A similar dispersion can be identified when comparing the average maximum pecuniary sanction for legal persons (EUR 14,236,324,18) with the median (EUR 663,878).

201. Therefore, ESMA considers it necessary to ensure a sufficient deterrent effect of the sanctions for breaches of Article 12 SSR across the EU. ESMA understands that such degree of harmonisation would exceed what can be achieved by means of the guidelines concerning the penalties and administrative measures (Article 41 of the SSR).

59 See Article 41 SSR and the list of administrative measures and sanctions applicable in Member States to infringements of the SSR published by ESMA.
4.2.5.2 Proposal: Reinforcing and harmonising sanctions for ‘naked’ short selling

202. ESMA considers it necessary to ensure that the sanctions for breaches of Article 12 of the SSR have a sufficient deterrent effect across the EU.

203. ESMA recognises that Article 41 of the SSR entitles ESMA to issue guidelines to ensure a consistent approach concerning the penalties and administrative measures to be established by Member States. However, despite the fact that RCAs have to make every effort to comply with ESMA guidelines, ESMA also notes that sanctions are set by law in most EEA countries, not by the RCAs themselves.

204. On that basis, ESMA concludes that the instrument provided by Article 41 of the SSR (guidelines) does not necessarily provide the full harmonisation and a combined deterrent effect that would be necessary to properly address the risks that ‘naked’ short selling strategies can have for the market as a whole, particularly on an aggregated basis.

Therefore, ESMA considers that a further degree of harmonisation should be imposed in the SSR to ensure that the maximum pecuniary administrative sanctions on short sellers breaching Article 12(1)(c) of the SSR are more aligned and effective in the EU.

205. To that end, ESMA is considering whether the sanction regime applying to breaches of the locate rule could be revised in line with the current text of Article 30(2)(i) and (j) of MAR, establishing the minimum amount that must be imposed under the maximum administrative pecuniary sanctions in the event of the infringement of Article 12(1) of the SSR.

206. ESMA also considers that national laws should retain the capacity of the competent authorities to impose any other administrative sanctions or administrative measures in the event of infringements of Article 12(1), and that the SSR should provide for the disgorgement of any profits where identified, including interests, to ensure an appropriate deterrent effect.

Question 11: Do you agree with reinforcing and harmonising sanctions for ‘naked’ short selling along the proposed lines? If not, please justify your answer.
4.3 List of exempted shares

4.3.1 Legal Framework

207. Recital (25) of SSR explains that “for reasons of efficiency, it is appropriate to exempt securities from certain notifications and disclosure requirements, where the principal venue for trading of that instrument is located in a third country”.

208. Article 16 of SSR exempts shares admitted to trading on a trading venue within the EU where the principal venue for the trading of shares is located in a third country from the obligation to notify RCAs of significant NSPs in shares (Article 5), the obligation to publicly disclose significant NSPs in shares (Article 6) and the restrictions on uncovered short sales in shares (Article 12).

209. In this regard, Article 2(1)(m) of SSR defines the principal venue in relation to a share as the venue for the trading of that share with the highest turnover.

210. Delegated Regulation 826/2012 specifies the method to calculate turnover to determine the principal venue for the trading of a share. According to Article 6 of that Regulation, RCAs must use the best available information\(^{60}\).

211. The identification of the shares having the principal trading venue in a third country is made by the RCAs at least every two years (Article 16(2) of SSR) unless specific circumstances arise (such as the removal from trading of the share from the EU trading venue)\(^{61}\). The list of exempted shares is published by ESMA\(^{62}\).

212. Article 16 of SSR has to be read in conjunction with Article 38(1) of SSR that foresees that RCAs shall, where possible, conclude cooperation arrangements with supervisory authorities of third countries that should specifically address the exchange of information to ensure that RCAs can efficiently carry out their duties under SSR.

213. RCAs make use on an ongoing basis of these type of arrangements\(^{63}\) that in many cases operate on the basis of ‘ad hoc’ requests between the relevant authorities.

214. As a consequence, SSR aims at limiting the duplication of obligations connected to short selling activities on shares admitted to trading on a EU trading venue but more heavily traded on a third-country venue: these shares are not subject to the SSR obligations as regards the notification and publication of NSPs and the restrictions on

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\(^{60}\) This may include:

(a) publicly available information;
(c) information from trading venues where the relevant share is traded;
(d) information provided by another competent authority, including a competent authority of a third country;
(e) information provided by the issuer of the relevant share;
(f) information from other third parties, including data providers

\(^{61}\) Article 12 Implementing Regulation (EU) 827/2012

\(^{62}\) https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_mifid_shsexs

uncovered short sales\textsuperscript{64} while subject to correspondent obligations in relation to short selling in the third country jurisdiction. At the same time, these shares could still be subject to the SSR legal requirements under Article 18 and the other emergency measures foreseen in Chapter V of SSR.

\section*{4.3.2 Analysis}

215. The purpose of the monitoring of NSPs exceeds the strict scope of financial markets because the establishment or increase of short selling positions usually describes the view of well-informed market participants about the economic outlook of a specific company or sector\textsuperscript{65}. Therefore, an inadequate or incomplete monitoring of NSPs may have an impact on the ‘real economy’ if the financial authorities do not obtain the relevant information in a timely manner.

216. ESMA notes that the outbreak of COVID-19 and its impact on the financial markets has raised the need for increasing transparency vis-à-vis financial regulators. As explained in the ESMA Opinion regarding the adjustment for the threshold of notification of NSPs\textsuperscript{66}, in any uncertain economic context, RCAs need to have as much visibility as possible about the appearance and evolution of NSPs, to be able to monitor and react quickly to any threat that may derive from short selling.

217. However, under the current SSR framework:

\begin{itemize}
\item a. Whereas RCAs have a certain degree of flexibility when considering which sources of information should be used for the purpose of those calculations\textsuperscript{67}, no other parameters than turnover can be taken into account by RCAs in the analysis of whether shares also traded in a third-country venue should be exempted from the above-mentioned obligations.
\item b. As a consequence, the determination of the principal trading venue only requires that more than 50% of the turnover of a share traded in the EU takes place in a third-country venue to include that share on the list of exempted shares.
\end{itemize}

218. ESMA has specifically considered this issue in the context of the end of the transition period of the UK’s withdrawal from the EU on 31 December 2020, given the close links that used to exist between the UK and the EU financial markets.

\textsuperscript{64} Articles 5, 6, 12 and 15 SSR.
\textsuperscript{65} See pages 116 and 117 of the ESMA Final Report on certain aspects of the SSR.
\textsuperscript{66} See recital (7) and Article 6 of Delegated Regulation 826/2012.
219. First, before the end of that transition period, ESMA and the UK Financial Conduct Authority (FCA) established an MMoU concerning consultation, cooperation and the exchange of information between each of the EEA competent authorities and the FCA.

220. However, the exchanges of information between the UK FCA and the RCAs foreseen in the MMoU are based on the submission of requests for information, not on an ongoing exchange of information as it used to operate under the ESMA Transaction Reporting Exchange Mechanism.

221. From that angle, reliance from RCAs on ‘ad hoc’ requests to monitor the accumulation of NSPs in specific shares and to identify trends in specific shares and sectors affected by NSPs may not be ideal in all cases.

222. Second, the RCAs revised and updated the list of exempted shares as required by Article 16 of SSR and Article 12 of implementing Regulation (EU) No 827/2012 of 29 June 2012 shortly after Brexit. The final updated version of the list of exempted shares was published on 15 March 2021.

223. During the performance of this exercise, some RCAs recommended revising the SSR framework to analyse the convenience of maintaining under the full scope of the SSR obligations shares that have a significant percentage of their trading volumes in the EU as they may still represent significant trading volumes in EU trading venues.

224. Under the current context, trading of most of the EEA companies is concentrated in EEA trading venues due to the impact of the share trading obligation set out in Article 23 of MiFIR: from 76% in 1H20 to 98% in 1H21. From that perspective, the current rule does not seem to be outdated and should provide adequate visibility to the RCAs.

225. Additionally, ESMA understands that reducing the number of shares exempted would imply an additional administrative burden for certain market participants, particularly by adding reporting and publication obligations in relation to those shares to RCAs and non-EU financial regulators. From that side, ESMA considers that any reduction of the scope of the list of exempted shares should be limited and based on a minimum threshold that could not fall below 40% of the turnover within the EU. Moreover, ESMA understands that

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69 The TREM covers the requirements for reporting of transactions to competent authorities under Article 26 of MiFIR and the related technical standards.
70 Public statement Brexit: Impact of the end of the transition period on 31 December 2020 on the trading obligation for shares: ESMA reminded market participants that, in the absence of an equivalent decision in respect of the UK by the EC, all EU shares, i.e. ISINS starting with a country code corresponding to an EU Member State and, in addition, shares with an ISIN from Iceland, Liechtenstein and Norway (all together EEA ISINs) will be within the scope of the share trading obligation (STO) established in Article 23 of MiFIR.
71 As indicated in ESMA’s first Report on Trends, Risks and Vulnerabilities in 2021, “analysing the development of trading for a sample of the 25 most traded EU shares in December 2020 and January 2021 shows that the expected shift in trading domicile [after the ESMA statement] took place in January 2021. Most on-exchange trading moved to EU venues, with the share of lit trading on EU venues going from 71% in December to 96% in January, and auction trading from 84% to 93%.”
any alternative approach should affect mostly (if not entirely) companies which have their legal domicile in the EU and traded in the EU and in a third-country.

4.3.3 Proposed amendments

226. ESMA understands that the current Article 16 of SSR still permits an adequate monitoring of the relevant shares in most cases.

227. At the same time, ESMA agrees that if the trading volumes of a share within the EU are significant enough, the short selling activity on those shares could still impact the rest of the market in the form of potential systemic risks, abusive behaviour or creation of disorderly trading conditions for the EU markets where they are traded.

228. From that angle, ESMA is considering whether RCAs should have the capacity to maintain within the scope of the SSR obligations shares for which a significant percentage of trading takes place within the EU. ESMA’s preliminary view is that “a significant percentage of trading” could imply that the share in question has no less than 40% of its turnover traded in the EU.

229. ESMA would also like to ask market participants whether NCAs should also take any other parameters into account (e.g., where the company is based, whether it is a systemically important credit institution, etc…).

Question 12: Do you consider that shares with only 40% of their turnover traded in a EU trading venue should remain subject to the full set of SSR obligations?

Question 13: Do you consider that NCAs should take any other qualitative but specific parameter into account in the identification of the shares subject to the full set of SSR obligations even if they are more heavily traded in a third-country venue? If yes, please elaborate

5 Transparency of net short positions

5.1 Article 6(2) SSR Publication Threshold

5.1.1 Legal framework

230. Article 6 SSR establishes the obligation of natural or legal persons to publicly disclose NSPs above 0.5% of the issued share capital of the company concerned and each 0.1% above that. A final disclosure is required once the position has fallen below 0.5%. As clarified in recital (7) SSR, the obligation is designed to provide useful information to other market participants about significant individual NSPs in shares.

231. Article 9(4) SSR specifies that the disclosure should take place in a manner that ensures fast access to information on a non-discriminatory basis. The information on NSPs in shares shall be disclosed to the public on a central website operated or
supervised by the RCA, as specified in Article 2 of Implementing Regulation 827/2012.

232. Article 6(3) SSR foresees that ESMA may issue an opinion to the EC on adjusting the thresholds for which no prior consultation is foreseen. However, given the impact that the disclosure regime has on the behaviour of market participants, further described below, ESMA considers it appropriate to consult on this element.

5.1.2 Analysis

233. In general, the current public disclosure threshold provides meaningful information to the market for transparency purposes, but it entails certain costs. On the one hand, public disclosure can increase pricing efficiency by bringing transparency when positions are disclosed by informed investors and allows for the quick dissemination of negative expectations about issuers’ fundamentals among market participants. However, it also seems to reinforce herd behaviour, with disclosure leading to follow-on disclosures by other investors. Disclosure can also weaken the incentives of short sellers to collect and analyse information, since other investors could free-ride the disclosed information. As a result, market efficiency would worsen, and the information content of disclosed positions may become less valuable.

234. ESMA consulted back in 2017 on whether the threshold for public disclosure was adequate and analysed the market impact of public disclosure of NSPs in shares.

235. On the impact of the public disclosure of NSPs in shares on the market, the 2017 Final Report found that public disclosure influences the behaviour of market participants with short positions below the 0.5% disclosure threshold. Some of these investors refrain from crossing the 0.5% threshold to avoid publicly disclosing their NSP in a share, to keep their strategy secret from other investors.

236. On the level of the publication threshold, ESMA received very limited input: only ten respondents provided responses and supported maintaining the threshold at 0.5%.

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73 The links to the national websites where NSPs in shares are disclosed is available in https://www.esma.europa.eu/sites/default/files/library/ssr_websites_ss_positions.pdf

74 Using SSR data on German shares, Jank, Roliing and Smajlbegovic (2016) investigate the behaviour of investors around the public disclosure threshold and find that a considerable fraction of position holders is reluctant to cross the threshold. The decision to cross appears to be persistent as some investors follow a policy not to disclose their positions. The authors also find stronger negative returns for the shares shorted by secretive investors, suggesting that these investors possess superior information. As a result, secretive investors are prevented by the threshold from fully acting on their information and beliefs due to the constraint imposed on short selling, resulting in less informational efficiency. Jones, Reed and Waller (2016) analysed the regimes previously in place in UK, France and Spain before SSR and document the existence of herding behaviour with the presence of a short position disclosure significantly increasing the probability of another disclosure, concluding that the obligation to publicly disclose short positions reduces short interest and informativeness of prices but improves liquidity.

75 See Annex V ESMA’s Final Report on the Evaluation of certain elements of the SSR.

76 The frequency of increase of NSPs at the bucket [≥0.4 and <0.5] is lower (36%) than for other buckets: circa 40% of those between [≥0.2 and <0.3] and [≥0.3 and <0.4] increased. Same applies for the buckets above 0.5%, that consistently display a frequency of increase above 40%. Similar conclusions can be drawn when looking at the duration of NSPs: the duration of short positions in the ≥0.4 and <0.5 bin was the second highest, with an average of 29 days. This abnormality reinforced ESMA’s view that the public disclosure threshold seems to influence the behaviour of some investors that avoid crossing the public threshold and tend to “overstay” in the reporting bin just below the threshold.
The Final Report concluded at the time that the current public disclosure threshold provides meaningful information to both regulators for supervisory purposes and the market for transparency purposes.

237. The evidence gathered by ESMA in the course of 2020 shows that the disclosed NSPs remained relatively stable both in terms of number of shares with NSPs above 0.5% and in terms of the market value of the companies with public NSPs along this period, even with the COVID-19 outbreak. The same stability is observed in the number of short sellers disclosing positions above 0.5% and the market value of their public positions.

238. In particular, ESMA notes that no significant differences can be observed over the whole period, taking into account that it covers the time period before the COVID-19 outbreak, the short-selling bans imposed by six RCAs and the first ESMA emergency decision, the non-renewal and termination of the short selling restrictions on 18 May 2020 and the period that followed until 10 June.

NUMBER OF SHARES ADMITTED TO TRADING ON A REGULATED MARKET (ISINs) VS. MARKET VALUE OF OUTSTANDING INDIVIDUAL NSPs ABOVE SPECIFIC THRESHOLDS

NUMBER OF PUBLIC VS NON-PUBLIC SHORT SELLERS

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77 Considering the public NSPs in the non-banning Member States only.
MARKET VALUE OF NSPs: PUBLIC SHORT SELLERS VS NON-PUBLIC SHORT SELLERS

239. More recently, the disclosure of individual NSPs became relevant in light of the events that took place in respect of the so-called meme stocks in January 2021. In particular, for shares of firms such as US videogame retailer GameStop or US movie theatre company AMC Entertainment, where large purchases of shares and call options, combined with very high short positions created the conditions for sharp price increases that led to a ‘short squeeze’ in some of these shares.

240. Whereas in the U.S. there is no obligation to publicly disclose NSPs, Section 13(f) of the U.S. Securities Exchange Act establishes that institutional investment managers that exercise investment discretion over $100 million or more have to file information about the instruments on which they hold a position on a quarterly basis which is made public.
afterwards. Whereas that information does not explicitly provide information about NSPs, it may permit other market participants to infer, at least, part of their strategy.\textsuperscript{82}

241. Additionally, as it is also possible in the EU, short sellers may voluntarily advertise their position, and issue negative reports on the companies targeted. However, after this volatility episode, advertising individual NSPs on certain shares started being considered as a signal that could be used to identify targets for other ‘short squeezes’. As an example, the vocal short seller Citron Research announced the end of the publication of their short selling reports after 20 years.

242. Similar concerns were quickly raised about a possible spread of the short squeeze phenomenon to European shares, since significant NSPs must be disclosed to the public, making EU shares possible targets.\textsuperscript{83}

243. However, the analysis of the NSPs in EU shares did not confirm those concerns. NSPs in EU shares were moderate in January 2021: only 85 EU issuers had NSPs above 5% of their issued capital with a total market capitalisation of EUR 301 billion, while only 20 of them had NSPs above 10% (the largest one being 16%), with a total market capitalisation of EUR 71 billion.\textsuperscript{84}

244. At the same time, a decline in the number of short sellers disclosing NSPs above 0.5% can be observed after the GameStop episode: from an average of 167 in January 2021 (more than in October 2020) to 139 in April 2021 (-17%). Since no clear decreasing pattern can be observed prior to January 2021, this may signal that a small number of short sellers left these strategies or reduced their positions below the publication threshold after the GameStop episode.

245. At the same time, it is worth noting that the 0.5% threshold has not impeded short sellers to operate their trading strategies, since a significant number of them (139) continue operating at the end of April 2021. The 2017 Final Report\textsuperscript{85} already showed that only a limited percentage of short positions between 0.4% and 0.5% (36%) crossed the 0.5% to avoid their position holders to disclose their positions.

246. Along the same line, the closure of short positions was also reflected in the publicly disclosed NSP data, which fell from 510 to 428 from 15 January to 08 February 2021.

\textbf{DISCLOSURES AND HOLDERS OF PUBLIC NSP DECREASING}

\textsuperscript{82} https://www.ft.com/content/3f6b47f9-70c7-4839-9bbd-6a62f1bd39e0
\textsuperscript{83} See Financial Times, “Short squeeze spreads to Europe as day traders hunt next GameStop”, 27 January 2021.
\textsuperscript{84} Capitalisation value as of 4 January 2021.
\textsuperscript{85} See page 118
247. On the basis of the aggregated data on NSPs that RCAs provided to ESMA until 19 March 2021, it is also possible to analyse the market value share of publicly displayed NSPs with respect to the total market value of reported NSPs (comprising also those below the 0.5% threshold): the market value of public NSPs have decreased by 6% in broad terms between November 2020 and March 2021.

248. The share of the market value of public NSPs to the market value of all NSPs decreased, from a stable average of 24%-25% of the total between November and December 2020 to 21% by the end of January 2021 and 19% on average in February and on 19 March 2021.

**Market value of public NSPs over aggregate NSPs**

249. However, the decrease is more important for heavily shorted shares, considering as such those that displayed, in January 2021, aggregated NSPs above 5% (-14% in market value of public NSPs over all NSPs) and aggregated NSPs above 10% (-16% in market value of public NSPs over all NSPs) of their total issued share capital.
At the same time, it is important to highlight that the GameStop episode took place in the context of an overall decrease in the NSPs that started after November 2020 (both in terms of number of ISINs affected and the market value of the NSPs) which seems to be related to the improved market conditions derived from the development and deployment of the vaccines for COVID-19.

As a consequence, whereas evidence indicates that the GameStop episode has indeed reinforced the reluctance of short sellers to cross the 0.5% threshold, the coinciding in time with an overall improvement of the market conditions impedes extracting clear conclusions. In particular, it is difficult to differentiate which percentage of the absolute reduction in disclosed NSPs corresponds to an increasing reluctance of short sellers to disclose their positions after GameStop from the overall market trend due to the improved market confidence.
5.1.3 Proposed amendments

252. As further elaborated in the following sections, ESMA is open to suggestions towards improving the transparency and functioning of the market.

253. In that sense, the evidence gathered recently does not indicate that the behaviour of the short sellers crossing the 0.5% threshold has been significantly affected by the COVID-19 events. More recently, whereas the ‘short squeeze’ observed in the U.S. in January 2021 seems to have reinforced the ‘reluctance’ observed in short sellers to disclose their positions in the short term, a significant number of market participants still cross it.

254. Moreover, the most abrupt reduction of publicly disclosed NSPs have been observed in relation to heavily ‘shorted’ shares, which seems a natural correction after the ‘short squeeze’ in the U.S. Afterwards, the reduction of public NSPs seems to follow a pattern that started in November 2020, before the GameStop episode.

255. As a consequence, ESMA’s preliminary view is that the current publication threshold still provides a good compromise between transparency to the market and market efficiency. Nonetheless, ESMA would like to gather the views of market participants on the SSR public disclosure regime as it currently stands and whether the threshold should be revised.

256. ESMA would also welcome the views from stakeholders on whether the disclosure regime could reduce or increase the risk of high volatility events like the ones observed in January 2021.

Question 14: Would you modify the threshold for the public disclosure of significant NSPs in shares? If yes, at which level would you set it out? Please justify your answer, if possible, with quantitative data.

5.2 Publication of aggregated net short positions on shares

5.2.1 Legal framework

257. Recital (40) SSR refers to fostering transparency of NSPs with the aim of reducing information asymmetries and ensuring that all market participants are adequately informed about the extent to which short selling is affecting prices.

258. However, the SSR does not foresee the compulsory publication by RCAs of the aggregated NSPs per issuer on a regular basis, based on the public and non-public notifications received.
5.2.2 Analysis

259. ESMA notes that in the U.S. a limited number of SROs provide on their websites daily aggregate short selling volume information for individual equity securities. The SROs are also providing website disclosures on a one-month delayed basis of information regarding individual short sale transactions in all exchange-listed equity securities. The SROs also publish monthly statistics on short interest in securities that trade on their markets.

260. ESMA analysed the possibility of publishing anonymised aggregated NSPs per issuer on a regular basis in 2017. Despite acknowledging that it could provide relevant information to the market, ESMA also identified arguments against such publication, including the possibility of unduly exposing the position of notifying entities.

261. In line with that, ESMA concluded that RCAs should be able to periodically publish anonymised aggregated NSPs per issuer on a voluntary basis when they consider that the issues described above can be adequately addressed in their jurisdiction.

262. However, ESMA notes that a very limited number of RCAs publish (or used to publish) aggregated NSPs on a regular basis in the shares of issuers under their jurisdiction. At the time of finalising this CP, only the Danish Finanstilsynet publishes aggregated NSPs monthly. CNMV used to publish aggregated NSPs on a fortnightly basis but ceased applying this practice. Both CAs published the aggregated data from all notifications received (both above 0.2% and above 0.5%).

263. ESMA also understands that there are reasons for which RCAs may decide not to publish aggregated NSPs at a national level while other RCAs are not following the same practice.

264. First, there is a risk that the aggregated NSPs in certain shares/sectors can be compared with the individual NSPs above 0.5% in other shares/sectors from non-aggregating countries. Such comparison could unduly lead market participants to conclude that the former shares are under a stronger short selling pressure than the latter.

265. Second, as indicated in the 2017 Report, the publication of NSPs that crossed the notifying threshold (currently set at 0.2% of the issued share capital) aggregated together with those that crossed the 0.5% threshold may unduly expose an entity notifying a position above 0.2%. For instance, for a share in which a limited number of market participants are holding NSPs, the publication of an aggregated position of 0.8% is very

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87 ESMA notes that the U.S. FINRA is also considering consolidating the publication of short interest data that is reported to FINRA for both listed and unlisted securities. If FINRA were to make this change, short interest files for all equity securities would be made available free of charge on the FINRA website and would not require changes to firms’ reporting requirements. In addition, if this change was made, the below potential changes to the content and timing of publicly disseminated data would apply to listed and unlisted securities. The consultation is available at https://www.finra.org/rules-guidance/notices/21-19
88 See pages 52 and 53 of ESMA’s Final Report on the Evaluation of certain elements of the SSR.
89 Five supportive out of seven responses.
90 https://www.dfsa.dk/Rules-and-Practice/Short-selling/Published-net-short-positions
likely to expose the situation of one market participant if there has been a public disclosure of a NSP of 0.6% held by another market participant.

266. However, ESMA also notes that it has recently issued an opinion recommending the EC to amend Article 5(2) SSR to lower the notification threshold from 0.2% to 0.1% which, if approved in accordance with Article 42 SSR, should improve the capacity of CAs to monitor the risks that short selling might entail.

267. Along the same line, ESMA also understands that the lower reporting threshold would provide additional benefits supporting the publication of aggregated NSPs: first, it would significantly enlarge their informative value, since they would contain NSPs above 0.1%, with the subsequent positive effect on market efficiency. Second, since the 0.1% threshold would imply the notification of up to 40% additional NSPs to the RCAs, the possibility of unduly exposing individual positions below the 0.5% threshold seems less likely.

268. In line with previous feedback received\(^91\), ESMA understands that the publication of aggregated information of NSPs should take place under a centralised notification and publication system, which is addressed in the next section of this CP, without forcing market participants to collect this data from 27 different sources.

269. Finally, ESMA wants to revisit one of the elements raised by stakeholders in the 2017 Final Report on the evaluation of certain elements of the SSR\(^92\): the publicly available information on the issued share capital which market participants noted that the sources they use to determine their NSPs may not be updated at all times.

270. In those cases, there might be mistakes in the determination of the NSPs which, if transmitted externally, could mislead other market participants. ESMA understands that it is possible that such negative impact could be aggravated by the publication of aggregated NSPs per issuer.

271. ESMA recognises that there are no explicit references to the source of the data for the calculation of NSPs. Only Article 3(3) of SSR, with respect to indirect positions, establishes that the determination of an NSP has to be made “acting reasonably having regard to publicly available information”, which consistently with a related Q&A\(^93\) published by ESMA in the past would encompass “information which is easy to access on the market operator’s or issuer’s website and which is obtainable free of charge”.

272. ESMA also acknowledges that, with respect to changes on the issued share capital, there is no equivalent requirement to the one set out in Article 15 of the Transparency Directive\(^94\). That Article establishes that for calculating the major shareholdings thresholds, the home Member State shall at least require the issuer to disclose to the public the total

\(^{91}\text{See Final Report, paragraph 282 onwards.}\)
\(^{92}\text{See Final Report, paragraph 260(a).}\)
\(^{93}\text{ESMA Q&A on the SSR, question 6.9.}\)
number of voting rights and capital at the end of each calendar month during which an increase or decrease of such total number has occurred.

273. At the same time, ESMA also understands that the information on the total issued share capital seems to be accessible from public registers and data vendors and has no evidence indicating that the eventual mismatches between the actual issued share capital and the one published by those sources are prolonged in time or have caused remarkable disruptions for the SSR notification and disclosure obligations.

5.2.3 Proposed amendments

274. ESMA's preliminary view is that the current SSR transparency regime could be complemented by the compulsory publication of aggregated NSPs per issuer integrating all individual positions reaching or exceeding the notification and the publication thresholds at least every two weeks.

275. ESMA also considers that the aggregated NSP figure should include the aggregated data from all notifications reported between the previous publication date until a date close to the publication date. ESMA also considers that the aggregated NSP should not be recalculated for subsequent changes and/or notifications until the next publication date.

276. ESMA also acknowledges that in case this proposal is adopted, it would still be necessary to further specify a number of working instructions to make it operational.

277. Moreover, and in line with the feedback received back in 2017\(^5\), ESMA considers that such publication of aggregated NSPs could be made by means of a centralised notification and publication system described below.

278. Finally, ESMA would like to receive views on whether the identification of the issued share capital is a matter of concern for market participants.

**Question 15:** Would you agree with the publication of anonymised aggregated NSPs by issuer on a regular basis? If yes, which would be the adequate periodicity for that publication?

**Question 16:** Have you detected problems in the identification of the issued share capital to fulfil the SSR notification/publication obligations? If yes, please describe and indicate how would you solve those issues.

\(^5\) Pages 56 to 58.
5.3 Centralised notification and publication system

5.3.1 Legal framework

279. The current mechanism of notification and disclosure of NSP is based on natural and legal persons notifying the RCAs, where applicable, the details of their NSPs. In turn, where applicable, the RCAs disclose the relevant information to the public through a central website which they operate or supervise at national level. Such mechanism for notification and disclosure of NSPs in shares and sovereign debt and of uncovered positions in sovereign credit default swaps is contained in Articles 5, 7, 8 and, in exceptional circumstances, in Article 18 and 28(1)(a) of SSR.

280. To promote a form of harmonisation of the information to be submitted to each RCA and to be disclosed to the public, ESMA has been mandated to develop technical standards specifying the details of the information that natural and legal persons should submit to the relevant RCA and the means the latter should use to disclose to the public.

5.3.2 Analysis

281. In line with the current procedure, RCAs have put in place reporting systems, through which NSP holders should register, in order for them to be able to notify the RCAs once their NSP has crossed the relevant thresholds. Despite the harmonisation of information achieved through Level 2 measures, the reporting and publication systems put in place by RCAs differ across the EU, and the registration mechanism for positions holders also appear to be specific for each jurisdiction.

282. As discussed in the previous sections, Article 11 of SSR prescribes that RCAs should provide to ESMA, on a quarterly basis, information on aggregated NSPs relating to issued share capital and to issued sovereign debt, and on uncovered positions relating to sovereign credit default swaps. Such notifications serve the purpose of enabling ESMA to have an overview and to periodically monitor the evolution of NSPs across the EU.

283. In 2017 ESMA publicly consulted on the possibility to build an EU centralised notification and publication system in the context of the SSR. Such proposal was driven by the fact that such centralised system would lead to a more harmonised reporting mechanism and allow investors reporting to different RCAs to reduce their administrative burden, through a unique process of registration. To ensure RCAs’ ability to perform efficient national monitoring and enforcement, ESMA had envisaged such system as capable of granting RCAs the access on a real-time basis to the information on NSPs of their competence, enabling them to check in real time the registrations and any notification.

284. ESMA believes that such centralised notification system would support the principle stated by Recital 3 of SSR that “provisions directly imposing obligations on private parties to notify and disclose net short positions relating to certain instruments and regarding uncovered short selling” are to be applied “in a uniform manner throughout the Union”.

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285. Based on the responses received to the public consultation, in its final Technical Advice to the EC, ESMA acknowledged the support received for a centralised EU-wide notification system.

286. ESMA reiterated that such centralised system would on the one hand reduce the cost and administrative burden for reporting entities and, on the other hand, would benefit RCAs that would no longer have to maintain their national notification system and could be relieved from the obligation to provide information on a quarterly basis to ESMA in accordance with Article 11 of SSR. Additionally, the system would provide an advantage for end investors, enabling them to access all the information in a centralised and standardised manner.

287. ESMA also highlighted that such centralised system would not affect the way RCAs currently perform monitoring and enforcement, as it would ensure that RCAs can access on a real-time basis the information on both the registrations and the notified NSPs of their competence the same way as they currently do via their national notification systems.

5.3.3 Proposed amendments

288. As discussed in the previous section, ESMA would see merits in the implementation of an EU-wide notification and publication system through which natural or legal persons could register and notify their NSPs once they cross the relevant thresholds. As already pointed out, such system would reduce costs and the administrative burdens for position holders stemming from the need to register to several national systems. At the same time, the creation of such system would be paired with lifting current obligations for RCAs to provide information on a quarterly basis to ESMA in accordance with Article 11(1) of SSR. The system would also eliminate the cost for RCAs connected to maintaining their own systems at national level.

289. Moreover, ESMA believes that the proposal to implement such a system of notification is supported, in the aftermath of the COVID-19 outbreak and the subsequent economic turmoil, by the evidence that threats to the financial stability of the EU financial system may unfold very rapidly. In response to such a threat and potential emergency situations the need for timely interventions might arise in short time spans.

290. Due to such developments, last year RCAs and ESMA deemed it necessary to introduce a provisional and additional reporting system from RCAs to ESMA, to enable ESMA to carry out a EU wide monitoring activity on a daily basis.

291. Also in light of ESMA’s direct intervention powers under Article 28 of SSR, a permanent centralised reporting system would allow ESMA to monitor on an ongoing basis the development of NSPs across the EU. Such a system would allow a swift assessment of

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97 ECB’s financial stability review: “financial stability is a condition in which the financial system – which comprises financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and the unravelling of financial imbalances”, quoted by ESMA in its December Decision on lower reporting threshold.
the evolution of NSPs by ESMA and promote ESMA’s coordination powers in case of potential threats whilst ensuring that RCAs do not lose any access to the information of their competence.

292. In that sense, as RCAs play a key role in performing efficient monitoring and enforcement, the centralised notification system would be designed in a manner that enables RCAs to fully carry out their supervisory duties on registrations and notifications. This objective could be achieved by ensuring that RCAs have real-time access to the information of their competence.

293. While the introduction of a centralised reporting system would require a legislative change, the technical details of the reporting should be regulated via delegated regulation to be adopted on the basis of ESMA’s technical standards.

Question 17: Do you agree with the establishment of a centralised notification and publication system for natural and legal persons to communicate their NSPs? In your view, which would be the benefits or shortcomings this system would bring? Please explain.

6 Outdated References

6.1.1 Analysis and Proposed amendments to the SSR

294. There are various outdated references in the SSR that would require an update to ensure alignment with current texts. This includes but is not limited to references to: the Data Protection Directive (repealed by GDPR); the Market Abuse Directive (repealed by MAR); and, MiFID (repealed by MiFID II/MiFIR). For MiFID, this would include, amongst others, references to the list of financial instruments contained in Section C of Annex I of MiFID; the definition of trading venues; as well as various references within the SSR to ‘admitted to trading on a trading venue in the Union’.

295. In respect of the MiFID references specifically, ESMA proposes that references to financial instruments contained in Section C of Annex I of MiFID should be replaced by references to Section C of Annex I of MiFID II. ESMA also suggests amending the reference to the definition of a trading venue contained in Article 2(1)(l) of SSR so as to include OTFs. Lastly, ESMA proposes to replace all references contained within the SSR to ‘financial instruments admitted to trading on a trading venue in the Union’ with references to ‘financial instruments admitted to trading or traded on a trading venue in the Union’ in line with MiFID II/MiFIR. Such amendment would allow for a clarification that all MiFID II/MiFIR financial instruments currently admitted to trading or traded on MTFs and OTFs would fall within the scope of the SSR.

296. Taking this opportunity, ESMA would like to highlight that the above is a non – exhaustive list of references to the MiFID texts and that in principle all references to MiFID should now be thought to have been replaced by references to MiFID II/MiFIR for the sake of legal clarity.
297. With respect to other outdated references, ESMA would propose their replacement by the ones of the pieces of legislation currently in force.

7 Annexes

7.1 Annex 1

Summary of questions

Q1: Does ESMA’s analysis confirm the observation that you made in your perimeter of competency? Please provide data to support your views.

Q2: What are your views on the proposed clarifications?

Q3: Do you agree with the proposed clarification?

Q4: What are your views regarding the exclusion or, alternatively, a percentage–based weighting approach, for indices, baskets and ETFs in the context of long – term bans?

Q5: Do you agree with the proposed alignment of the conditions to adopt measures under Article 20 and Article 28 of SSR?

Q6: do you agree with the proposed amendments to Article 24 of Delegated Regulation 918/2012?

Q7: Do you agree with the proposed amendments to the SSR and, more specifically, the mediation procedure under Article 23 of SSR?

Q8: What are your views on ESMA’s proposal to include subscription rights in the calculation of NSPs in shares?

Q9: Do you agree with this proposal to reinforce the third-party’s commitment? If not, please elaborate. If yes, would you either (A) keep the three types of locate arrangements, but increase the level of commitment of the third party to a firm commitment for all types of arrangements, or (B) simplify the regime to keep only one type of firm locate arrangement?

Q10: Do you agree with this introducing a five-year-long record-keeping obligation for locate arrangements? If not, please justify your answer.

Q11: Do you agree with reinforcing and harmonising sanctions for “naked short selling” along the proposed lines? If not, please justify your answer.

Q12: Do you consider that shares with only 40% of their turnover traded in a EU trading venue should remain subject to the full set of SSR obligations?
Q13: Do you consider that NCAs should take any other qualitative but specific parameter into account in the identification of the list of shares that should not be exempted from the SSR obligations despite being more heavily traded in a third-country venue? If yes, please elaborate

Q14: Would you modify the threshold for the public disclosure of significant NSPs in shares? If yes, at which level would you set it out? Please justify your answer, if possible, with quantitative data.

Q15: Would you agree with the publication of anonymised aggregated NSPs by issuer on a regular basis? If yes, which would be the adequate periodicity for that publication?

Q16: Have you detected problems in the identification of the issued share capital to fulfil the SSR notification/publication obligations? If yes, please describe and indicate how would you solve those issues.

Q17: Do you agree with the establishment of a centralised notification and publication system for natural and legal persons to communicate their NSPs? In your view, which would be the benefits or shortcomings this system would bring? Please explain.

7.2 Annexe 2: Impact analysis of the 2020 short selling bans

7.2.1 Introduction

298. ESMA has carried out an impact economic analysis on the effects of the short selling bans adopted during the first wave of the COVID-19 pandemic in 2020, with the aim to assess their effects on market quality, looking at liquidity, returns, and volatility indicators, as well as the possibility of a displacement effect between countries.

299. The analysis has been conducted at the European level, taking into account all EEA30 countries as well as the UK98, relying on a difference-in-difference regression combined with matching techniques, in order to isolate the cross-sectional effects of the bans.

300. The volatility analysis highlights that shares in banned countries exhibited a lower degree of volatility during the ban period, implying an average decrease of between -6% and -10%, while the effects on abnormal returns do not appear significant.

98 Since the data used in the analysis are encompassing the years 2019 and 2020, i.e. before the end of the Brexit transition period, and the amount of trading activities in the UK allow for increasing accuracy of the analysis during the matching process, the UK shares are included in the matching process and in the regressions as a control group.
301. Last but not least, separating our dataset by stocks characteristics, we observe that the impact on liquidity is more pronounced for large-cap stocks, highly fragmented stocks, and for stocks with listed derivatives. In addition, both the evolution of the short selling levels of our matched dataset, and the study of short-sellers activity patterns through publicly disclosed data, point to a minor increase of NSPs in non-banning jurisdictions. Since this increase did not mirror the reduction in short selling activity observed in banning jurisdictions, this suggests that only a limited displacement of short selling can be attributed to the bans.

7.2.2 Effects of the ban on market quality

7.2.2.1 Literature review

302. Most of the academic literature on short selling states that, under efficient market conditions, short sellers are informed traders and constraining short sales reduces the informational efficiency of prices – see Diamond and Verrecchia (1987). Thus, constraining short sales is likely to have a negative impact on market quality. E.g. Saffi and Sigurdsson (2011) document that stocks with higher short selling constraints, measured by low stock lending supply, have lower price efficiency, and relaxing the short selling constraints does not lead to instability in the form of a higher probability of large negative stock returns. However, Brunnermeier and Oehmke (2014) find that predatory short selling can be responsible for a higher probability of default, especially for financial stocks and during crisis periods by contributing to the decline in stock prices.

303. Concerns that short sellers can exacerbate downwards price movements, heightening volatility and thus reduce market confidence led many regulators to prohibit or constrain short sales during the 2008 financial crisis, as well as during the Euro area debt crisis in 2012, thus providing natural experiment configuration for economic analysis. However, the majority of short selling bans that were put in place before the COVID-19 crisis affected financial stocks, based on financial stability concerns for the banking system, and thus are not entirely comparable to market-wide bans.99

304. The most encompassing analysis, from Beber and Pagano (2013), looking at the short selling bans imposed during the 2008 crisis in 30 countries indicates that the bans were associated with a decrease in liquidity, with an increase in bid-ask spreads of 1.28 to 1.98 percentage points (compared to a sample average of 4%), and with a significant increase of the Amihud illiquidity indicator. In contrast, disclosure requirements that were in place in some countries are associated with a significant improvement in market liquidity, i.e. associated with a reduction of 0.65 percentage points in the bid-ask spread. They also observe more stringent effects

99 Furthermore, one of the challenging aspects of assessing the impact of short selling bans from an empirical perspective is that the bans themselves (as well as the selection of banned stocks in most of the bans put in place before the 2020 European bans) are endogenous, and thus the empirical identification of the effect of the intervention on market characteristics is challenging.
of the bans on liquidity for small-cap stocks and for stocks that do not have listed options, suggesting that the availability of an option market allows investors to express short views on the banned stocks. Boehmer et al (2013), using intraday data on the 2008 short sale ban in the US, similarly document a deterioration of liquidity and market quality in response to the ban.

305. A few analyses of the effects of the 2020 European bans have already been published, showing an overall deterioration of market liquidity consistent with prior empirical work in the other crisis settings.

306. Lopez and Pastor (2020) analyse the differences in market quality between the ES IBEX35 (subject to short selling restrictions) and the DE DAX30 (not subject to short selling restrictions). The results are not clear-cut: whereas they identify a significant and negative impact of the ban on bid-ask spreads, which persisted once the ban was lifted, the ban also seemed to have improved the depth of IBEX35 constituents, based on the Amihud illiquidity indicator. Furthermore, the authors do not find further evidence that the securities subject to the ban experienced a decrease in their trading volume or volatility, and no significant impact of the ban on prices, CDS spreads nor any specific impact on financial stocks was observed. Furthermore, the authors do not find further evidence that the securities subject to the ban experienced a decrease in their trading volume or volatility, and no significant impact of the ban on prices, CDS spreads nor any specific impact on financial stocks was observed.

307. Similarly, Siciliano and Ventoruzzo (2020) analyse the impact of the bans on 15 selected EU countries, exploiting a difference-in-difference strategy combined with matching. Their results estimate a significant increase of bid-ask spreads of 14%, and a decrease of the inverse of the Amihud illiquidity indicator by 0.1%, with more pronounced effects when separating between financial and non-financial stocks (the bid-ask spread of financial firms increased by 25.6% versus 14.4% for non-financial firms during the banned period).

308. Finally, making use of the publicly disclosed short selling positions from CAs’ websites in 2019 and 2020, Greppmair, Jank & Smajlбегович (2020) study how short sellers evaluate the importance of fiscal space for individual companies. Their results indicate that short sellers adapted quickly, since short selling activity shifted upon the onset of the pandemic towards companies with low financial flexibility and in countries with limited fiscal space. This trading pattern suggests that short sellers bet on the inability of governments with lower fiscal space to provide sufficient stimulus to their economy. Consistent with the notion that short sellers are informed investors, they entered their short positions before the market crash. This strategy was profitable, as shorted firms with low liquidity buffers in low-rated countries

100 However, since this result is surprising and not in line with the literature, the authors point out that further research on this issue can be useful, especially since Amihud levels for Spanish securities were higher than their German control group - a difference that could have been caused by country risk.
experienced an abnormal return of -10% during the period of COVID-19 related market stress.

7.2.2.2 Description of events

309. As a result of the COVID-19 pandemic, financial markets have been hit by an external shock of unprecedented size in 2020. During the initial stage of the crisis in 1Q20, markets experienced one of the fastest declines in recent history, including surges in volatility and liquidity contractions.

310. The STOXX Europe 600 index recorded a peak-to-trough fall of -35.5% in February, which was accompanied by extreme weekly and daily market movements with a one-week fall of around -10% in the last week of February and a one-day fall of -11.5% on 13 March.

311. This immediate market reaction to the outbreak in February and March 2020 was driven by market uncertainty over the magnitude of the pandemic and its economic impact against a background of limited information and experience with that type of external shock. The outcome was a strong short-run liquidity and volatility shock in 1Q20 in key market segments, testing the resilience of market infrastructures and financial institutions.

312. As investor sentiment and equity market performance turned negative, short selling activity, a widespread phenomenon during market downturns, increased from late February 2020, reflecting investors’ pessimism. During the first wave of the COVID-19 crisis, a few CAs initially imposed one-day short selling bans on selected stocks, in accordance with Article 23 of SSR: on 13 March 2020, Italy and Spain banned short selling on 85 and 69 stocks, respectively; on 17 March 2020, while Spain issued a long-term ban in accordance with Article 20 of SSR, Belgium, France, and Italy banned short selling for 17, 92 and 20 shares, respectively. Subsequently, in addition to Spain, 5 other (Austria, Belgium, France, Greece, Italy) imposed long-term exchange-wide short selling bans which started from 18 March 2020 and were lifted on 18 May 2020 as market conditions improved (see Section 3).

313. The initial shock waned in 2Q20, with equity markets rapidly recovering as seen in the April monthly performance being close to an historic high, and a further increase observed in May. Massive policy responses – containment, fiscal, monetary and regulatory – in the EU and elsewhere helped mitigating the economic impact of the pandemic. Since the crisis was accompanied by a widespread and steep increase in bid-ask spreads and volatility in stock markets (T.1 and T.2 show the impact of the COVID-19 pandemic on our dataset), this analysis explores the role of short selling bans in this context.
7.2.2.3 Methodology

314. The analysis on the effect of the bans relies on a difference-in-difference regression combined with matching techniques, in order to isolate the cross-sectional effects of the bans, similarly to Beber et al. (2018) and Siciliano and Ventoruzzo (2020). This empirical approach, extensively used in the economic studies of regulatory changes -see Gertler et al. (2011), is designed to measure the effect of a ‘treatment’, here the short selling ban, on a set of subjects through the comparison of the behaviour of the treated group and a control sample, pre- and post-treatment.

315. The difference-in-difference identification strategy allows us to compare the equity market quality between banned and non-banned jurisdictions. To increase the robustness of the analysis, sample matching is added as a pre-analysis step: the goal is to balance the treatment and the control groups (i.e. have similar characteristics of the shares in the treatment group and in the control group). Moreover, multi-country evidence from analysing all European banning jurisdictions, rather than individual country data, should be less affected by idiosyncratic effects arising from other country-specific policy interventions that occurred during the crisis period.

316. The hypothesis tested in the analysis, in line with the conclusion of previous studies, is that the imposition of a short selling ban, by preventing potentially informed investors to take new short selling positions, will slow down the price discovery process, and that such delayed resolution of uncertainty about fundamentals will decrease the liquidity of shares, measured here with bid-ask spreads and the Amihud illiquidity indicator.

317. The expected effects on prices and volatility are more ambiguous: if the ability to short sell stocks increases the informational efficiency of market prices (see Saffi and Sigurdsson (2011)), a constraint on short selling, by slowing down price discovery, will be expected to sustain prices. However, short-sales constraints, by increasing the risk perceived by uninformed investors, can lead them to require
higher expected returns (inducing lower prices) or lead to negative information not incorporated into share prices and then aggravate the price decline after the end of the ban (Hong and Stein (2003)).

318. The bans imposed from March to May 2020 applied to equity NSPs, prohibiting investors from creating or increasing existing NSPs on a trading venue or through OTC transactions.

319. Most of the bans also stated clearly that the prohibition applied not only to shares, but prohibited also any transactions which might constitute or increase a NSP on shares involving any type of financial instruments including saving/preferred shares, depositary receipts, derivatives. Previous bans in 2008 and 2012 allowed to substitute for short selling with options, by replacing the investor’s short position with the option market maker’s short position. However, this substitute was costly and only available to sophisticated investors.

320. This aspect is important since, analysing the US stocks during the 2008 financial crisis, Kolasinski et al. (2013) documents that the ban decreased market liquidity and increased the informativeness of short sales, and that both these changes were especially strong for stocks with listed options.

321. However, since the 2020 European bans did not allow for the possibility to use the derivative markets, the effect of the policy on market liquidity should not be affected by the availability of listed options or of other derivatives, through which a synthetic short position could have been taken.

322. Furthermore, an important feature of the SSR regime is the market-making exemption that implies that a number of market participants, mainly large banks, are still allowed to take short positions. Indeed, while bans may effectively curtail speculative short selling behaviours, the market making exemption means that the ban does not constitute a full constraint on short sales, an assumption on which the empirical literature analysing the short selling bans in 2008 is based.

7.2.2.4 Sample creation

323. The regressions are estimated on daily data, first for all EEA30 and UK shares, and then for selected samples of the dataset, to investigate whether the liquidity impacts vary with share characteristics. The following analysis focuses on the impact

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101 Since the NSP is calculated as the sum of all short positions minus all long positions held by an investor in relation to restricted shares and related instruments, all relevant positions were prohibited; stemming from the purchases or sales of shares, options, swaps, futures, depositary receipts, index-related instruments, covered warrants, certificates and any other structured product whose effect is to create a NSP in a share subject to the ban.

102 Since the data used in the analysis are encompassing the years 2019 and 2020, i.e. before the end of the Brexit transition period, and the amount of trading activities in the UK allow for increasing accuracy of the analysis during the matching process, the UK shares are included in the matching process and in the regressions as a control group.
of the two months exchange-wide bans, excluding the short-term bans issued on 13 and 17 March 2020.103

324. The list of shares is created using the European Financial Instrument Reference Data System (FIRDS) from which the relevant instruments traded in the EEA are extracted for the year 2019 and 2020 (common/ordinary shares, depositary receipts on equities, and preferred/preference shares based on their CFI codes), taking into account possible ISIN changes. Shares terminated before 2020, or for which the last received data is before 2020, as well as shares exempted from the bans (i.e. shares having their principal trading venue located in a third country) are excluded.104 For all these instruments, the relevant variables are extracted using ESMA Financial Instruments Transparency System (FITRS) and FIRDS databases, as well as market data. The Annex provides descriptive information of all the variables that were used and their definition (Table 5).

325. From this dataset, penny stocks are excluded, i.e. shares with an average price below EUR 1 in 4Q19, as well as observations for negative bid-ask spreads and, daily returns equal to zero, that can signal stale prices. Finally, to deal with possible data quality issues, we further winsorize the data by eliminating the observations corresponding to the top and lowest 1% of bid-ask spreads and Amihud variable, as well as bid-ask spreads that are higher than 10% on average during 2020. Table 6 in Annex provides descriptive information for our total dataset by country, after the exclusion of the necessary observations.

7.2.2.5 Matching process

326. Matching is a statistical technique used to construct a comparison group, in order to enable a comparison of outcomes among treatment and control groups while controlling for possible confounding factors (Gertler et al. (2011)).

327. Several matching techniques can be employed but we focused on two: Nearest Neighbor Matching (NNM) and Coarsened Exact Matching (CEM).105 NMM selects the closest counterpart of each observation based on a weighted function of a defined set of covariates (i.e. a ‘distance’ measure), while CEM performs exact matching on a set of covariates, ‘coarsening’ the continuous ones into strata and discarding the strata that do not contain at least one treated and one control observations. In the final estimation, only the retained observations are used, but they are weighted by the size of the corresponding “stratum”. Hence, this method

103 The one- or two-day bans imposed in March are too short-lived for a dedicated econometric analysis.
104 In the same manner, shares that are traded on a Regulated Market and that have a foreign issuer are excluded, in order to remove non-EEA depositary receipts or shares that are from a foreign issuer and thus have very high market cap while not being really traded in the EEA.
105 Propensity Score Matching (PSM) was assessed; however, since our setting did not satisfy the required assumptions, it was deemed not suitable for the analysis. The Synthetic Control Methods (SCM) approach was also considered, but given our large sample of analysis it would have been impractical to construct a ‘synthetic’ control unit for each treatment share.
allows for multiple control observations to be matched to a single treated observation, with weights correcting any potential imbalance of observations.

328. Both methods have been evaluated based on (i) the balance of results, measured by comparing standardised mean differences prior to and after the matching, (ii) the impact of each method on the sample size. In terms of balance, CEM is more powerful than NMM method, but it is also more restrictive and has a higher chance of reducing the sample size. Graph T.6 in the Annex shows the standardised mean differences between the treatment and control groups after carrying out both CEM and NNM matching in our dataset. In this setting, CEM achieves a more balanced outcome (as shown by the fact that absolute standardised mean differences between treatment and control group for all matching variables are below the standard threshold value of 0.1), while NNM seems to allow for a greater degree of imbalance for specific information, despite performing well overall. This comes at the expense of a contained sample reduction: from a starting point of 1,273 treatment shares, CEM matches 1,232 (97%) while NNM matches all of them.

329. Based on these reasons, CEM has been chosen for the matching procedure, resulting in a final sample composed by 2,464 stocks (half of them belonging to the treatment group and half to the control group).

330. Among a range of potential variables considered, the following set of information has been employed for the matching procedure of treatment and control groups:

- market capitalisation (specifically, average market capitalisation in 4Q19, in order to avoid any confounding impacts due to the pandemic and to the short-selling bans);
- the share sectoral information (i.e. the classification of economic sectors from Refinitiv Eikon);
- the liquidity status (using the liquidity assessment from ESMA transparency calculations, based on the free float, average daily number of transactions and average daily turnover at the share level for 2019 and 2020).

331. Table 7 in the Annex shows the differences between the treatment and control groups, before and after the matching. Finally, to fulfil the parallel trends assumption needed for the difference-in-difference analysis, T.7, T.8, T.9 and T.10 in the Annex

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106 Due to the coarsening of continuous variables, using CEM the observations for which a suitable match is not found will be dropped; on the other hand, the ‘distance’ approach is less powerful but also less restrictive in terms of observation filtering.

107 The list is not exhaustive and many potential alternatives could be considered. However, these choices are in line with related works in the literature and, in our opinion, guarantee a balanced outcome without losing a significant number of observations due to missing data.

108 According to MiFID/MiFIR, a share is liquid if all of the following conditions are satisfied: (a) the free float of the share is not less than EUR 100 million for shares admitted to trading on a regulated market; (ii) the market capitalisation is not less than EUR 200 mn for shares that are only traded on MTFs; (b) the average daily number of transactions in the share is not less than EUR 250 mn; (c) the average daily turnover for the share is not less than EUR 1 million.
present the graphical evolution for both groups after the matching process and show that the distance between the treatment and control group remains constant over time. Finally, Table 1 below presents a description of the main variables of the dataset, after the matching process. Finally, to fulfil the parallel trends assumption needed for the difference-in-difference analysis, T.7, T.8, T.9 and T.10 in the Annex present the graphical evolution for both groups after the matching process and show that the distance between the treatment and control group remains constant over time. Finally, Table 1 below presents a description of the main variables of the dataset, after the matching process.

Table 1: Description of the dataset after matching

<table>
<thead>
<tr>
<th>Variable</th>
<th>n. obs.</th>
<th>p5</th>
<th>mean</th>
<th>wmean</th>
<th>median</th>
<th>p95</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price close</td>
<td>2,444</td>
<td>2.9</td>
<td>53.0</td>
<td>77.5</td>
<td>8.3</td>
<td>22.3</td>
<td>348.3</td>
</tr>
<tr>
<td>Market cap.</td>
<td>2,444</td>
<td>37.7</td>
<td>1,678.3</td>
<td>18,587.2</td>
<td>158.2</td>
<td>846.8</td>
<td>5,328.2</td>
</tr>
<tr>
<td>Volumes</td>
<td>2,439</td>
<td>1.4</td>
<td>331.9</td>
<td>1,874.2</td>
<td>12.1</td>
<td>121.8</td>
<td>1,549.5</td>
</tr>
<tr>
<td>Turnover</td>
<td>2,439</td>
<td>12.1</td>
<td>3,754.2</td>
<td>38,434.0</td>
<td>78.4</td>
<td>828.2</td>
<td>13,644.6</td>
</tr>
<tr>
<td>ROA</td>
<td>1,693</td>
<td>-</td>
<td>0.5</td>
<td>1.5</td>
<td>5.2</td>
<td>2.7</td>
<td>6.3</td>
</tr>
<tr>
<td>Abnormal Returns</td>
<td>2,426</td>
<td>-</td>
<td>0.0001</td>
<td>0.0003</td>
<td>0.0001</td>
<td>0.0016</td>
<td>0.0178</td>
</tr>
<tr>
<td>Bid-ask spread</td>
<td>2,442</td>
<td>0.1</td>
<td>0.9</td>
<td>0.1</td>
<td>0.4</td>
<td>0.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Amihud</td>
<td>2,406</td>
<td>0.0</td>
<td>1.5</td>
<td>0.0</td>
<td>0.1</td>
<td>0.5</td>
<td>8.1</td>
</tr>
<tr>
<td>Historical vol.</td>
<td>2,444</td>
<td>1.8</td>
<td>2.7</td>
<td>2.1</td>
<td>2.3</td>
<td>2.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Intraday vol.</td>
<td>2,440</td>
<td>2.0</td>
<td>2.9</td>
<td>2.8</td>
<td>2.9</td>
<td>3.8</td>
<td>1.6</td>
</tr>
<tr>
<td>Fragmentation</td>
<td>2,436</td>
<td>1.0</td>
<td>1.6</td>
<td>2.8</td>
<td>1.1</td>
<td>2.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Short interest</td>
<td>1,388</td>
<td>0.9</td>
<td>13.2</td>
<td>18.3</td>
<td>3.7</td>
<td>14.3</td>
<td>24.7</td>
</tr>
</tbody>
</table>

Note: number of shares, mean, weighted mean (wmean) by daily volumes, median, 5th and 95th percentile (p5, p95) and standard deviation (std) for each variable presented. Closing price, turnover and ROA in EUR, market capitalisation in EUR millions, volumes in thousands, bid-ask spreads in %, Amihud, historical volatility and intraday volatility multiplied by a 100 factor, fragmentation calculated as 1/Herfindhal-Hirschman Index (HHI).

Source: Refinitiv, FIRDS, FITRS, Quandl, ESMA.

7.2.2.6 Main results

The difference-in-difference analysis of the impact of short selling bans on our set of dependent variables employs the following baseline regression model:

\[ Y_{sct} = \alpha + \beta Treatment_s + \gamma Event_t + \delta Treatment_s \times Event_t + \theta Controls_{sct} + FE + \epsilon_{sct} \]

- \( \alpha \) is a constant, and \( s \) represents the share included in the analysis, \( c \) the country and \( t \) the time index.
- \( Y_{sct} \) is one the dependent variables for which the regression is estimated, i.e. bid-ask spreads, Amihud illiquidity indicator, abnormal return or intraday volatility.
- \( Treatment_s \) is a dummy variable equal to one over all trading days for shares in banned countries.
- **Event**\(_t\) is a dummy variable equal to one for all shares during the validity of the short selling ban.

- **Treatment\(_s\) * Event**\(_t\) is the interaction variable which isolates the effect of the treatment on the affected stocks. It is, hence, the most important coefficient of this regression.

- **Controls**\(_{sect}\) is the set of control variables included in the regression, that can be either at the stock level (market capitalisation, daily traded volumes, etc.) or at the country level (stringency index, country sentiment, etc.). Additionally, VSTOXX is added as a proxy for overall volatility in EEA markets.

- **FE** stands for the fixed-effects that are also included in some regressions. Stock-fixed-effects control for unobserved variables linked to each stock, and time fixed-effect take into account the commonality in liquidity or returns. Those effects are sometimes combined (two-way fixed-effects), keeping in mind the issues caused by multicollinearity.\(^{109}\)

333. The difference-in-difference model estimates the impact of the bans on four main variables of interest: two variables to assess the liquidity of the equity market (bid-ask spreads and the Amihud illiquidity indicator), abnormal returns (to represent the evolution of prices) and a volatility measure. These proxies are better indicators than trading volumes, since crisis periods are often associated with greater trading volumes.

334. Following Degryse et al. (2015) and ESMA (2017), we compute the bid-ask spreads using the closing ask and bid prices for each share (the difference between the highest price a buyer is willing to pay for a share and the lowest price a seller is willing to accept), and daily bid-ask spreads are normalised using the following formula to correct for nominal differences and make reliable comparisons across companies and countries:

\[
Spread_{st} = \frac{\text{Ask Price}_{st} - \text{Bid Price}_{st}}{\text{Mid Price}_{st}}
\]

335. The Amihud illiquidity indicator is the second measure of liquidity considered in this work: it calculates the daily ratio of the absolute value of a stock return to its dollar volume, and thus it serves as a rough measure of price impact:

\[
Amihud_{st} = \frac{|\text{Return}_{st}|}{\text{Volumes}_{st} * \text{Closing Price}_{st}}
\]

336. Increasing values of Amihud indicate that the price return is less affected by trading volumes, and thus higher values indicate less-liquid stocks. We normalise the bid-ask spreads and Amihud using a log transformation.

337. We calculate abnormal returns, which allow for an assessment of prices evolution and stock over/under-performing with respect to the reference market

\(^{109}\) When adding one or multiple fixed-effects, share-invariant or time-invariant variables will be dropped from the regressions, as well as the variables 'Event' or 'Treatment' in the regression above.
benchmark, for each share by comparing the daily returns with the returns of the share benchmark multiplied by the market beta, using:

\[
Abnormal\ Return_{st} = Return_{st} - (Market\ beta_{st} * Benchmark\ \ Return_{t})
\]

338. In order to increase the robustness of the analysis, we use two different measures of volatility: first, we compute historical volatility as the standard deviation of a stock's log returns over two days. Second, we calculate the so-called high-low range volatility, or intraday volatility, based on daily high and low trading prices, using Parkinson’s (1980) approach:

\[
Intraday\ Volatility_{st} = \sqrt{\frac{1}{4 \ln 2} \left( \ln \left( \frac{\text{High Price}_{st}}{\text{Low Price}_{st}} \right)^2 \right)^2}
\]

where \( High\ Price_{st} \) is the stock’s highest trading price on day \( t \), and \( Low\ Price_{st} \) is the stock’s lowest trading price.

339. Furthermore, the following control variables are added to the regression:

- Market capitalisation, used to control for firm size. As larger firms generally benefit from larger coverage by financial analysts, they tend to have larger trading volumes and possibly higher market liquidity.

- Volumes traded, to control for firm trading volumes, since shares with more trading volumes beget liquidity.

- A fragmentation indicator, calculated as the inverse of the Herfindahl-Hirschman Index, which is a widely used measure to determine the concentration of a market. Fragmentation can have a significant impact on market liquidity, since higher fragmentation can improve liquidity aggregated over all trading venues, but may lower liquidity in the reference market. The indicator is calculated at share level for on-exchange trading and is defined as:

\[
Fragmentation_{st} = \frac{1}{HHI_{st}}, \text{ where for each } t, HHI_{st} = \sum_{j=1}^{M} (market\ share_{sj})^2
\]

with \( M \) being the total number of venues that displayed trading in share \( s \).

- VSTOXX, which controls for daily volatility,

- The stringency index, which is a daily country measure of the strength of containment policies linked to the spread of the pandemic\textsuperscript{110}, controls for the impact of the pandemic at the country level.

\textsuperscript{110} This variable is measured as the daily average for each country of nine indicators pertaining to containment and lockdown policies (Oxford COVID-19 Government Response Tracker 2021).
Other control variables, such as turnover, Return on Equity, Return on Assets, Economic sentiment at the country level and country risk were tested, but were not changing the results or adding value, and hence are not presented here.

The sample covers 2,464 European stocks between 13 January 2020 (i.e., two months before the ban) and 30 June 2020. The same regressions were estimated using different timeframes (up until the end of September 2020) with similar results.

The effects of the short selling ban on market liquidity for the concerned shares appear to be negative, as indicated by the sign and the statistical significance of the main variable of interest in the regression: the interaction between Treatment and Event (Table 2).

The short selling ban is correlated with a deterioration of the bid-ask spread of the concerned shares: the regression coefficient (0.072) is statistically significant and implies an average increase of 1.075 ($=e^{0.072}$), meaning bid-ask spreads increased by 7.5% for stocks in banned jurisdictions during the restriction, compared to the control group.

Similarly, the coefficient for Amihud is significant and the ban is associated with an increase of between 2% to 5% of the Amihud illiquidity indicator.

Table 2

<table>
<thead>
<tr>
<th>Regression results: liquidity variables</th>
<th>Log bid-ask spread</th>
<th>Log bid-ask spread</th>
<th>Log Amihud</th>
<th>Log Amihud</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment*Event</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>Treatment Event</td>
<td>0.072***</td>
<td>0.072***</td>
<td>0.022***</td>
<td>0.047***</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.006)</td>
<td>(0.011)</td>
<td>(0.011)</td>
</tr>
<tr>
<td>Treatment</td>
<td>0.023***</td>
<td>0.023***</td>
<td>0.032***</td>
<td>0.032***</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.005)</td>
<td>(0.006)</td>
<td>(0.006)</td>
</tr>
<tr>
<td>Event</td>
<td>-0.016***</td>
<td>-0.014***</td>
<td>0.029***</td>
<td>0.032***</td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.003)</td>
<td>(0.006)</td>
<td>(0.006)</td>
</tr>
<tr>
<td>Fragmentation</td>
<td>-0.00002***</td>
<td>-0.00001***</td>
<td>-0.00004***</td>
<td>-0.00003***</td>
</tr>
<tr>
<td></td>
<td>(0.0000)</td>
<td>(0.0000)</td>
<td>(0.0000)</td>
<td>(0.0000)</td>
</tr>
<tr>
<td>Market cap.</td>
<td>-0.00001***</td>
<td>-0.00001***</td>
<td>-0.0001***</td>
<td>0.0001***</td>
</tr>
<tr>
<td></td>
<td>(0.0000)</td>
<td>(0.0000)</td>
<td>(0.0000)</td>
<td>(0.0000)</td>
</tr>
<tr>
<td>Volume</td>
<td>0.009***</td>
<td>0.01***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0002)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VSTOXX</td>
<td>0.002***</td>
<td>0.002***</td>
<td>0.003***</td>
<td>0.0004</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0002)</td>
<td>(0.0001)</td>
<td>(0.0003)</td>
</tr>
<tr>
<td>Stringency index</td>
<td>0.014***</td>
<td>0.014**</td>
<td>0.062***</td>
<td>0.061***</td>
</tr>
<tr>
<td></td>
<td>(0.0005)</td>
<td>(0.0005)</td>
<td>(0.001)</td>
<td>(0.001)</td>
</tr>
</tbody>
</table>
344. In addition, the ban is linked with a decrease in abnormal returns of -0.12% for shares under the ban, with respect to their matched peers. However, when adding the volatility variable into the regression model, the impact appears as non-statistically significant, and in both cases, the adjusted R-squared is small, showing that the proportion of the variance of the abnormal returns explained by the model is minor.

345. In the literature, the effectiveness of short selling bans in supporting stock prices is also ambiguous. Looking at excess returns during the 2008 financial crisis, Beber and Pagano (2013) show that the bans have not been associated with better stock price performance globally, with the US being the only exception. In line with our results, Siciliano and Ventoruzzo (2020) estimates that shares’ excess returns in the banned period in 2020 were, on average, 0.1% lower compared with firms in European countries that did not impose short selling bans.

346. Finally, the volatility analysis highlights that shares in banned countries exhibited a lower degree of volatility during the ban period: the coefficients displayed in Table T.3 imply a statistically significant reduction in volatility: compared to the sample average/median (both equal to 2.9), the coefficients (-0.187, -0.299) imply an average decrease of between -6% (= -0.187/2.90) and -10% (= -0.299/2.90). Since the results for the historical volatility measure are similar, only the intraday volatility model is presented here.

<table>
<thead>
<tr>
<th>Regression results: abnormal returns and volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnormal returns</td>
</tr>
<tr>
<td>(5)</td>
</tr>
<tr>
<td>Treatment*Event</td>
</tr>
<tr>
<td>(0.0004)</td>
</tr>
<tr>
<td>Treatment</td>
</tr>
<tr>
<td>Event</td>
</tr>
<tr>
<td>Fragmentation</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Market cap.</td>
</tr>
</tbody>
</table>

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1
Source: ESMA.
7.2.2.7 Differentiated effects of the ban by share characteristics

347. The same type of analysis is then estimated on different groups of stocks, in order to assess whether short selling bans had differentiated effects on the liquidity of stocks with specific characteristics (Table 4).

348. Separating between the smallest (small-cap. shares) and the largest (large-cap.) market capitalisation of our sample\(^{111}\), we observe that the bans affected the bid-ask spreads of large-cap more (+19.1%) than small-cap companies (+4.1%).

349. Similar estimation on the Amihud illiquidity indicator confirms that the adverse liquidity effect of bans was more pronounced for large-cap shares, with a statistically significant effect on the Amihud illiquidity indicator for large-cap of +31.0%, and for small-cap. of -9.3%, i.e. a slight increase in liquidity for small-cap shares (Table 8 in the Annex).

350. These results are similar to Boehmer et al. (2013), who argue that lower impacts of short selling restrictions on small-cap stocks are not surprising given that the level of shorting activity did not reliably change for the US small-cap stocks during the 2008 ban, contrary to large-cap stocks. While this explanation might not be entirely transferable to the EU situation, it can be expected to observe different effects for stocks where the short interest in the market is a smaller proportion of the outstanding shares. Thus, it can be expected that in countries where large-cap stocks are overrepresented, the ban was associated with larger increases in bid-ask spreads and in the Amihud illiquidity indicator.

\(^{111}\) Small and large capitalisation are defined here as the first and the last quartiles in terms of market capitalisation of the dataset.
In order to assess whether the ban had a similar impact on stocks that have listed derivatives or not, we estimate the same regression on the stocks with the largest market capitalisation (i.e. in the third and fourth quartile of market capitalisation of our sample) and add a dummy variable for stocks with available listed derivatives (options, futures and warrants) in ESMA’s FIRDS database. Since in our sample stocks with listed derivatives are usually large cap stocks, this choice helps to single out the effect of having listed derivatives from the market size effect.

In line with the results for large-cap stocks, the results show that the ban widened the bid-ask spread (+11.3%), with an additional deterioration of liquidity for stocks with listed derivatives (+7.8%). A similar effect is observed in the Amihud estimation (+14.8% of the illiquidity indicator for large-cap, and an additional +12.7% for stocks with listed options). These results confirm that the bans had a stronger impact on the liquidity of the stocks with listed derivatives, i.e. the most liquid stocks.

Finally, using the fragmentation indicator calculated as the inverse of the Herfindahl-Hirschman Index for volumes traded by venue\(^{112}\), the impact of the bans on bid-ask spread does not appear statistically significant for shares with low trading fragmentation, but impacted shares with high trading fragmentation (+14.5%). The same discrepancy in the liquidity deterioration is observed looking at the Amihud illiquidity indicator, with low fragmentation shares seeing an improvement of their liquidity (-5.3% of the illiquidity), while highly fragmented shares saw a deterioration (+30.5%).

Table 4

<table>
<thead>
<tr>
<th>Regression results: bid-ask spreads for small and large cap. stocks, low and highly fragmented stocks, and impact of derivatives listing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small-cap. stocks</td>
</tr>
<tr>
<td>Treat*Event</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Treatment</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Event</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Market cap.</td>
</tr>
</tbody>
</table>

\(^{112}\) Similarly, low (highly) fragmented stocks are defined as the first (last) quartiles in terms of market fragmentation of the dataset.
354. ESMA also carried out an analysis to assess the effects of the bans on the financial and industrial sectors (T.5 and T.9 in annex).

355. It can be noticed that the impact of the bans on the bid-ask spread is quite similar for financials (+12%) and industrials (+11%), and more pronounced than the general impact of the ban on bid-ask spreads (+7.5%).

356. The impact on the Amihud illiquidity is significant and more important for industrials (+11%) than for other shares (+5%), while it is not significant for financials. This might mean that other characteristics, such as fragmentation level or historical volatility, have more importance in explaining the liquidity evolution of the shares under the ban.

357. The impact on abnormal returns appears as non-statistically significant for industrials, and small for financials (but significative, -0.2%). In both cases, the adjusted R-squared is small, showing that the proportion of the variance of the abnormal returns explained by the model is minor (similarly for the whole perimeter).

358. On intraday volatility, the impact of the ban is significative and a little higher for industrials (-13%) than for the whole sample (-10%), while it is not significative for financials.

359. All in all, the results do not appear to be entirely conclusive on the presence of a "sector effect".
### Table 5

Regression results: liquidity variables and sectoral dummies

<table>
<thead>
<tr>
<th></th>
<th>Log bid-ask spread</th>
<th>Log bid-ask spread</th>
<th>Log bid-ask spread</th>
<th>Log Amihud</th>
<th>Log Amihud</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment*Event</td>
<td>(19) 0.072***</td>
<td>(20) 0.066***</td>
<td>(21) 0.062***</td>
<td>(22) 0.047***</td>
<td>(23) 0.044***</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment*Event</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Financials</td>
<td>0.048***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.015)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment*Event</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Industrials</td>
<td>0.049***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fragmentation</td>
<td>-0.016***</td>
<td>-0.014***</td>
<td>-0.014***</td>
<td>0.032***</td>
<td>0.032***</td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
<td>(0.003)</td>
<td>(0.003)</td>
<td>(0.006)</td>
<td>(0.006)</td>
</tr>
<tr>
<td>Market cap.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.00000</td>
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<td>-0.00000</td>
<td>-0.00000</td>
<td>-0.00000</td>
</tr>
<tr>
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<td>(0.0000)</td>
<td>(0.0000)</td>
<td>(0.0000)</td>
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</tr>
<tr>
<td>Volume</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.00000</td>
<td>-0.00000</td>
<td>-0.00000</td>
<td>-0.00000</td>
<td>-0.00000</td>
</tr>
<tr>
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<td>(0.0000)</td>
<td>(0.0000)</td>
<td>(0.0000)</td>
<td>(0.0000)</td>
</tr>
<tr>
<td>Stringency index</td>
<td>0.002***</td>
<td>0.002***</td>
<td>0.002***</td>
<td>0.0004</td>
<td>0.0004*</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0002)</td>
<td>(0.0002)</td>
<td>(0.0003)</td>
<td>(0.0003)</td>
</tr>
<tr>
<td>Historical vol.</td>
<td>0.014***</td>
<td>0.014**</td>
<td>0.014**</td>
<td>0.061***</td>
<td>0.061***</td>
</tr>
<tr>
<td></td>
<td>(0.0005)</td>
<td>(0.0005)</td>
<td>(0.0005)</td>
<td>(0.001)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>Fixed-effects</td>
<td>Stock,</td>
<td>Stock,</td>
<td>Stock,</td>
<td>Stock,</td>
<td>Stock,</td>
</tr>
<tr>
<td>Observations</td>
<td>203,833</td>
<td>203,833</td>
<td>203,833</td>
<td>198,655</td>
<td>198,655</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.780</td>
<td>0.780</td>
<td>0.780</td>
<td>0.866</td>
<td>0.866</td>
</tr>
</tbody>
</table>

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1
Source: ESMA.

### 7.2.4 Possibility of a displacement effect

ESMA carried out an exploratory analysis to gauge the possibility of a shift in short selling activity from banning jurisdictions to non-banning ones (i.e. a ‘displacement’ effect) and the potential extent of such phenomenon.
361. A causal impact of the short selling ban on displacement was not estimated, given the fact that it would be extremely difficult to disentangle the effect of the ban from the effect of deteriorating economic conditions as a consequence of the COVID19 pandemic. Nevertheless, descriptive information from various data sources provides useful indications as to whether such an effect actually materialised. The analysis relied on two different data sources:

i. aggregate short-selling disclosures at share level for the matched sample employed in the market quality analysis (described in section 7.2.2.5);

ii. publicly disclosed short positions at position holder – share level (i.e. NSPs above the 0.5% disclosure threshold).\textsuperscript{113}

362. First, the analysis focussed on the matched sample, for which we obtained the aggregate level of NSPs. Given the balanced nature of the matched sample of interest, constructed with the purpose of pairing similar stocks across banned and non-banned countries, the existence of a displacement effect would imply a drop in NSP levels for treatment shares combined with a corresponding rise in NSP levels for control shares.

363. While short selling activity decreased for banned stocks in our sample, as expected, there was no clear reversal of NSPs towards non-banned shares (T.3). The evolution of short positions in our matched sample shows a large increase in short positions before the introduction of short selling restrictions across member states. By definition, in countries with short selling bans, NSPs started to decrease

\textsuperscript{113} ESMA does not currently have access to notifications at position holder level, but only at share level: for this reason, to analyse the behaviour of position holders, publicly disclosed data is used. This database provides meaningful information to both regulators for supervisory purposes and the market for transparency purposes. However, we also know that the public disclosure of NSPs influences the market outcome of short positions below and above the 0.5% disclosure threshold, and so different behaviour can be expected for position holders below the 0.5% public threshold.
immediately after the introduction of the bans (a decline by 52bp between the enactment and the lifting of the ban). The increase of NSPs in non-banned jurisdictions also slowed down significantly from mid-March after the introduction of short selling bans in other jurisdictions (with an increase of 15bp from March to May 2020, when the observed increase from February to March was 27bp), suggesting there was no clear displacement effect of short selling bans or reversal of NSPs towards non-banned shares.

364. As a second step, the activity of short sellers was examined by analysing publicly disclosed NSP data, with the purpose of understanding whether the short selling ban impacted the behaviour of short sellers with NSPs of more than 0.5%. A long-term decrease in the total number of publicly disclosed NSPs can be observed (T.11).

365. During the short selling ban, public NSPs decreased by 23% in banning countries and by 5% in non-banning countries. The number of overall active position holders (i.e. short sellers reporting NSPs above the 0.5% threshold) declined moderately – from 207 to 200 (-3%) (T.12). In addition, the number of active position holders dropped from 99 (174) to 86 (170) in banning (non-banning) countries, a percentage decline of -13% (-2%). Overall, these numbers do not convey a displacement effect from banning countries to non-banning countries.

To check for further short selling pattern, position holders were grouped according to their historical behaviour between January 2020 and the enactment of the short selling ban, in order to obtain 3 classes:

1. ‘Ban preference’: holders that detain 50% (or more) of their positions in banned countries, on average.

2. ‘No ban preference’: holders that detain 50% (or more) of their positions in non-banned countries, on average.

3. ‘No preference’: holders that became active only after 18 March 2020 and, thus, cannot be classified in either of the two previous groups.

The number of investors classified in each of these 3 groups, and its evolution, is graphically described in (T.13).

366. Based on this classification, the evolution of NSPs and market exposure of these classes of position holders was analysed and is summarized in (T.4 – T.5).  

114 The same classification exercise has been carried out by employing the market value of outstanding NSPs rather than the number of NSPs, leading to comparable results.
367. Despite the drop in outstanding NSPs in banning jurisdictions observed in (T.4) during the ban, investors with a preference for banning countries did not relevantly modify their shorting activity, and on 18 May 2020 still held 58% of their positions in banning jurisdictions, compared to 63% on the day of the ban enactment. Moreover, no significant impact was observed for the ‘no ban preference’ group, which displayed a slight decrease in NSPs for both banning and non-banning jurisdictions (T.5). Thus, these figures suggest that many investors who had already positioned themselves prior to the ban did not massively shift their NSPs from banning to non-banning jurisdictions as a consequence of the ban. Despite the drop in outstanding net shorts in banning jurisdictions observed in (T.4), investors with a preference for banning countries did not relevantly modify their shorting activity during the ban, and on 18 May 2020 still held 58% of their positions in banning jurisdictions, compared to 63% on the day of the ban enactment. As expected, no significant impact was observed for the ‘no ban preference’ group. Thus, these figures suggest that many investors who had already positioned themselves prior to the ban did not massively shift their NSPs from banning to non-banning jurisdictions as a consequence of the ban.

368. On the other hand, for the investors who were not active before the start of the short selling ban it is not possible to determine an ex-ante propensity towards either banning or non-banning countries (hence the ‘no preference’ group). During the validity of the bans, these short sellers had no choice but to take short positions in non-banning jurisdictions (T.14 in annex). Thus, for these investors the ban acted as a constraint on their short selling preferences: as soon as the ban ends, their exposure to banning jurisdictions starts to increase. Overall, the number of position holders belonging to the ‘no preference’ group was lower than the other two groups during the ban period (T.13 in annex), and the number and market exposure of their NSPs was also less important in size (T.14).

369. In conclusion, the analysis of publicly disclosed short selling data does not point towards a relevant impact of the short selling ban on position holders’ preferences.
7.2.5 References


7.2.6 Annex

Table 5: Variables used and definition

<table>
<thead>
<tr>
<th>Variable</th>
<th>Notes</th>
<th>Frequency</th>
<th>Source</th>
<th>Window</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Value</td>
<td>Market capitalization, in EUR millions</td>
<td>Daily</td>
<td>Refinitiv Datastream</td>
<td>2019, 2020</td>
</tr>
<tr>
<td>Prices: Open, Close, High &amp; Low</td>
<td>In EUR</td>
<td>Daily</td>
<td>Refinitiv Datastream</td>
<td>2019, 2020</td>
</tr>
<tr>
<td>Ask, Bid prices</td>
<td>In EUR</td>
<td>Daily</td>
<td>Refinitiv Datastream</td>
<td>2019, 2020</td>
</tr>
<tr>
<td>Bid-Ask spread</td>
<td>In percent</td>
<td>Daily</td>
<td>Computed</td>
<td>2020</td>
</tr>
<tr>
<td>Trading volumes</td>
<td>In number of shares</td>
<td>Daily</td>
<td>ESMA FITRS</td>
<td>2019, 2020</td>
</tr>
<tr>
<td>Volumes</td>
<td>Number of shares traded, in thousands</td>
<td>Daily</td>
<td>Refinitiv Datastream</td>
<td>2019, 2020</td>
</tr>
<tr>
<td>Turnover</td>
<td>Turnover = Volumes*Price</td>
<td>Daily</td>
<td>Computed</td>
<td>2019, 2020</td>
</tr>
<tr>
<td>Fragmentation</td>
<td>The inverse of the HH index on the regulated markets at stock level</td>
<td>Daily</td>
<td>Computed using FITRS</td>
<td>2020</td>
</tr>
<tr>
<td>Liquidity flag</td>
<td>Liquidity assessment from ESMA transparency calculations</td>
<td>Flag</td>
<td>ESMA FITRS</td>
<td>2019, 2020</td>
</tr>
<tr>
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<td>Economic Sector of the company</td>
<td>Flag</td>
<td>Refinitiv Eikon</td>
<td>2020</td>
</tr>
<tr>
<td>Intraday price volatility</td>
<td>Using Parkinson formula</td>
<td>Daily</td>
<td>Computed</td>
<td>2020</td>
</tr>
<tr>
<td>Historical Volatility</td>
<td>Standard deviation of a stock’s log returns over two days</td>
<td>Daily</td>
<td>Computed</td>
<td>2020</td>
</tr>
<tr>
<td>Amihud</td>
<td>Illiquidity indicator</td>
<td>Daily</td>
<td>Computed</td>
<td>2020</td>
</tr>
<tr>
<td>Abnormal returns</td>
<td>Comparing daily returns with the market beta and the share benchmark</td>
<td>Daily</td>
<td>Computed</td>
<td>2020</td>
</tr>
<tr>
<td>Securities Lending information</td>
<td>A set of relevant variables</td>
<td>Daily</td>
<td>Quand</td>
<td>2020</td>
</tr>
<tr>
<td>Free Float</td>
<td>In percent</td>
<td>Daily</td>
<td>Refinitiv Datastream</td>
<td>2019, 2020</td>
</tr>
<tr>
<td>Derivatives listed</td>
<td>Options/Warrants/Futures listing of share</td>
<td>Flag</td>
<td>ESMA FIRDS</td>
<td>2020</td>
</tr>
<tr>
<td>National Indices</td>
<td>Value of EEA national indices in EUR at country level</td>
<td>Daily</td>
<td>Refinitiv Eikon</td>
<td>2020</td>
</tr>
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<td>Market beta</td>
<td>Historical BETA</td>
<td>Monthly</td>
<td>Refinitiv Datastream</td>
<td>2020</td>
</tr>
<tr>
<td>Country Risk</td>
<td>5Y CDS spreads on sovereign debt</td>
<td>Daily</td>
<td>Refinitiv Eikon</td>
<td>2020</td>
</tr>
<tr>
<td>Market Volatility</td>
<td>VSTOXX</td>
<td>Daily</td>
<td>Refinitiv Datastream</td>
<td>2020</td>
</tr>
<tr>
<td>Economic Sentiment</td>
<td>At country level</td>
<td>Monthly</td>
<td>Eurostat</td>
<td>2020</td>
</tr>
<tr>
<td>Stringency</td>
<td>Log of Stringency Index</td>
<td>Daily</td>
<td>OxCGRT</td>
<td>2020</td>
</tr>
</tbody>
</table>

Sources: ESMA.

Table 6: Coverage of the full dataset and descriptive statistics by CA

<table>
<thead>
<tr>
<th>RC A</th>
<th>N. obs</th>
<th>N. shares</th>
<th>Volume s</th>
<th>Market cap.</th>
<th>Bid-ask spread</th>
<th>Amihud</th>
<th>Historical volatility</th>
<th>Intraday volatility</th>
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<tbody>
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<td>0.039</td>
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<td>111</td>
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<td>0.005</td>
<td>2.105</td>
<td>2.942</td>
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<tr>
<td>Country</td>
<td>Volumes</td>
<td>Market Cap.</td>
<td>Bid-Ask Spread</td>
<td>Amihud</td>
<td>Volatility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>------------</td>
<td>----------------</td>
<td>--------</td>
<td>------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>60</td>
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<td>3.1</td>
<td>2.181</td>
<td>3.711</td>
<td>1.541</td>
<td>1.380</td>
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<tr>
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<td>7</td>
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<td>0.735</td>
<td>1.789</td>
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<td>18.2</td>
<td>0.100</td>
<td>0.007</td>
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<td>1.786</td>
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<td>1,832.7</td>
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<td>0.088</td>
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<td>2.421</td>
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<td>0.036</td>
<td>0.002</td>
<td>1.648</td>
<td>2.426</td>
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<tr>
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<td>10</td>
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<td>1.9</td>
<td>0.122</td>
<td>0.035</td>
<td>1.110</td>
<td>1.492</td>
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<td>38,216.</td>
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<td>0.040</td>
<td>0.014</td>
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<td>2.871</td>
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<td>10,799.</td>
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<td>0.045</td>
<td>0.005</td>
<td>1.812</td>
<td>2.608</td>
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<td>35,012.</td>
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<td>32,490.</td>
<td>1,092.1</td>
<td>0.100</td>
<td>0.014</td>
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<td>2.958</td>
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<td>0.213</td>
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<td>17.8</td>
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<td>0.249</td>
<td>1.174</td>
<td>1.085</td>
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<td>0.074</td>
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<td>2.683</td>
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<td>146.9</td>
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<td>0.031</td>
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<td>IT</td>
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<td>84,104.</td>
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<tr>
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<td>1.4</td>
<td>0.363</td>
<td>1.271</td>
<td>1.481</td>
<td>1.554</td>
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<tr>
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<td>7</td>
<td>1.1</td>
<td>1.9</td>
<td>1.683</td>
<td>0.446</td>
<td>2.279</td>
<td>1.936</td>
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<tr>
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<td>3.646</td>
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<td>3.317</td>
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<tr>
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<td>2.758</td>
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<tr>
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<td>6.3</td>
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<td>0.246</td>
<td>1.549</td>
<td>1.606</td>
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<td>3.083</td>
<td>0.530</td>
<td>4.435</td>
<td>1.326</td>
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</tbody>
</table>

Note: bid-ask spreads, Amihud and volatility are weighted by market cap. Volumes in thousands, market capitalisation in EUR bn, bid-ask spread in %, and Amihud is multiplied by a factor of 100.

Sources: Refinitiv Datastream, FIRDS, FITRS, ESMA.

Table 7: Differences in the main variables used for the matching and the regressions, for the treatment and control groups, before and after the matching.
Note: Market capitalisation in EUR bn, sector and liquid flag in % of the dataset, bid-ask spread in %, intraday volatility multiplied by a factor 100.

Sources: Refinitiv Datastream, FIRDS, FITRS, ESMA.
T.6
Standardized mean differences

T.7
Bid-ask spreads parallel trends

T.8
Amihud parallel trends

T.9
Abnormal returns parallel trends

T.10
Volatility parallel trends

T.11
Number of publicly disclosed NSPs

Note: bid-ask spreads in %, for shares under the ban or not in the dataset, multiplied by a factor 100.
Sources: Refinitiv, ESMA.

Note: Amihud illiquidity indicator, for shares under the ban or not in the dataset, multiplied by a factor 100.
Sources: Refinitiv, ESMA.

Note: Abnormal returns, for shares under the ban or not in the dataset.
Sources: Refinitiv, ESMA.

Note: Intraday volatility, using Parkinson formula, for shares under the ban or not in the dataset, multiplied by a factor 100.
Sources: Refinitiv, ESMA.

Note: number of NSP in EEA countries, split by countries with and without short selling bans during the course of 2020. Data is relative to publicly disclosed NSP (those above 0.5% of the outstanding amount issued).
Sources: NCAs, ESMA.
Table 8

Regression results: Amihud for small and large cap. stocks, low and highly fragmented stocks, and impact of derivatives listing

<table>
<thead>
<tr>
<th>Small-cap. stocks</th>
<th>Large-cap. stocks</th>
<th>Impact of listed derivatives</th>
<th>Low fragmented stocks</th>
<th>Highly fragmented stocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat*Event</td>
<td>(14)</td>
<td>(15)</td>
<td>(16)</td>
<td>(17)</td>
</tr>
<tr>
<td></td>
<td>-0.098***</td>
<td>0.270***</td>
<td>0.138***</td>
<td>-0.054**</td>
</tr>
<tr>
<td></td>
<td>(0.028)</td>
<td>(0.015)</td>
<td>(0.015)</td>
<td>(0.023)</td>
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<td>Treatment</td>
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<tr>
<td>Event</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abnormal returns</td>
<td>Abnormal returns</td>
<td>Intraday volatility</td>
<td>Intraday volatility</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------</td>
<td>------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Treatment*Event</td>
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<td>-0.0003 (0.0004)</td>
<td>-0.304*** (0.0004)</td>
<td>-0.297*** (0.025)</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment<em>Event</em></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Financials</td>
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<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment<em>Event</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrials</td>
<td>-0.001 (0.001)</td>
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</tr>
<tr>
<td>Fragmentation</td>
<td>0.0001 (0.0002)</td>
<td>0.0001 (0.0002)</td>
<td>-0.035*** (0.013)</td>
<td>-0.036*** (0.013)</td>
</tr>
<tr>
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<td>(0.0002) (0.0002)</td>
<td>(0.0001) (0.001)</td>
<td>(0.013) (0.013)</td>
<td>(0.013) (0.013)</td>
</tr>
<tr>
<td>Market cap.</td>
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<td>0.0000 (0.0000)</td>
<td>0.0000 (0.0000)</td>
<td>0.0000 (0.0000)</td>
</tr>
<tr>
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<td>(0.0000) (0.0000)</td>
<td>(0.0000) (0.0000)</td>
<td>(0.0000) (0.0000)</td>
<td>(0.0000) (0.0000)</td>
</tr>
<tr>
<td>Volume</td>
<td>0.0000 (0.0000)</td>
<td>0.0000 (0.0000)</td>
<td>0.0000 (0.0000)</td>
<td>0.0000 (0.0000)</td>
</tr>
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<td>(0.0000) (0.0000)</td>
<td>(0.0000) (0.0000)</td>
<td>(0.0000) (0.0000)</td>
<td>(0.0000) (0.0000)</td>
</tr>
<tr>
<td>Stringency index</td>
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<td>0.0001*** (0.0001)</td>
<td>0.002*** (0.001)</td>
<td>0.002*** (0.001)</td>
</tr>
<tr>
<td></td>
<td>(0.0000) (0.0000)</td>
<td>(0.0000) (0.0000)</td>
<td>(0.0000) (0.0000)</td>
<td>(0.0000) (0.0000)</td>
</tr>
</tbody>
</table>

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1
Source: ESMA.

Table 9
Regression results: abnormal returns, volatility and sectoral dummies
<table>
<thead>
<tr>
<th>Variable</th>
<th>Stock, Day</th>
<th>Stock, Day</th>
<th>Stock, Day</th>
<th>Stock, Day</th>
<th>Stock, Day</th>
<th>Stock, Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations</td>
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<td>209,972</td>
<td>209,972</td>
<td>209,972</td>
<td>209,972</td>
</tr>
<tr>
<td>Adjusted R2</td>
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<td>0.046</td>
<td>0.383</td>
<td>0.383</td>
<td>0.383</td>
<td>0.383</td>
</tr>
</tbody>
</table>

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1
Source: ESMA.