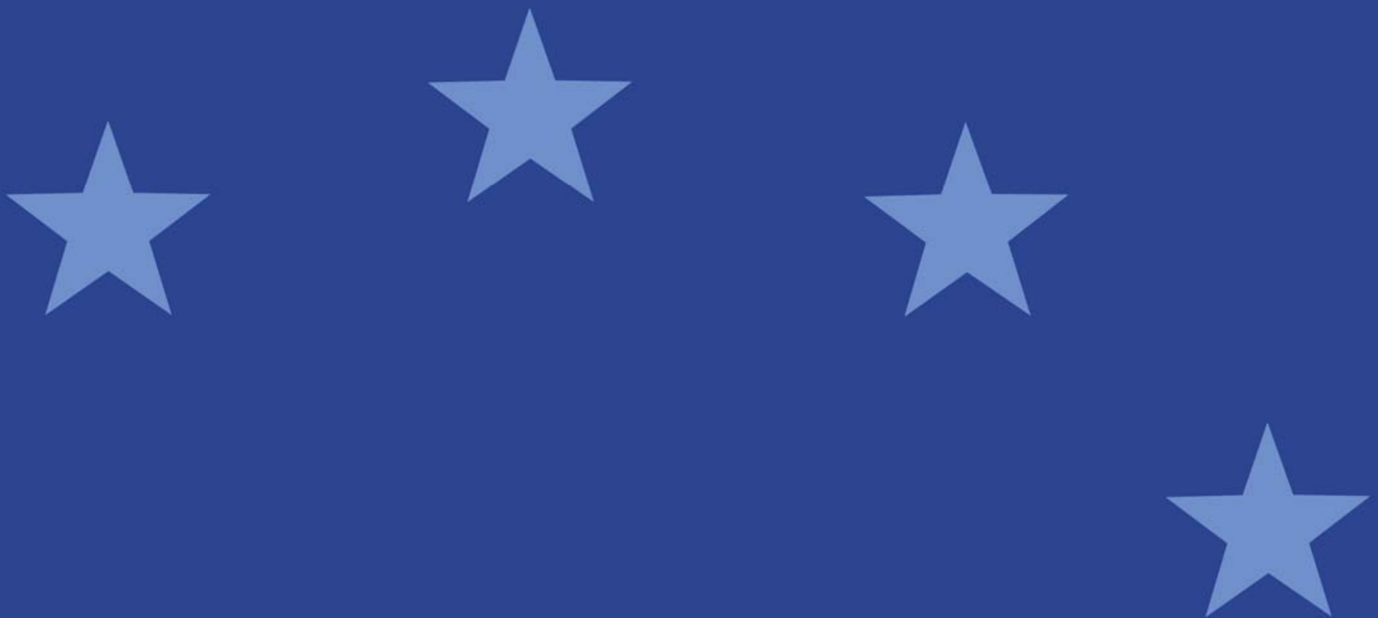
Final Report

Guidelines on systems and controls in an automated trading environment for trading platforms, investment firms and competent authorities



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I. Scope

What?

1. This paper contains guidelines issued under Article 16 of the ESMA Regulation. In accordance with Article 16(3) of the ESMA Regulation, competent authorities and financial market participants must make every effort to comply with the guidelines and recommendations.

Who?

2. These guidelines set out ESMA's view of how Union law should be applied in a particular area, or of appropriate supervisory practices within the European System of Financial Supervision. ESMA therefore expects all relevant competent authorities and financial market participants to comply with these guidelines unless otherwise stated.

3. These guidelines cover :

   a. the operation of an electronic trading system by a regulated market or a multilateral trading facility;

   b. the use of an electronic trading system, including a trading algorithm, by an investment firm for dealing on own account or for the execution of orders on behalf of clients; and

   c. the provision of direct market access or sponsored access by an investment firm as part of the service of the execution of orders on behalf of clients.

4. The guidelines will also have implications for firms not authorised as market operators or investment firms under MiFID. These include firms who sell electronic trading systems to market operators or investment firms, or act as the outsourced providers of such systems, or provide connectivity services to investment firms when accessing trading platforms. Such firms will be affected by trading platforms' and investment firms' obligations in relation to their electronic trading systems.

5. The guidelines will also affect firms exempt from MiFID who trade on own account and access trading platforms directly as members, participants or users, or through DMA or SA. They will be affected by the guidelines on fair and orderly trading for trading platforms in relation to the requirements for members, participants and users who are not authorised, and the guidelines for trading platforms and investment firms relating to DMA and SA.

6. References in the guidelines to investment firms relate to investment firms when executing orders on behalf of clients and/or dealing on own account in an automated trading environment. An investment firm when operating a multilateral trading facility is covered by the guidelines relating to trading platforms.

7. ESMA includes within the scope of electronic trading systems used by investment firms, electronic systems to send orders to trading platforms (whether or not orders from clients are submitted electronically to the investment firm) and electronic systems which automatically generate orders i.e. trading algorithms. Smart order routers may be part of a firm's systems for sending orders to

trading platforms. For the purposes of this work, ESMA covers smart order routers only from the perspective of the risks involved in order entry and not, for example, in relation to best execution.

8. These guidelines are not restricted to the trading of shares but cover trading in an automated environment of any financial instrument (as defined in MiFID).

9. For both trading platforms and investment firms, the systems and controls employed in complying with these guidelines should take into account the nature, scale and complexity of their business.

When?

10. These guidelines will become effective *one month after the publication by national competent authorities of the guidelines and recommendations on their official website in their national language*. According to this schedule and unless otherwise informed, market participants should be able to comply with the guidelines since the 1st May 2012.

Reporting Requirements

11. Competent authorities that comply with these guidelines should incorporate them into their supervisory practices, including where particular guidelines within the document are directed primarily at financial market participants. National competent authorities must notify ESMA whether they comply or intend to comply with these guidelines, with reasons for non-compliance, *two months after publication of the final guidelines in all EU official languages by ESMA*.

12. Financial market participants are not required to report to ESMA whether they comply with these guidelines and recommendations.

II. Definitions

13. For the purposes of these guidelines and recommendations, terms shown in italics have the meaning defined in the table below. Certain other terms used in the guidelines, for example investment firm, have the meaning defined in Article 4 of the *Markets in Financial Instruments Directive*.

Competent Authorities	Competent authorities designated under Article 48 of MiFID
Direct Market Access (DMA)	An arrangement through which an investment firm that is a member/participant or user of a trading platform permits specified clients (including eligible counterparties) to transmit orders electronically to the investment firm's internal electronic trading systems for automatic onward transmission under the investment firm's trading ID to a specified trading platform.
ESMA	European Securities and Markets Authority
ESMA Regulation	Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC, OJ L

	331, 15.12.2010, p.84.
Financial Market Participants	A person as defined in Article 4(1) of the ESMA Regulation: "…means any person in relation to whom a requirement in the legislation referred to in Article 1(2) [which includes MiFID and MAD and their respective implementing measures] or a national law implementing such legislation applies"
Market Abuse Directive (MAD)	Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse), OJ L 96, 12.4.2003, p.16.
Markets in Financial Instruments Directive (MiFID)	Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC, OJ L 145, 30.4.2004, p.1.
MiFID Implementing Directive	Commission Directive 2006/73/EC of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and the Council as regards organisational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive, OJ L 241, 2.9.2006, p.26.
Sponsored Access (SA)	An arrangement through which an investment firm that is a member/participant or user of a trading platform permits specified clients (including eligible counterparties) to transmit orders electronically and directly to a specified trading platform under the investment firm's trading ID without the orders being routed through the investment firm's internal electronic trading systems.
Suspicious Transaction Report (STR)	Reports to competent authorities required under Article 6(9) of MAD where a person professionally arranging transactions reasonably suspects that a transaction might constitute insider dealing or market manipulation.
Trading Algorithm	Computer software operating on the basis of key parameters set by an investment firm or a client of an investment firm that generates orders to be submitted to trading platforms automatically in response to market information.
Trading Platform	A regulated market (RM) or multilateral trading facility (MTF).

III. Purpose

14. The purpose of these guidelines is to ensure common, uniform and consistent application of MiFID and MAD as they apply to the systems and controls required of:

- trading platforms and investment firms in an automated trading environment; and

- trading platforms and investment firms in relation to the provision of DMA or SA.

IV. Feedback statement on the public consultation on the ESMA's guidelines on systems and controls in a highly automated environment for trading platforms, investment firms and competent authorities

Q1: Do you agree with ESMA that it is appropriate to introduce guidelines already before the review of MiFID covering organisational arrangements for trading platforms and investment firms in relation to highly automated trading, including the provision of DMA/SA?

15. 35 respondents answered this question.

16. The vast majority of respondents (30 out of 35) supported fully or broadly the introduction of guidelines by ESMA before the review of MiFID and MAD is completed. The following main remarks were made:

    - Most respondents, including the Securities and Markets Stakeholders Group, agreed that ESMA was right to introduce these guidelines now. However, in some cases this support was conditional on ESMA ensuring that the guidelines did not involve costly changes for firms.

    - Many of the proposed guidelines are already considered as "best practices" by the industry but it is helpful to spell out these practices;

    - The timing for completion of the MiFID review is uncertain, and in any case the new legislation is not likely to be in force before the end of 2013, so there is a scope for action from ESMA in the meantime;

    - Close coordination with the European Commission is needed (in particular to ensure that changes to the guidelines after MIFD and MAD review are kept to the minimum and subject to a cost-benefit analysis);

    - Some respondents argued that industry needed a realistic transitional period to implement the guidelines. The length of the transitional period was not specified; and

    - ESMA should make sure that the guidelines are implemented in a consistent way at national level (i.e. incorporated in a consistent way by national competent authorities in their supervisory practices to avoid implementation discrepancies).

17. A minority of respondents (5 out of 35) has significant reservations about, or find inappropriate, the introduction of these guidelines before the review of MiFID is completed. These respondents indicated that:

    - ESMA should wait until the MiFID review is completed because otherwise ESMA risked creating uncertainty and imposing two sets of implementation costs on firms.;

    - The real issues on automated trading that need regulatory action are related to other microstructural subjects (tick sizes, co-location…). Since these topics will be dealt with in the context of MiFID review, these respondents saw no need for immediate action; and

- The guidelines might have to be amended substantially in the future to reflect the MIFID review making the value of adopting guidelines now very limited.

18. Some comments referred to other issues related to the guidelines, such as the need to look again at some of the guidelines (because some were too broad and others were not practicable), the scope (e.g. the need to include within the scope of the guidelines connectivity providers, organized trading facilities, co-location, stub quotes, or the need to assess the impact of the current level of liquidity and speed of trading on long term investors…), or the need to ensure that regulation of HFT is based on adequate evidence and does not adversely affect liquidity.

19. *ESMA considers that:*

    i. *These guidelines will contribute to the stability and robustness of European electronic trading systems, and it is therefore desirable to implement these guidelines now and not wait for the completion of the MiFID review. In deciding to move ahead now, ESMA took into account the fact that these guidelines are in the main a codification of best practices and should not require trading platforms and firms to make major systems changes.*

    ii. *In that context, ESMA believes that there will be sufficient time to implement the guidelines since:*

        1. *The guidelines will be published by ESMA in all EU official languages shortly after their approval. That publication shall trigger the 2-month period in which national competent authorities will confirm whether they intend to comply with the guidelines; and*

        2. *These guidelines will become effective one month after the publication by national competent authorities of the guidelines and recommendations on their official website in their national language. According to this schedule and unless otherwise informed, the guidelines will become effective on the 1st May 2012.*

Q2: Do you think that the draft guidelines adequately capture all the relevant points relating to the operation of trading platforms' electronic trading systems?

20. 25 respondents answered this question.

21. The vast majority of responses indicated that the main points had been covered.

22. At the open hearing and in the consultation responses issues which are covered by the existing legislative framework but were not considered within the scope of the directive were raised. Most prominent amongst these were:

    i. Potential conflicts of interest of market operators and market participants being active in each other's domain (this was raised by the Securities and Markets Stakeholder Group amongst others);

ii. Business continuity arrangements and standards for market operators and market participants/users;

iii. Microstructural issues. This includes tick sizes, fees, controls on general clearing members, co-location and understanding HFT strategy (the ESRB suggested exploring possible policies to constrain HFT for financial stability reasons).

23. However, a number of respondents mentioned issues related to the topics addressed in the guidelines such as:

- Outsourcing of the operation of trading platform should be possible and more clearly dealt with;
- The parameters used for capacity planning, e.g. peak intraday load;
- Using message throttling as opposed to trading halts was criticised;
- Requiring trading platforms to provide cost-effective testing for platform users;
- Business continuity and resilience arrangements should be more specific and should not be limited only to system failures
- Additional role of national regulators was suggested regarding standards of risk management;
- All trading venues should have a control framework to promote market integrity;
- Lighter requirements for reference price systems were suggested;
- Differentiated rules should be applied to RMs and MTFs (whilst a number of other respondents supported equal requirements in guidelines for both trading venues);
- External audit of market participants on adherence to guidelines was proposed; and
- There was opposition to taking a one-size-fits-all approach for stress-testing.

24. Notably, one response said that more clarity on was required on the applicability of the guidelines by asset class/market structure.

25. *ESMA notes that the guidelines have a narrow focus and that this is not intended to mean that other standards are not relevant to the trading activities of investment firms and the operation of trading platforms. Certain microstructural issues were deliberately left out of the guidelines but will be picked up again after the work on the guidelines is completed.*

26. *It is important to note that the work related to automated trading will not stop with the issuance of the guidelines, but will continue either in the context of the MiFID review or within the current legislative framework. In particular, both conflicts of interest and business continuity arrangements are important topics. Future ESMA work on microstructural issues will look at conflicts of interest. However, it is not planned at this stage to do further work on business continuitygiven that all EEA jurisdictions should require to have in place effective business continuity arrangements. The ESMA work plan for 2012 will be published on ESMA website in due course.*

27. *In relation to point made on the applicability per asset class/market structure, the guidelines have been amended to clarify that they are not restricted to trading of equity financial instruments but cover trading of any financial instrument in an automated environment.*

Q3: Are there areas where it would be helpful to have more detail on the organisational requirements applying to trading platforms' electronic trading systems?

28. 25 respondents answered this question.

29. Most respondents did not identify a need for more detailed requirements. However, some respondents suggested that more details was required in the following areas:

- Potential conflicts of interests of market operators and market participants being active in each other's domain;
- Testing methodologies;
- Prevention of market abuse;
- Applicability of the guidelines to various electronic processes for the trading of various asset classes;
- Reporting of "significant incidents that may affect the sound management of the technical operations of the system"; and
- Record-keeping requirements, emergency conditions and duty to review.

30. *ESMA has revised the guidelines and amended them where it was considered necessary.*

Q4: Do you have additional comments on the draft guidelines on organisational requirements for trading platforms' electronic trading systems?

31. 24 respondents answered this question.

32. Most respondents had no additional comments or referred to comments they had previously made. A number of respondents repeated their point on the need to have more flexibility on capacity management and message throttling.

33. Additionally, there were some individual comments on issues such as more flexibility for trading in different asset classes, clear definitions of HFT and algorithmic trading and more consistency on trading rules, especially more certainty on conditions for "busting" trades.

34. *ESMA believes that the general principle of proportionality set out in the introductory text of the guidelines is sufficient to deal with the specificities of trading in different asset classes. It does not believe that in the context of the guidelines it is appropriate to define HFT, although it has sought to define algorithmic trading.*

Q5: Do you think that the draft guidelines adequately capture all the relevant points related to the operation of trading algorithms?

35. 28 respondents answered this question.

36. 9 of them believed the guidelines adequately captured all points relevant to the operation of trading algorithms.

37. One general comment in the responses was that the guidelines needed to distinguish between different firms' activities and their respective obligations. In addition, several suggestions were received for improvements to the guidelines :

  - Level of detail and scope: across questions 5-7, which relate to guideline 2, there was a split of opinion between respondents on how much detail the guidelines should contain. Some respondents were asking for more detail whilst others were stressing that the guide-

lines should be principles based to allow market participants flexibility on how to effectively implement the guidelines in their organisation.

- Need to distinguish between different firm's activities and business models: three respondents noted the guidelines do not distinguish between different types of firm in terms of their business activity. Respondents say this is material as what constitutes appropriate governance arrangements will differ between firms.

- Concern business continuity, security and personnel arrangements are not effective: Three respondents questioned whether the business continuity arrangements were appropriate, one of the three suggested the requirements should be dropped. One respondent said the guidelines are disproportionate for exclusively proprietary traders as firms without customers do not necessarily need to be able to operate their electronic trading systems with full functionality from a back-up site.

- Extent of the Compliance Department's responsibilities needs clarification and reassessment: Two respondents requested that the role of Compliance should be clarified as it is important to keep in mind that algorithm strategies and workings are complex and IT intensive. Consequently, Compliance may have to sign-off on items that are beyond their remit/knowledge base. One respondent suggested Compliance's domain should be restricted to approving overall controls and processes on an algorithm's release.

- Record keeping guidelines will not capture the right information and will be costly to implement: Two respondents said that the guidelines would mean firms would have to store information that is not necessary such as the intermediate results of software and algorithm that is not representative of the end product. The two respondents suggested narrowing the requirements to focus on documenting trading, compliance and risk management controls and that processes are followed.

- Algorithmic testing and monitoring is impractical: Two respondents said that it is impossible to simulate how an algorithm will behave in stressed markets. One of these two respondents noted that testing is dependent upon the market operator providing access to their systems and that ESMA should place a requirement on operators to co-operate. A third respondent said that testing and risk controls are required but live testing should not be mandatory.

38. *In relation to the need for distinguishing between different activities and business models, ESMA wants to reiterate the point made in the consultation paper where it was indicated that for both trading platforms and investment firms the systems and controls employed would need to be effective and proportionate to the nature, scale and complexity of their business.*

39. *ESMA disagrees with market participants that consider that business continuity arrangements are disproportionate. MiFID establishes a requirement for business continuity arrangements. The exact arrangements will be subject to the general principle of proportionality taking account of the circumstances of individual firms, including whether they have clients.*

40. *ESMA notes the concerns of those respondents who considered that compliance departments could only be expected to play a limited role in the governance procedures for algorithms. In particular, the points made indicating that compliance staff could not be expected to have any responsibility for*

the technical elements of algorithms as opposed to ensuring controls were built into their use and worked effectively. The guidelines have been amended to clarify that compliance staff should be responsible for providing clarity about the firm's regulatory obligations and the policies and procedures that seek to ensure the use of the trading systems and algorithms comply with the firm's obligations and that any failures to comply are detected rather than the technical properties of the trading systems or algorithms.

41. *Regarding the responses on record keeping obligations, the guidelines have been amended to clarify that the information that it is necessary to keep is that which is "sufficient for competent authorities to monitor the firms' compliance with their obligations in respect of MiFID's organisational requirements".*

42. *On the impossibility to simulate how the algorithm will behave in stressed market conditions, the guidelines include the obligation to roll out the deployment of trading environment in a live environment in a controlled and cautious fashion, so as to preserve the possibility of the investment firm making changes if the algorithm does not behave as expected. The guidance that a system/algorithm should be tested to continue to work effectively under stressed market conditions has been kept in the guidelines.*

Q6: Are there areas where it would be helpful to have more detail in the guidelines applying to the organisational requirements for investment firms' electronic trading systems?

43. 18 respondents answered this question.

44. Respondents largely restated concerns raised above, under question 5, as follows:

- More detail required on record keeping: Two respondents requested further detail on record keeping requirements and what comprises adequate records. One of those respondents also suggested a balance needed to be struck between what information would be valuable to the regulator and what would be realistic at the firm level. The same respondent also questioned whether ESMA could keep details of firms' trading strategies completely confidential given the potential value it could have, if leaked to a competitor.

- Another respondent reiterated that it is necessary to distinguish between different firms' activities and business models.

- One respondent suggested that ESMA should clarify 'trading algorithm' to avoid unintended consequences. The respondent suggested that ESMA should state whether it intends to:

    - Capture all orders where decisions on price, size, time and destination were taken by a computer;
    - Exclude typical execution algorithms;
    - Only capture certain trading strategies.

45. *ESMA maintained its broad definition of "trading algorithm" in light of the responses received. It believes that such an approach is necessary to avoid regulatory arbitrage but recognises that the application of the guidelines to any algorithm will vary depending on the nature of the individual algorithm. For the other comments received, see ESMA s feedback under Q5.*

Q7: Do you have additional comments on the draft guidelines relating to organisational requirements for investment firms' electronic trading systems?

46. 19 respondents answered this question.

47. 3 of the respondents confirmed they had nothing further to add and 7 respondents referred directly back to their earlier responses related to Guideline 2.

48. The main topic raised, by five respondents, was the cost and limitations around algorithm testing as real time testing cannot be fully replicated within a test environment. One respondent suggested the level of testing conducted on an algorithm should be appropriate to an algorithm's size, complexity and nature.

49. The other key item raised by two respondents is that an algorithm should not be allowed to exit all positions simultaneously as that could exacerbate disruption and expose other participants to risk. One respondent disagreed and recommended traders should wind down algorithms slowly to avoid volatility in the market and ensure an orderly withdrawal.

50. One respondent pointed out that market operators should not be mandated to provide live testing facilities.

51. *ESMA does not impose in the guidelines a level of testing, but it requires that that level should be appropriate to ensure that:*

   i. *The operation of the electronic trading system/algorithm is compatible with the investment firm's obligations under MiFID and other relevant Union and national laws;*
   ii. *The operation of the electronic trading system/algorithm is compatible with the investment firm's obligations under the rules of the trading platform they use;*
   iii. *The compliance and risk management controls embedded in the system/algorithm work as intended; and*
   iv. *The electronic trading system/algorithm works effectively in stressed market conditions.*

52. *For the other comments, see the responses to Q 5 and Q6.*

Q8: Do the draft guidelines on organisational requirements for trading platforms to promote fair and orderly trading offer a sufficiently comprehensive list of the necessary controls on order entry?

53. 33 respondents provided a response to the question either specifically or providing indications in this area in the context of the overall response to the consultation.

54. Most of the respondents considered that guidelines will provide greater consistency in the area of controls employed by trading platforms as well as a sufficiently comprehensive list of the necessary controls on order entry. At the same time, many respondents requested greater clarity in certain areas:

- Circuit breakers and limit up/limit down arrangement:

  Most respondents considered that platform based circuit breakers should be mandatory, harmonised across EU and based on volatility interruptions; one of them also supported limit-up and limit-down systems (taking into account cross product/cross market hedging, level playing field for all market participants, maintenance of block orders priority and a ban on cancelling trades once executed). On the contrary, some respondents considered that there is no need to mandate to the use of circuit breakers by trading platforms: a harmonised control system is vital, but each venue should be allowed to implement the trading controls that best suits their market and operating systems. Some respondents suggested that guidelines in this article should not be too prescriptive and should consider alternative approaches such as limit-up/limit-down arrangements.

- Capacity of the trading platform to constrain flow or speed of orders and cancellation/amendment/correction of orders:

  Some respondents said that trading platforms have various mechanisms to prevent capacity from being breached which have the same effect as slowing down of order flow: *e.g.* arrangements to constraint or halt trading in the order book; measures on message entry (including modification and deletions) and on reduced limit of messages per second. However, any mechanisms should take into account differences among different types of member: *e.g.* "acceptable" message rates from market makers. Moreover transparent and clear criteria on how trading platforms are to determine which orders appear to be erroneous should be provided. A few respondents underlined that the ultimate responsibility to ensure that orders are not entered in the order book in error is for members/participants and that cancellation of orders by trading venues could generate the rejection of good orders where trading is extremely volatile and there are significant price movements.

- Systems' testing:

  Only a few respondents provided comments in this area. In particular, comments referred to the need for harmonisation at EU level for requirements on standardised testing of the systems that members/participants use to access the platforms. However, some other respondents indicated that systems and controls should not be mandatory but left to market operators. The algo-trading firm must ensure its systems and controls are adequate and fulfil the rules of the venue it is accessing.

- Pre and post-trade controls:

  Some respondents indicated that there should be harmonisation at EU level for requirements on members/participants' pre and post-trade controls. At the same time, it was argued that trading platforms might not be in the position to sufficiently screen any individual's access to the trading venue: *(i)* access might be via an intermediary who is a registered trading member; *(ii)* participants internal systems are highly bespoke. One respondent suggested that the competent authority, and not the trading venue, should enforce and supervise controls.

- Training/knowledge for traders

Only few comments were received in this area mainly arguing that standardised training programmes for traders would be appropriate. In this respect, it was suggested that ESMA might be the coordinator of the project across EU; alternatively the competent authorities could set and enforce standards on knowledge for those accessing the systems. One respondent observed that passing examinations would not necessarily indicate trading ability.

55. Additional comments were made concerning the need to have guidelines on organisational requirements for members/participants and users of trading platforms that are neither credit institutions nor investment firms, before the implementation of new MiFID II requirements. Furthermore, some respondents emphasised that it is the market structure itself that regulates the volumes of messaging sent to the order book. Therefore, instead of relying on order flow management by trading venues (with a risk of race-to-the-bottom between trading platforms), the regulation of tick size would represent the perfect lever: regulators should impose a single tick size for security across all EEA trading venues, using factors such as liquidity and volatility. This would naturally generate a reduction in messaging volume.

56. *For ESMA's position on the comments received, see ESMA's position on Q10.*

Q9: Are there any areas of the draft guidelines on organisational requirements for trading platforms to promote fair and orderly trading where you believe it would be helpful to have more detail?

57. 20 respondents provided a response to the question.

58. Some respondents said that the guidelines do not need additional details. Many other respondents provided indications and suggestions to add more clarity with respect to specific items or suggested additional controls. In addition to what was explained above under Q8, comments were made on:

i. The capacity of the trading venue to constrain the flow or speed of orders, cancellation/amendment/correction of orders and limits on order entry volume:

Some respondents indicated that more details are needed on the circumstances and permissible time periods for order cancellation. In this respect, according to one respondent, it should be made clear whether the ability to cancel and potentially amend errors is only possible on the same day. Furthermore, it had been underlined that mechanisms to constrain order flow or speed of orders should be applied in a differentiated manner in order to take into account differences among users of trading platforms (*e.g.* market maker, HFT).

ii. Pre and post-trade controls

Different views were expressed in this area: on one side. Some respondents said that additional clarifications and details are needed with respect to pre and post-trade controls, in order for ESMA to coordinate a consistent regional approach; however, other respondents argued that requirements for pre and post-trade controls should not be too detailed or specific.

iii. Additional comments were made on the issue of an order to transaction ratio: it was suggested that when a ratio of X transactions per fill is exceeded the trading platform should notify the client so that the matter could be addressed; the same respondent also suggested a three tier system for non-clearing members: warning when close to limits, throttling system to slow-down orders and hard limits to halt trading.

59. *For ESMA's response to the points raised, see ESMA's position on Q10.*

Q10: Do you have additional comments on the draft guidelines on organisational requirements for trading platforms to promote fair and orderly trading?

60. 21 answered this question.

61. Only a few respondents considered that no additional details are required in the guidelines. Some respondents provided specific comments suggesting that:

i. Members of trading platforms who are not credit institutions and investment firms should be covered by organisational requirements;

ii. Requirements regarding circuit breakers should be more detailed and harmonised across all trading platforms in EU. Also, limit-up/limit-down mechanisms could work well. A combination of both mechanisms could be the optimal solution;

iii. Standardised testing issues and IT compatibility of members/participants issue should be covered in the guidelines on organisational requirements for investment firms and not in those for trading venues, since firms are the source of the orders;

iv. Throttling would be an appropriate measure, to apply not only to order entry but to any messages;

v. Investment firms must put in place additional filters further to the imposed by the platforms;

vi. Any regulatory response should be modulated to reflect the fact that different trading platforms target different user-groups and that RMs should have the right to introduce regulations as appropriate for dealing with HFT.

62. *ESMA has taken into account the comments received to amend Guideline 3 in order to make it clearer and allow trading platforms to properly assess what competent authorities expect from them. In particular:*

i. *Paragraph 2, bullet f) has been amended to endorse those comments highlighting that measures should consider message traffic (including modification and deletion) rather than the order flow*;

ii. *Paragraph 2, bullet g) has been amended to explicitly refer to circuit breakers and volatility interruptions in the context of the guideline, in order to provide more clarity on the arrangements considered. Those mechanisms, even though*

not included in the previous text of the Guideline, were mentioned and illustrated in the Explanatory Notes;

iii. *Paragraph 2, bullet b) has been amended to reflect the fact that differences among trading platforms do exist but member/participant systems should be prevented from jeopardizing the fair and orderly trading;*

iv. *Paragraph 2, bullet a) has been amended to indicate that the application of the guidelines laid down in this document for the investment firm should also apply to members or participants who are not credit institutions or investment firms"; furthermore, changes have been made to make it clear that adequate due diligence on applications to become a member/participant or user as well as the ability to obtain information from a member/participant or user to facilitate monitoring of their compliance with the rules and procedures of the regulated market or multilateral trading facility relating to organisational requirements and trading controls is expected in this area. Those requirements, even though not included in the previous text of the Guideline, were mentioned and illustrated in the Explanatory Notes;*

v. *Additional clarifications and additions have been included in the guideline also on the basis of the comments received with respect to: i) information to competent authorities by Trading platforms about significant risks that may affect fair and orderly trading and major incidents where those risks crystallise; ii) the need for Trading platforms to make the rules and procedures governing the matters covered under the guideline publicly available; iii) the need for trading platforms to have in place a feed of the investment firm's orders in as close to real time as possible as well as systems for monitoring these orders; iv) the presence of knowledgeable staff (accessible to the authority with the mandate to take remedial action) on a continuous basis to monitor the trading activity taking place on the platform.*

Q11: Do the draft guidelines on organisational requirements for investment firms to promote fair and orderly trading offer a sufficiently comprehensive list of the necessary controls on order entry?

63. 31 respondents answered this question.

64. The majority of the respondents supported the guidelines. However, a significant minority of 13 respondents had concerns about the scope and practicality of part of this guidelines, indicating that some controls might go too far or be impracticable. Only four respondents argued for more stringent requirements.

65. Two respondents suggested ESMA to remind investment firms that they should ensure that the systems they are using to access a trading venue have a level of functionality that is compatible with fair and orderly trading on that venue.

66. Six respondents requested a clarification in the guidelines so that organizational requirements be proportionate to the nature, size and scale of investment firms. These respondents also mentioned the complexity of the firm's trading activity, such as the characteristics of the markets in which the firm

operated, as a relevant proportionality consideration. One respondent added that small investment firms that do not engage in HFT should not be burdened with such organisational requirements because smaller firms are unlikely to trigger large price movements or other disorder on the market.

67. Ten respondents indicated that they have concerns with regard to guideline 4.2 (second indent) relating to a firm's ability to block or cancel orders if the client does not have adequate funds or holdings of, or access to, the relevant financial instrument to complete the transaction. These respondents said that this provision is not practicable, as it assumes that all investment firms are in a position to have insight in the financial position, trading activity, initial position and/or custody holdings of the client. More specifically, one respondent noted that it may not be possible for markets which operate a T+3 settlement cycle to comply with this proposed detailed guideline, as investment firms do not know whether payment or delivery will be made at the time of the order. Others noted that some firms only have knowledge of transactions that occur on or through that investment firm, therefore missing trading activity on or through other investment firms or trading platforms. Also, 4 market participants questioned whether this detailed guideline was intended as an automatic ban on short selling and whether it would call into question legitimate short selling strategies.

68. 13 Respondents expressed concerns with regard to the detailed guideline which would require investment firms to ensure that compliance staff has a feed of the firm's orders in as close to real time as possible and have systems for monitoring those orders. These respondents considered this provision to be impracticable, unnecessary or going too far. The main concern expressed was about the concept that compliance staff should not monitor trades in real time. It was argued that given the large the number of orders and the speed at which these are traded, the real time order flow can best monitored by the trading surveillance officers (or at desk level, by the front office desk). Respondents said that compliance is not equipped to evaluate the real-time order flows and books properly. Rather, they argued that compliance is better positioned for operating on an ex-post 'exceptions basis', where they prioritise their attention to flagged exceptions. Thus, these respondents argued that it is more effective if compliance looks selectively at trades that represent potential issues, functioning as a second control on the front office, and focussing on patterns in trading using an ex-post system.

69. Finally, five respondents argued it is unnecessary to have approval of both compliance and risk management when overriding pre-trade controls.

70. *ESMA has considered the feedback set out above.*

71. *While emphasising that the notion of proportionality underlies all of the guidelines for systems and controls in an automated trading environment, ESMA sees no reason to adjust guideline 4. The scope of this guideline is purposefully broad, so as to capture all investment firms who make use of trading algorithms, including those not constituting high frequency trading. Even relatively "slow" algorithms may create risks, which makes it appropriate to capture all investment firms who make use of such algorithms in the guidelines.*

72. *While affirming that it had no intention to address short selling here in any way, ESMA recognises that firms usually trade on the basis of credit limits not the cash holdings of clients and thus do not have full sight of the financial instruments that a client owes. Therefore, ESMA has decided to delete this detailed guideline.*

73. *Considering that IT compatibility and having the right level of systems functionality will contribute to the prevention of erroneous order entry, and will improve a firm's risk management ability, ES-*

MA has adopted the suggestion that investment firms should have systems compatible with fair and orderly trading and has included it as detailed guideline.

74. *After evaluating this feedback, and considering the role it sees for the compliance function of investment firms in a highly automated trading environment, ESMA has decided to adjust and clarify the related guideline and split it in separate parts.*

75. *ESMA's first focus is on investment firms ensuring that they have in place a feed of the firm's orders in as close to real time as possible and that it has systems for monitoring these orders.*

76. *Secondly, in order to be able to respond to inquiries from competent authorities or trading venues, the firm should have staff members present who monitor these systems on a continuous basis whenever the firm sends orders to the market. These staff members should be knowledgeable and mandated to take appropriate action where necessary.*

77. *Thirdly, investment firms should ensure that compliance staff is able to follow closely the firm's electronic trading activity so that they can quickly respond to and correct any failures or regulatory infractions that may take place. However, this does not necessarily imply that compliance staff should monitor firm's order flow in real-time.*

78. *Given the importance that ESMA attaches to the compliance with pre-trade controls, and given the significant risks that can occur when these are overridden without due approval, ESMA does not consider there is reason to change this detailed guideline.*

Q12: Are there any areas of the draft guidelines on organisational requirements for investment firms to promote fair and orderly trading where you believe it would be helpful to have more detail?

79. 28 respondents answered this question. Some respondents argued that the implications of a requirement to block orders if there are inadequate funds are potentially quite significant and that the text was not clear. Others noted that no individual firm can ensure beyond any doubt that a client holds adequate funds at any given time. In their opinion, the guidelines should also have further clarified the room for flexibility for firms to tailor limits to their business models, and should have taken into account current business practices which are effective in achieving the main objective of risk management.

80. Some respondents believed that clarification and additional guidance would be useful regarding staff training. Two respondents proposed a harmonized European program, where the training could be provided by entities certified by national regulators under the leadership of either ESMA or the European Commission.

81. Several respondents requested clarification on the role of compliance with regard to the monitoring of real time trades.

82. *As explained in its feedback to the responses to question 11 above, ESMA has noted the concerns with the detailed guideline on checking clients' cash and holdings of financial instruments and has decided to remove it.*

83. *ESMA has taken note of this suggestion on staff training, but at this stage does not see reason to expand further on the current detailed guideline.*

84. *As explained above in the feedback to the responses to question 11, ESMA has clarified its thoughts on the role of compliance by splitting the original detailed guideline in separate parts, which address the concerns raised by respondents.*

Q13: Do you have additional comments on the draft guidelines on organisational requirements for investment firms to promote fair and orderly trading?

85. 17 respondents answered this question.

86. These answers were of a general nature, relating to the notion of fair and orderly trading and its importance.

Q14: Are there any areas of the draft guidelines on organisational requirements for trading platforms to promote fair and orderly trading where you believe it would be helpful to have more detail?

87. 29 respondents answered this question.

88. Most of the respondents (22 out of 25) agreed with and supported the proposed guidelines. Most of them considered that the proposed guidelines were sufficiently detailed.

89. Nevertheless, five respondents said that ESMA should provide additional guidance on list of examples of potentially abusive behaviour (which were included in the explanatory text)and amend the guidelines to ensure that only illegitimate trading is captured. It was argued that further clarity would allow for better monitoring and surveillance capabilities and therefore would improve the ability of RMs and MTFs to identify manipulative behaviour.

90. Two respondents also highlighted the need to distinguish between HFT and the conduct involving abusive trading strategies and added that HFT is not abusive by nature and is already subject to current MAD requirements.

91. *In the light of the feedback ESMA has revised the descriptions of potential instances of market abuse to try and provide more clarity.*

Q15: Do you have additional comments on the draft guidelines on organisational requirements for RMs and MTFs to prevent market manipulation?

92. 17 respondents answered this question.

93. Most of the respondents did not provide relevant comments on the draft guidelines.

94. One respondent said that ESMA should take the opportunity to promote cooperation between market surveillance departments to be able to better detect, investigate and discipline market manipulation. Another respondent said that further harmonization of the interpretation of behaviour that constitutes market manipulation would make it easier for participants to access European markets.

95. One respondent specifically mentioned that efficient market integrity in Europe would require that all venues be coordinated through a uniform system and added that a second level of surveillance should

be centralized at European level and that the number of cases identified should be made public regularly.

96. *ESMA notes that the European's Commission's proposals for the revisions to MiFID seek to facilitate greater co-operation between trading platforms with respect to, amongst other issues, conduct that may indicate abusive behaviour.*

Q16: Are there any areas of the draft guidelines on organisational requirements to deal with market manipulation for investment firms where you believe it would be helpful to have more detail?

97. 21 respondents answered this question.

98. Most of the respondents agreed with and supported the proposed guidelines. Whilst most of them thought that the proposed guidelines were sufficiently detailed, six responded that it would be helpful to have further detail in this area.

99. Some of the respondents noted, that broadening monitoring activities is likely to necessitate changes to systems, which need a reasonable timescale for implementation.

100. *As noted above under question 1, ESMA believes that there is sufficient time for the implementation of the guidelines.*

Q17: Do you have additional comments on the draft guidelines relating to organisational requirements to deal with market manipulation for investment firms?

101. 15 respondents answered this question.

102. 5 respondents reminded ESMA that under existing rules, the requirement to send STRs to regulators does not include where suspicions are aroused by orders and that ESMA paper goes inappropriately beyond the requirements set in the relevant directives.

103. *ESMA has noted the points made by respondents. CESR, ESMA's predecessor, provided guidance on STRs as part of guidelines relating to MAD which contains the obligation relating to STRs. In these guidelines ESMA has restated what CESR said about the reporting of suspicious behaviour related to orders.*

Q18: Do the draft guidelines on organisational requirements for trading platforms whose members/participants or users offer DMA/SA deal adequately with the differences between DMA and SA?

104. 24 respondents answered this question.

105. 11 respondents said that these draft guidelines adequately deal with the difference between DMA and SA. Respondents generally agreed that the member/participant providing DMA/SA access remains responsible for all orders entered. Some suggested this should be clearly stated in the rules of the trading venue. Other respondents said that the risks linked to DMA and/or SA should rather be dealt with at the level of the DMA/SA provider, rather than dealing with it in the rules of the trading venue as they argued that the trading venue is not part of the agreement between the DMA/SA provider and the client.

106. In this way, four respondents argued that, from the point view of the trading venue, no distinction should be made between DMA/SA; they believe risk monitoring and due diligence remain the responsibility of the DMA/SA provider and that a trading venue should not make any distinction between its participants based on the type of access; however, if distinctions were to be made, they should be transparent and objective.

107. Some respondents suggested distinguishing, in the definition of sponsored access, between naked access, defined as a Sponsored Access arrangement without any pre-trade control, and controlled Sponsored Access.

108. Several respondents said that it is not useful to include requirements on adequate systems and controls and due diligence in the rules of the trading platform. They believed that these requirements should instead be included in the organisational requirements at the level of the member/investment firm that provides DMA/SA access.

109. Several respondents representing investment firms thought it would be useful to have guidelines clarifying the role the trading platform can/should play in monitoring the risks linked to SA via gateway controls.

110. One respondent argued that individual ID codes for SA access, where they do not already exist, should be encouraged. However, this respondent said that client identities should remain confidential from other market participants. Three other respondents were of the view that an individual ID code should only be granted after agreement by the SA provider. Based on the individual trade ID for a SA access, five respondents agreed that a trading venue should ultimately have the possibility to stop orders, whereas two of these believe, however, that this ability should only be exercised by the trading venue upon request from the SA provider.

111. *ESMA agrees that the ultimate responsibility for orders and eventual interventions and sanctions remain with the member/participant or user under whose trading codes these orders are entered. For reasons of transparency and to remove any uncertainty, ESMA believes this should be explicitly stated in the rules and procedures of the trading platforms.*

112. *ESMA believes that no additional distinction should be made in the definition itself. However, the detailed guidelines under Guideline 8 now, for the avoidance of doubt, make clear that naked SA is incompatible with MiFID.*

113. *ESMA is of the opinion it is useful to include, in addition to requirements set on the investment firm providing DMA/SA access, general requirements in the rules and procedures of the trading platform. ESMA will thus maintain this requirement in the guidelines.*

114. *ESMA has looked again at clarifying the guidelines with respect to trading platforms to make clearer that if they allow SA then their procedures and arrangements have to be compatible with the need of members/participants to meet their obligation to have adequate monitoring of and controls over the activities of their SA clients.*

115. *ESMA has taken into account these suggestions and concerns over access code and has specified in the guidelines the possibility that trading platforms may take additional interventions over sponsored access by assigning a separate unique trader ID to those clients that access the market via sponsored access.*

Q19: Are there any areas of the draft guidelines on organisational requirements for trading platforms whose members/participants or users offer DMA/SA where you believe it would be helpful to have more detail?

116. 19 respondents answered this question.

117. Respondents suggested more details as follows: where a trading venue offers SA controls, it should be clarified that it has obligations with respect to the effective and continued implementation of those controls and a closer alignment of monitoring and control standards to be exercised by SA providers.

118. *ESMA has revised the guidelines to make clearer that if a trading platform allows SA its procedures and arrangements have to be compatible with the need of members/participants to meet their obligation to have adequate monitoring of and controls over the activities of their SA clients.*

Q20: Do you have additional comments on the draft guidelines relating to organisational requirements for trading platforms whose members/participants or users provide DMA/SA?

119. 26 respondents answered this question.

120. *ESMA welcomes the comments provided by the respondents that were diverse in nature and has taken them into account in the detailed guidelines where it felt this was appropriate, some of which are addressed in the feedback under Q18 and Q19.*

Q21: Do the draft guidelines on organisational requirements for investment firms providing DMA/SA deal adequately with the differences between DMA and SA?

121. 22 respondents answered this question.

122. 12 respondents believe that the guidelines sufficiently deal with the differences between the two forms of access.

123. Five respondents however did not think the guidelines dealt adequately with the enhanced risks associated with sponsored access: one respondent questioned whether SA should be permitted at all; three respondents noted that since the risk profile was greater for SA, and so believe there should be enhanced controls in this area; however, another respondent argued that there should be no distinction between different types of market access including DMA and SA though the same respondent then contradicted itself by saying that greater emphasis should be put on the risks associated with SA. One other respondent stated that there is no call for guidelines on pre-trade controls for SA arrangements.

124. *ESMA believes that sponsored access is compatible with MiFID where appropriate controls are in place. As the guidelines emphasise, investment firms are responsible for all the trading done in their name. When offering sponsored access it is therefore necessary for them to ensure that relevant controls are in place for this trading in the same way as they are obliged to do so for other forms of trading done in their name. In adopting controls investment firms have to have regard to the type of business they will be conducting with a client. Given the nature of sponsored access it is likely that some aspects of the controls, such as due diligence on the clients, that they implement in regard to such clients will be more extensive than for other clients.*

Q22: Are there any areas of the draft guidelines on organisational requirements for investment firms providing DMA/SA where you believe it would be helpful to have more detail?

125. 20 respondents answered this question.

126. Most respondents wanted some form of clarification and additional detail though the exact area of clarification varied among respondents. 8 respondents said that draft guideline 8.2 (3rd bullet) was the area most in need of clarification.

127. Specific attention was drawn to that part of the guideline calling for: "an assessment, periodically reviewed, of the trading activities of direct market access/sponsored access clients to assess the potential market wide impact of the orders that are likely to be sent to the relevant trading platforms".

128. 8 responses asked ESMA to clarify the meaning of 'market-wide impact'. One firm said it was unclear on what basis ESMA was requiring such an assessment. Three firms wanted to know what 'trading activity' could be considered to cause such an event given that in principle, all orders have a market-wide impact, as they contribute to price discovery .

129. The same firm stressed that firms must have adequate arrangements in place to identify and manage the risks to their operations. The "potential market wide impact of the orders" has an unclear and attenuated connection to a firm's operations. This respondent argued that while trading and market abuse by clients could pose risks to a firm, "market wide impact" is much broader than "market abuse".

130. Again under draft guideline 8.2 (1st bullet) one respondent protested against the requirement for an assessment of the 'financial standing' of the client, arguing that it was not practical for a broker to have a 'complete view' of a client's status.

131. Three firms felt that draft guideline 8.2 (2nd bullet) was not clear and requested it be re-worded (or deleted) though they did not provide alternative drafting suggestions.

132. Another respondent suggested adding at the end of draft guideline 8.2 (4th + 5th bullets) "which can be monitored and reallocated real-time across disparate direct market access/sponsored access systems".

133. *ESMA's intention in mentioning the market wide impact of orders was that investment firms have an understanding of the sort of trading that their DMA/SA clients conduct in order to assess with there is any possibility that the trading could give rise to concerns about fair and orderly trading on specific trading platforms. It has amended the text of the guideline to make this clearer.*

134. *ESMA's intention in mentioning the financial standing of clients was that firms should do checks, as appropriate to the nature of the business they plan to undertake with a client, to ensure that any exposures the firm will develop in relation to the client are consistent with the firm's risk appetite. The language of the guideline has been redrafted to try and make this clearer.*

135. *ESMA does not believe that the guideline dealing with the assessment of clients is unclear.*

136. *ESMA has revised the drafting of the relevant guideline to take account of cross-market issues.*

Q23: Do you believe that there is sufficient consistency between the draft guidelines on organisational requirements for investment firms providing DMA/SA and the SEC's Rule 15c3-5 to provide an effective framework for tackling relevant risks in cross-border activity and without imposing excessive costs on groups active in both the EEA and the US?

137. 21 respondents answered this question.

138. 11 respondents said they were content that the guidelines were consistent with the SEC approach and did not appear to have any major issues with the way they are currently drafted.

139. One of these 11 respondents commented that while there was generally consistency, more harmonisation could be achieved still by providing greater clarity in the guidelines to help firms implement controls efficiently with minimal disruption/expense. It was also suggested that ESMA should monitor US implementation of rule 15c3-5, particularly around pre-trade controls and post-trade surveillance, to inform the implementation of its own guidelines.

140. Only one respondent said explicitly that the guidelines (particularly with reference to Guidelines 4 and 8) were not consistent with the US approach on 15c3-5. This firm believes that the overlap in Guidelines 4 and 8 is confusing and unnecessary and argue that certain requirements in Guideline 8 should be applied to all forms of market access.

141. The respondent insisted that ESMA has not adequately explained why it is limiting Guideline 8 only to trading by DMA and SA clients when all market access arrangements provided by an investment firm create risks for that firm and the trading platform. The respondent believes that the policies and procedures in Guideline 8 apply regardless of type of market access provided.

142. Since the SEC Rule 15c3-5 does not impose separate or different requirements on DMA or SA - requiring only that broker-dealers with market access have effective controls reasonably designed to manage the financial, regulatory, and other risks of that activity - ESMA should combine Guidelines 4 and 8 so as to apply the same standards to all market access. This would bring greater consistency between the ESMA and SEC approaches.

143. Two respondents made more oblique comments on this. One response elaborated on why they thought the current draft guidelines were inconsistent with the SEC approach. They argue that to ensure harmony between EEA and U.S for 'holistic cross trading platform, cross trading system and cross asset class coverage', ESMA should follow SEC Rule 15c3-5 for market participants to ensure pre-trade risk controls immediate dissemination of information to surveillance personnel and aggregated credit checks for clients– all with regard to cross disparate trading platforms, trading systems and covered asset classes involved in a client's trading activity.

144. To this end, they propose Explanatory Note 56 (pg38) of CP be modified to " For a robust framework to mitigate the risks set out in the introduction to this section of the paper, controls need to operate on a pre-trade and post-trade basis across disparate trading platforms, trading systems and asset classes. And of course, oversight of these risk controls needs to be monitored on an on-going basis."

145. Another respondent advised emulating the SEC approach on the responsibility for risk controls, i.e. though pre-trade risk controls provided by trading platforms can be useful risk management tools; they believe that broker-dealers with market access should be responsible in the first instance for establishing and maintaining appropriate risk management controls under the Rule.

146. *ESMA welcomes the fact that a significant number of respondents thought that the guidelines were broadly consistent with those of the SEC. As well as the text of the guidelines themselves, this Feedback Statement and the original Consultation Paper provide a lot of material which should aid investment firms and regulated markets and MTFs in implementing the guidelines in a consistent fashion. There is also a responsibility for ESMA members where they comply with the guidelines to ensure a consistency of implementation. ESMA is developing a close relationship with the SEC part of which involves sharing experiences about the way in which regulation is implemented by firms and trading platforms.*

147. *ESMA does not believe that its approach and that of the SEC are significantly different. ESMA has made clear that the order control parts of Guideline 4 apply equally to order flow from DMA and SA clients as to orders originating from other clients and from the firm when dealing on own account. It is simply that the presentation of the guidelines differ to that used by the SEC, in part because ESMA is conscious that specific questions have been raised by market participants about SMA and SA and ESMA wanted to deal with these issues directly rather than implicitly as part of a set of general standards applying to highly automated trading.*

148. *ESMA recognises that trading in different asset classes and on different platforms can often be interconnected. It is important that investment firms take account of the interconnectedness of their trading and ESMA has sought to reflect this in drafting changes made throughout the guidelines.*

149. *ESMA has revised the text to try and make it as clear as possible that investment firms are responsible for all orders they execute no matter how the order originates.*

Q24: Do you have additional comments on the draft guidelines on organisational requirements for investment firms providing DMA/SA?

150. 24 respondents answered this question.

151. One response questioned the notion of having separate standards for DMA/SA on the grounds that all market access creates risk and therefore there should be a single set of standards covering all forms of market access.

152. A couple of respondents suggested that greater consistency in risks controls should be achieved by requiring trading platforms to develop and provide risk controls with brokers being responsible for setting client specific parameters around client trading. One of the respondents who suggested this approach also argued that regulators should specify the minimum standards that these controls should reach.

153. A couple of respondents picked up the issue of confidentiality. They were concerned that brokers should not be able to profit from the sight of client order flow and one argued that trading platforms should be required to provide written disclosure concerning the use, packaging, redistributing and selling of order flow data.

154. Several respondents commented on the required due diligence on DMA/SA clients. Some said that the main emphasis of due diligence should be on financial standing. Some emphasised that many DMA/SA clients were already authorised, whilst one suggested that with retail clients the risks of their use of DMA/SA were limited.

155. One respondent wanted the guidelines to set out what legal agreements between investment firms and DMA/SA clients should cover, and another wanted trading platforms to be able to review investment firms' policies and procedures detailing their compliance with the DMA/SA guidelines.

156. Some respondents reiterated concerns about the requirements to check holdings of securities and cash and to monitor trades of individual clients (on the grounds this confused the responsibilities of investment firms and those tasked with market surveillance).

157. *A response to the issue of separate DMA/SA standards was included under question 23.*

158. *ESMA believes that the implementation of the guidelines should lead to greater consistency in risk controls across Europe. It does not think that it would be appropriate for regulators to set out centrally detailed requirements for those controls. Within such an approach it would be difficult to properly accommodate the full range of business models of investment firms and trading platforms and it would involve a significant commitment of resource to keep the requirements up to date.*

159. *ESMA recognises that the confidentiality of trading information is an important issue. However, it believes this subject lies outside the scope of these guidelines.*

160. *ESMA recognises that the nature of the due diligence that a firm conducts will depend on the type of business it is conducting. For example, ESMA would normally expect that the extent of due diligence that a firm conducts will be more extensive in relation to sponsored access clients than direct market access clients. ESMA has therefore tried to make the relevant guideline less prescriptive.*

161. *ESMA believes that, consistent with IOSCO's Principle 2 of IOSCO's Principles for DEA that there should be a legally binding contract between an investment firm and its DMA/SA clients. However, as set out in the Consultation Paper there is no specific obligation to this effect under existing EU law and therefore the guidelines cannot introduce such an obligation. However, ESMA welcomes the inclusion of such an obligation in the Commission's proposals for the revision of MiFID,in paragraph 4 of Article 17 of the recast MiFID.*

162. *ESMA has addressed points about draft guideline 4 in the feedback to the responses to questions 11 to 13.*

General question regarding the draft guidelines in Annex VII to this CP:

Q25: Does the explanatory text provided in addition to the guidelines (see Annex VII to this CP) help market participants to better understand the purpose and meaning of the guidelines? Should it therefore be retained in the final set of guidelines?

163. 23 respondents answered this question.

164. Most of those who responded to this question thought that it would be useful to retain the explanatory text, with some saying it was important to achieve uniform application of the guidelines. However, several of those said that if the explanatory text were retained it should be made clear that it was not part of the guidelines and not subject to the "comply or explain" obligation. It was also suggested that any substantive points in the explanatory text should be included in the guidelines themselves. A minority of those who responded to the question said that the guidelines should not need additional explanatory text and that the explanatory text was by and large just a summary of points made in the guidelines.

165. *ESMA included the explanatory text in the Consultation Paper to assist readers in understanding the thinking behind specific points in the guidelines. It believes that the final guidelines should not need substantive explanatory text and should be capable of being understood as they stand. Therefore, in the final guidelines ESMA has removed the explanatory text. In doing so, however, it has looked closely at the explanatory text and sought to incorporate those elements of it that materially added to the draft guidelines in the final guidelines themselves.*

Annex I. Guidelines on systems and controls in an automated trading environment for trading platforms, investment firms and competent authorities

V. Scope

What?

1. This paper contains guidelines issued under Article 16 of the ESMA Regulation. In accordance with Article 16(3) of the ESMA Regulation, competent authorities and financial market participants must make every effort to comply with the guidelines and recommendations.

Who?

2. These guidelines set out ESMA's view of how Union law should be applied in a particular area, or of appropriate supervisory practices within the European System of Financial Supervision. ESMA therefore expects all relevant competent authorities and financial market participants to comply with these guidelines unless otherwise stated.

3. These guidelines cover :

    a. the operation of an electronic trading system by a regulated market or a multilateral trading facility;

    b. the use of an electronic trading system, including a trading algorithm, by an investment firm for dealing on own account or for the execution of orders on behalf of clients; and

    c. the provision of direct market access or sponsored access by an investment firm as part of the service of the execution of orders on behalf of clients.

4. The guidelines will also have implications for firms not authorised as market operators or investment firms under MiFID. These include firms who sell electronic trading systems to market operators or investment firms, or act as the outsourced providers of such systems, or provide connectivity services to investment firms when accessing trading platforms. Such firms will be affected by trading platforms' and investment firms' obligations in relation to their electronic trading systems.

5. The guidelines will also affect firms exempt from MiFID who trade on own account and access trading platforms directly as members, participants or users, or through DMA or SA. They will be affected by the guidelines on fair and orderly trading for trading platforms in relation to the requirements for members, participants and users who are not authorised, and the guidelines for trading platforms and investment firms relating to DMA and SA.

6. References in the guidelines to investment firms relate to investment firms when executing orders on behalf of clients and/or dealing on own account in an automated trading environment. An investment firm when operating a multilateral trading facility is covered by the guidelines relating to trading platforms.

7. ESMA includes within the scope of electronic trading systems used by investment firms, electronic systems to send orders to trading platforms (whether or not orders from clients are submitted

electronically to the investment firm) and electronic systems which automatically generate orders i.e. trading algorithms. Smart order routers may be part of a firm's systems for sending orders to trading platforms. For the purposes of this work, ESMA covers smart order routers only from the perspective of the risks involved in order entry and not, for example, in relation to best execution.

8. These guidelines are not restricted to the trading of shares but cover trading in an automated environment of any financial instrument (as defined in MiFID).

9. For both trading platforms and investment firms, the systems and controls employed in complying with these guidelines should take into account the nature, scale and complexity of their business.

When?

10. These guidelines will become effective *one month after the publication by national competent authorities of the guidelines and recommendations on their official website in their national language*. According to this schedule and unless otherwise informed, market participants should be able to comply with the guidelines since the 1st May 2012.

Reporting Requirements

11. Competent authorities that comply with these guidelines should incorporate them into their supervisory practices, including where particular guidelines within the document are directed primarily at financial market participants. National competent authorities must notify ESMA whether they comply or intend to comply with these guidelines, with reasons for non-compliance, *two months after publication of the final guidelines in all EU official languages by ESMA*.

12. Financial market participants are not required to report to ESMA whether they comply with these guidelines and recommendations.

VI. Definitions

13. For the purposes of these guidelines and recommendations, terms shown in italics have the meaning defined in the table below. Certain other terms used in the guidelines, for example investment firm, have the meaning defined in Article 4 of the *Markets in Financial Instruments Directive*.

Competent Authorities	Competent authorities designated under Article 48 of MiFID
Direct Market Access (DMA)	An arrangement through which an investment firm that is a member/participant or user of a trading platform permits specified clients (including eligible counterparties) to transmit orders electronically to the investment firm's internal electronic trading systems for automatic onward transmission under the investment firm's trading ID to a specified trading platform.
ESMA	European Securities and Markets Authority
ESMA Regulation	Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision

	No 716/2009/EC and repealing Commission Decision 2009/77/EC, OJ L 331, 15.12.2010, p.84.
Financial Market Participants	A person as defined in Article 4(1) of the ESMA Regulation: "…means any person in relation to whom a requirement in the legislation referred to in Article 1(2) [which includes MiFID and MAD and their respective implementing measures] or a national law implementing such legislation applies"
Market Abuse Directive (MAD)	Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse), OJ L 96, 12.4.2003, p.16.
Markets in Financial Instruments Directive (MiFID)	Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC, OJ L 145, 30.4.2004, p.1.
MiFID Implementing Directive	Commission Directive 2006/73/EC of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and the Council as regards organisational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive, OJ L 241, 2.9.2006, p.26.
Sponsored Access (SA)	An arrangement through which an investment firm that is a member/participant or user of a trading platform permits specified clients (including eligible counterparties) to transmit orders electronically and directly to a specified trading platform under the investment firm's trading ID without the orders being routed through the investment firm's internal electronic trading systems.
Suspicious Transaction Report (STR)	Reports to competent authorities required under Article 6(9) of MAD where a person professionally arranging transactions reasonably suspects that a transaction might constitute insider dealing or market manipulation.
Trading Algorithm	Computer software operating on the basis of key parameters set by an investment firm or a client of an investment firm that generates orders to be submitted to trading platforms automatically in response to market information.
Trading Platform	A regulated market (RM) or multilateral trading facility (MTF).

VII. Purpose

14. The purpose of these guidelines is to ensure common, uniform and consistent application of MiFID and MAD as they apply to the systems and controls required of:

- trading platforms and investment firms in an automated trading environment; and

- trading platforms and investment firms in relation to the provision of DMA or SA.

Guideline 1. Organisational requirements for regulated markets' and multilateral trading facilities' electronic trading systems

Relevant legislation.

Article 39, paragraphs (b) and (c), of MiFID for regulated markets.

Article 14, paragraph (1), and Article 13, paragraphs (2), (4), (5) and (6,) of MiFID and Articles 5 to 9, Articles 13 and 14 and Article 51 of the MiFID Implementing Directive for multilateral trading facilities.

General guideline

1. A regulated market's or multilateral trading facility's electronic trading system (or systems) shall ensure that it complies with applicable obligations under MiFID and other relevant Union and national law taking into account technological advancements and trends in the use of technology by its members/participants or users. In particular, the system (or systems) should be well adapted to the business which takes place through it (or them) and is (or are) robust enough to ensure continuity and regularity in the performance of the automated market (or markets) operated by the market operator or investment firm.

Detailed guidelines

2. In following the general guideline trading platforms should at least take into account the following:

a) Governance

- The governance process is central to compliance with regulatory obligations. Trading platforms should, within their overall governance and decision-making framework, develop, procure (including outsourcing) and monitor their electronic trading systems through a clear and formalised governance process. The governance process must ensure that all of the relevant considerations including commercial, technical, risk and compliance that ought to be brought to bear in making the key decisions are given due weight. In particular, it must embed compliance and risk management principles. The governance process must also have clear lines of accountability, including procedures for the sign-off for development, initial deployment, subsequent updates and resolution of problems identified through monitoring. There should also be appropriate procedures for the communication of information.

- In the governance process compliance staff should be responsible for providing clarity about the market operator or firm's regulatory obligations and the policies and procedures that seek to ensure the use of the trading systems comply with the market operator or firm's obligations and that any failures to comply are detected. This requires compliance staff to have an understanding of the way in which the trading systems operate but not knowledge of the technical properties of the trading systems.

a) Capacity and resilience

- Regulated markets' and multilateral trading facilities' electronic trading systems should have sufficient capacity to accommodate reasonably foreseeable volumes of messaging and that are scalable to allow for capacity to be increased in order to respond to rising message flow and emergency conditions that might threaten their proper operation.

b) Business Continuity

- Trading platforms should have effective business continuity arrangements in relation to their electronic trading systems to address disruptive incidents, including but not limited to system failures. The business continuity arrangements should ensure a timely resumption of trading, including but not limited to system failures. The arrangements should cover, as appropriate, matters such as:

  a. Governance for the development and deployment of the arrangements;

  b. Consideration of an adequate range of possible scenarios related to the operation of their electronic trading systems which require specific continuity arrangements;

  c. The backing up of business (including compliance) critical data that flows through their electronic trading systems;

  d. The procedures for moving to and operating the electronic trading system from a back-up site;

  e. Staff training on the operation of the arrangements and individuals' roles within them; and

  f. An on-going programme for the testing, evaluation and review of the arrangements including procedures for modification of the arrangements in light of the results of that programme.

d) Testing

- Trading platforms should prior to deploying an electronic trading system, and prior to deploying updates, make use of clearly delineated development and testing methodologies. The use of these methodologies should seek to ensure that, amongst other things, the operation of the electronic trading system is compatible with the regulated market's and multilateral trading facility's obligations under MiFID and other relevant Union or national law, that compliance and risk management controls embedded in the systems work as intended (including generating error reports automatically) and that the electronic trading system can continue to work effectively in stressed market conditions.

e) Monitoring and review

- Trading platforms should monitor in real time their electronic trading systems. They should deal adequately with problems identified as soon as reasonably possible in order of priority and be able when necessary to adjust, wind down, or shut down the electronic trading system. Decisions on action to deal with problems with electronic trading systems should take due account of the need, as far as possible, for those operating trading platforms to act in an orderly manner.

- In order to ensure that trading platforms remain continually effective, the operators of these trading platforms should periodically review and evaluate their electronic trading systems, and associated process for governance, accountability and sign-off and associated business continuity arrangements. They should act on the basis of these reviews and evaluations to remedy deficiencies. The review and evaluation process should have some degree of independence which can be achieved, for example, by the involvement of internal audit or third parties.

f) Security

- Trading platforms should have procedures and arrangements for physical and electronic security designed to protect their electronic trading systems from misuse or unauthorised access and to ensure the integrity of the data that is part of or passes through the systems.

g) Staffing

- Trading platforms should have procedures and arrangements, including recruitment and training, to determine their staffing requirements and then to ensure they employ sufficient number of staff with the necessary skills and expertise to manage their electronic trading systems. This will include employing staff with knowledge of relevant electronic trading systems, the monitoring and testing of such systems and the sort of trading that will be undertaken by members/participants of the regulated market or users of the multilateral trading facility and of the regulated markets' or multilateral trading systems' regulatory obligations.

h) Record keeping and cooperation

- Trading platforms should keep records in relation to their electronic trading systems covering at least the matters referred to in points a) to g) above. That will include information about key decisions, system properties, testing methodologies, test results and periodic reviews. The records should be sufficiently detailed to enable competent authorities to monitor compliance with relevant obligations of the trading platform. Market operators and investment firms operating multilateral trading facilities should keep the records for at least 5 years. Market operators operating regulated markets should keep them for at least as long as required by their home competent authority.

- Trading platforms should inform competent authorities, in line with the supervisory arrangements that exist in their Member State, about any significant risks that may affect the sound management of the technical operations of the system and major incidents where those risks crystallise.

Guideline 2. Organisational requirements for investment firms' electronic trading systems (including trading algorithms)

Relevant legislation. *Articles 13, paragraphs (2), (4), (5) and (6), of MiFID and Articles 5 to 9, Articles 13 and 14 and Article 51 of the MiFID Implementing Directive*

General guideline

1. An investment firm's electronic trading system (or systems), including trading algorithms, shall ensure that the firm complies with applicable obligations under MiFID and other relevant Union

and national laws as well as the rules of the trading platforms to which it sends orders. In particular, the system (or systems) should be well adapted to the business which takes place through it (or them) and is (or are) robust enough to ensure continuity and regularity in the performance of its investment services and activities in an automated trading environment.

Detailed guidelines

2. In following the general guideline investment firms should at least take into account the following:

a) Governance

- The governance process is central to compliance with regulatory obligations. Investment firms should, within their overall governance and decision-making framework, develop, procure (including outsourcing) and monitor their electronic trading systems, including trading algorithms, through a clear and formalised governance process. This governance process must ensure that all of the relevant considerations including commercial, technical, risk and compliance that ought to be brought to bear in making the key decisions are given due weight. In particular, it must embed compliance and risk management principles. The governance process must also have clear lines of accountability, including procedures for the sign-off for development, initial deployment, subsequent updates and resolution of problems identified through monitoring. There should also be appropriate procedures for the communication of information.

- In the governance process compliance staff should be responsible for providing clarity about the firm's regulatory obligations and the policies and procedures that seek to ensure the use of the trading systems and algorithms comply with the firm's obligations and that any failures to comply are detected. This means compliance staff need to understand the way in which trading systems and algorithms operate, but not knowledge of the technical properties of the trading systems or algorithms.

b) Capacity and resilience

- Investment firm's electronic trading systems should have sufficient capacity to accommodate reasonably foreseeable volumes of messaging. Capacity should be scalable and able to respond to rising message flow and emergency conditions that might threaten the system's proper operation.

c) Business Continuity

- Investment firms should have adequate, reasonable and effective business continuity arrangements in relation to their electronic trading systems to cover disruptive incidents (which, as necessary, can ensure a timely resumption of trading) including but not limited to system failures, as the arrangements should cover, as appropriate, matters such as:

    a. Governance for the development and deployment of the arrangements;

    b. Consideration of an adequate range of possible scenarios related to the operation of their electronic trading systems which require specific continuity arrangements;

    c. The backing up of business (including compliance) critical data that flows through their electronic trading systems;

d. The procedures for moving to and operating the electronic trading system from a back-up site;

e. Staff training on the operation of the arrangements and individuals' roles within them; and

f. An on-going programme for the testing, evaluation and review of the arrangements including procedures for modification of the arrangements in light of the results of that programme.

d) Testing

- Investment firms should prior to deploying an electronic trading system or a trading algorithm and prior to deploying updates, make use of clearly delineated development and testing methodologies. For algorithms these might include performance simulations/back testing or offline-testing within a trading platform testing environment (where market operators make testing available). The use of these methodologies should seek to ensure that, amongst other things, the operation of the electronic trading system or trading algorithm is compatible with the investment firm's obligations under MiFID and other relevant Union and national laws as well as the rules of the trading platforms they use, that compliance and risk management controls embedded in the system or algorithm work as intended (including generating error reports automatically) and that the electronic trading system or algorithm can continue to work effectively in stressed market conditions. Working effectively in stressed market conditions may imply (but not necessarily) that the system or algorithm switches off under those conditions.

- Investment firms should adapt trading algorithm tests (including tests outside live trading environments) to the strategy the firm will use the algorithm for (including the markets to which it will send orders and their structure). The investment firm should also ensure these tests are commensurate with the risks that this strategy may pose to itself and to the fair and orderly functioning of the markets operated by the trading platforms the firm intends the algorithm to send orders to. Investment firms should undertake further testing if the markets in which the algorithm is to be used changes from those originally intended.

- Investment firms should roll out the deployment of trading algorithms in a live environment in a controlled and cautious fashion by, for example, limits being placed on the number of financial instruments being traded, the value and number of orders, and the number of markets to which orders are sent to enable the firm to check that an algorithm performs as expected in a live environment and to make changes if it does not.

e) Monitoring and review

- Investment firms should monitor in real time their electronic trading systems, including trading algorithms. They should deal adequately with problems identified as soon as reasonably possible in order of priority and be able when necessary to adjust, wind down, or immediately shut down their electronic trading system or trading algorithm. Investment firms, when taking action to deal with problems with their electronic trading systems should, as far as possible, take due account of the need, as far as possible, for members/participants and users of regulated markets to act in an orderly manner.

- Investment firms should periodically review and evaluate their electronic trading systems and trading algorithms, and the associated governance, accountability and sign-off framework and associated business continuity arrangements. They should act on the basis of these reviews and evaluations to remedy deficiencies identified. The review and evaluation process should have some degree of independence which can be achieved, for example, by the involvement of internal audit or third parties. Reviews of the performance of trading algorithms should include an assessment of the impact on market integrity and resilience as well as profit and loss of the strategies the algorithm is deployed for.

f) Security

- Investment firms should have procedures and arrangements for physical and electronic security designed to protect electronic trading systems and trading algorithms from misuse or unauthorised access and to ensure the integrity of the data that is part of or passes through the systems and algorithms.

g) Staffing

- Investment firms should have procedures and arrangements, including training and recruitment, to determine their staffing requirements and to employ sufficient number of staff with the necessary skills and expertise to manage their electronic trading systems and trading algorithms. This will include employing staff who have knowledge of relevant electronic trading systems and algorithms, the monitoring and testing of such systems and algorithms, and of the sort of trading strategies that the firm deploys through its trading systems and algorithms and of firms' regulatory obligations.

h) Record keeping and co-operation

- Investment firms should keep, for at least five years, records of their electronic trading systems (and trading algorithms) in relation to the matters covered in points a) to g) above, including information about key decisions, the trading strategy or strategies that each algorithm is deployed to execute, system properties, testing methodologies, test results and periodic reviews. The records should be sufficiently detailed to enable competent authorities to monitor firms' compliance with their relevant obligations.

- Investment firms should inform competent authorities, in line with supervisory arrangements in that exist in their home Member State, about any significant risks that may affect the sound management of the technical operations of their electronic trading systems and algorithms and major incidents where those risks crystallise.

Guideline 3. Organisational requirements for regulated markets and multilateral trading facilities to promote fair and orderly trading in an automated trading environment

Relevant legislation.

Article 39, paragraphs (b), (c) and (d), Article 42, and Article 43 of MiFID for regulated markets.

Article 14, paragraphs (1) and (4), Article 13, paragraphs (2), (5) and (6), Article 42, paragraph (3), and Article 26 of MiFID and Articles 13 and 14 and Article 51 of the MiFID Implementing Directive for multilateral trading facilities.

General guideline

1. Regulated markets' and multilateral trading facilities' rules and procedures for fair and orderly trading on their electronic markets should be appropriate to the nature and scale of trading on those markets, including the types of members, participants and users and their trading strategies.

Detailed guidelines

2. In following the general guideline, the rules and procedures of trading platforms should at least include:

a) Requirements for members or participants who are not credit institutions or investment firms

- Trading platforms should perform adequate due diligence on applications to become a member/participant or user from persons who are not credit institutions or investment firms under EU law.

- Trading platforms should have organisational requirements for members or participants who are not credit institutions or investment firms (taking account as necessary of the controls imposed on firms authorised outside the EEA), including requirements on the monitoring of trading against the rules of the platform and the management of risk. Trading platforms' rules should require members/participants and users who are not investment firms to follow the guidelines laid down in this paper for investment firms.

b) IT compatibility

– Trading platforms should have standardised conformance testing to ensure that the systems that members and participants are using to access the platform have a minimum level of functionality that is compatible with the trading platforms' electronic trading system and will not pose a threat to fair and orderly trading on the platform.

c) Pre- and post-trade controls

– To ensure that there is orderly trading on the platform, trading platforms should have minimum requirements for members'/participants' and users' pre- and post-trade controls on their trading activities (including controls to ensure that there is no unauthorised access to trading systems). In particular, there should be controls on filtering order price and quantity (this requirement is without prejudice to the responsibility of members/participants or users to implement their own pre- and post-trade controls).

d) Trader access and knowledge

– Trading platforms should have standards covering the knowledge of persons within members/participants and users who will be using order entry systems.

d) Limits to access and intervention on transactions.

- Trading platforms should have the ability to prevent in whole or in part the access of a member or participant to their markets and to cancel, amend or correct a transaction. The rules and procedures for cancelling, amending or correcting trades should be transparent to members/participants and users of the regulated market or multilateral trading facility.

e) Measures to cope with excessive flooding of the order book.

- Trading platforms should have arrangements to prevent the excessive flooding of the order book at any one moment in time, notably through limits per participant on order entry capacity.

f) Prevention of capacity limits from being breached.

- Trading platforms should have arrangements (such as throttling) to prevent capacity limits on messaging from being breached. At a minimum, the framework of those arrangements should be made available to members/participants and users.

g) Measures to constrain or halt trading.

- Trading platforms should have arrangements (for example, volatility interruptions or automatic rejection of orders which are outside of certain set volume and price thresholds) to constrain trading or to halt trading in individual or multiple financial instruments when necessary, to maintain an orderly market. At a minimum the framework of those arrangements should be made available to members/participants and users.

h) Obtaining information from members/participants and users

– Trading platforms should have the ability to obtain information from a member/participant or user to facilitate monitoring of compliance with the rules and procedures of the regulated market or multilateral trading facility relating to organisational requirements and trading controls.

j) Monitoring

– Trading platforms should, whenever the trading platform is in operation, monitor their markets as close to real time as possible for possible signs of disorderly trading. This monitoring should be conducted by staff who understands the functioning of the market. Those staff should be accessible to the platform's home competent authority and should have the authority to take remedial action, when necessary, to protect fair and orderly trading.

k) Record keeping and co-operation

i) Trading platforms should keep records of the matters covered by points a) to j) above, including of issues which emerge in relation to the policies and procedures mentioned. The records should be sufficiently detailed to enable a competent authority to monitor compliance with relevant obligations of trading platforms. Market operators and investment firms operating multilateral trading facilities should keep the records for at least 5 years. Market operators operating regulated markets should keep them for at least as long as required by their home competent authority.

ii) Trading platforms should inform competent authorities, in line with the supervisory arrangements that exist in their Member State, about significant risks that may affect fair and orderly trading and major incidents where those risks crystallise.

Guideline 4. Organisational requirements for investment firms to promote fair and orderly trading in an automated trading environment

Relevant legislation. *Articles 13, paragraphs (2), (4), (5) and (6), of MiFID and Articles 5, 6, 7 and 9, Articles 13 and 14 and Article 51 of the MiFID Implementing Directive.*

General guideline

1. Investment firms must have policies and procedures to ensure that their automated trading activities, including where they are providing DMA or SA, on trading platforms comply with their regulatory requirements under MiFID and other relevant Union and national laws and, in particular, and that they manage the risks relating to those trading activities.

Detailed guidelines

2. In following the general guideline, investment firms' automated trading activities should at least take account of the following points:

a) Price or size parameters

- Investment firms should be able to automatically block or cancel orders that do not meet set price or size parameters (differentiated as necessary for different financial instruments), either or both on an order-by-order basis or over a specified period of time.

b) Permission to trade

- Investment firms should be able to automatically block or cancel orders from a trader if they are aware for a financial instrument that a trader does not have permission to trade.

c) Risk management

- Investment firms should be able to automatically block or cancel orders where they risk compromising the firm's own risk management thresholds. Controls should be applied as necessary and appropriate to exposures to individual clients or financial instruments or groups of clients or financial instruments, exposures of individual traders, trading desks or the investment firm as a whole.

d) Consistency with the regulatory and legal framework

- The electronic systems of investment firms, and the orders these generate, should be consistent with the firm's obligations under MiFID, or other relevant Union or national legislation, or under the rules of the RM or MTF to which the order is to be sent (including rules relating to fair and orderly trading).

e) Reporting obligations to supervisory arrangements

- Investment firms should inform competent authorities, in line with the supervisory arrangements that exist in their Member State, about significant risks that may affect fair and orderly trading and major incidents where those risks crystallise.

f) Overriding of pre-trade controls

- Investment firms should have procedures and arrangements for dealing with orders which have been automatically blocked by the firm's pre-trade controls but which the investment firm wishes to submit. These procedures and arrangements should make compliance and risk management staff aware of when controls are being overridden and require their approval for the overriding of these controls.

g) Training on order entry procedures

- Investment firms should ensure that employees involved in order entry have adequate training on order entry procedures, for example through on-the-job training with experienced traders or classroom-based training, including complying with requirements imposed by trading platforms, before they are allowed to use order entry systems.

h) Monitoring and accessibility of knowledgeable and mandated staff

- Investment firms should, during the hours they are sending orders to trading platforms, monitor their orders in as close to real time as possible, including from a cross-market perspective, for potential signs of disorderly trading. This monitoring should be conducted by staff who understand the firm's trading flow. These staff members should be accessible to the firm's home competent authority and to the trading platforms on which the firm is active and should have the authority to take remedial action, when necessary.

i) Close scrutiny by compliance staff

- Investment firms should ensure that compliance staff are able to follow closely the firm's electronic trading activity so that they can quickly respond to and correct any failures or regulatory infractions that may take place.

j) Control of messaging traffic

- Investment firms should ensure that they have control of messaging traffic to individual trading platforms.

k) Management of operational risk

- Investment firms should manage the operational risks in electronic trading through appropriate and proportionate governance arrangements, internal controls and internal reporting systems tak-

ing account, as appropriate, of CEBS' Guidelines on the Management of Operational Risk in Market-Related Activities[1].

l) IT compatibility

- Investment firms should ensure that the systems that that they use to access a trading platform have a minimum level of functionality that is compatible with the trading platform's electronic trading systems and will not pose a threat to fair and orderly trading on that platform.

m) Record keeping and co-operation

i. Investment firms should keep records, for at least five years, of the matters covered by points a) to l) above. The records should be sufficiently detailed to enable competent authorities to monitor firms' compliance with their relevant obligations.

ii. Investment firms should inform competent authorities, in line with the supervisory arrangements that exist in their Member State, about significant risks that may affect fair and orderly trading and major incidents where those risks crystallise.

Guideline 5. Organisational requirements for regulated markets and multilateral trading facilities to prevent market abuse (in particular market manipulation) in an automated trading environment

Relevant legislation

Article 39, paragraphs (b) and (d), and Article 43 of MiFID and Article 6, paragraphs (6) and 9, of MAD and Articles 7 to 10 of the MAD Implementing Directive 2004/72/EC for regulated markets.

Article 14, paragraph (1), Article 13, paragraphs (2), (5) and (6), and Article 26 of MiFID, Articles 5 to 9 and Article 51 of the MiFID Implementing Directive and Article 6, paragraphs(6) and (9) of MAD and Articles 7 to 10 of the MAD Implementing Directive 2004/72/EC for multilateral trading facilities.

General guideline

1. Trading platforms should have effective arrangements and procedures, taking account of the specific supervisory arrangements/regulation in their Member State, which enable them to identify conduct by their members/participants and users that may involve market abuse (in particular market manipulation) in an automated trading environment.

2. Potential cases of market manipulation that could be of particular concern in an automated trading environment include:

   - **Ping orders –** entering small orders in order to ascertain the level of hidden orders and particularly used to assess what is resting on a dark platform.

[1] Available in http://www.eba.europa.eu/documents/Publications/Standards---Guidelines/2010/Management-of-op-risk/CEBS-2010-216-(Guidelines-on-the-management-of-op-.aspx

- **Quote stuffing-** entering large numbers of orders and/or cancellations/updates to orders so as to create uncertainty for other participants, slowing down their process and to camouflage their own strategy.

- **Momentum ignition-** entry of orders or a series of orders intended to start or exacerbate a trend, and to encourage other participants to accelerate or extend the trend in order to create an opportunity to unwind/open a position at a favourable price.

- **Layering and Spoofing-** submitting multiple orders often away from the touch on one side of the order book with the intention of executing a trade on the other side of the order book. Once that trade has taken place, the manipulative orders will be removed.

Detailed guidelines

3. In following the general guideline, the arrangements and procedures of trading platforms which seek to prevent and identify conducts by their members/participants and users that may involve market abuse and in particular market manipulation in an automated trading environment should at least include:

a) Staffing

– Trading platforms should have sufficient staff with an understanding of regulation and trading activity and the skill to monitor trading activity in an automated trading environment and identify behaviour giving rise to suspicions of market abuse (in particular market manipulation) in case monitoring market abuse falls under their responsibility.

b) Monitoring

- Trading platforms should at least have systems (including automated alert systems on transactions and orders) with sufficient capacity to accommodate high frequency generation of orders and transactions and low latency transmission, in order to monitor, using a sufficient level of time granularity, orders entered and transactions undertaken by members/participants and users and any behaviour which may involve market abuse (in particular market manipulation, including, where the trading platform has sight of this, cross-market behaviour) and with the ability to trace backwards transactions undertaken by members/participants and users as well as orders entered/cancelled which may involve market manipulation.

c) Arrangements for the identification and reporting of suspicious transactions and orders

– Trading platforms should have in place arrangements to identify transactions, and it is also recommended that these arrangements also cover orders[2], that require an STR to competent authori-

[2] CESR's first and third set of Level 3 guidance on the implementation of the MAD, CESR has already provided guidelines on suspicious transactions reports (STR), which state: "CESR is of the view that where an unexecuted order for a transaction gives rise to a suspicion of market abuse, this suspicion is recommended, when not already legally required on a national basis, to be reported to the competent authority." The guidance also provides a standard STR report form (Sections IV and V of the May 2005 guidance (Ref : CESR/04-505b) and Section 2 of the May 2009 guidance (Ref : CESR/09-219)).

ties in relation to market abuse (in particular market manipulation) and to make those reports without delay (if initial enquiries are undertaken, a report should be made as soon as possible if those enquiries fail to find a satisfactory explanation for the observed behaviour).

d) Reviews

- Trading platforms should conduct periodic reviews and internal audits of procedures and arrangements to prevent and identify instances of conduct that may involve market abuse.

e) Record keeping

– Trading platforms should keep records of the matters covered by points a) to d) above, including effective audit trails regarding how each alert of possible suspicious behaviour is dealt with whether or not a report is made to the relevant competent authorities. The records should be sufficiently detailed to enable competent authorities to monitor compliance with their relevant obligations of trading platforms. Market operators and investment firms operating multilateral trading facilities should keep the records for at least 5 years. Market operators operating regulated markets should keep them for at least as long as required by their home competent authority.

Guideline 6. Organisational requirements for investment firms to prevent market abuse (in particular market manipulation) in an automated trading environment

Relevant legislation. *Article 13, paragraphs (2), (5) and (6), of MiFID and Articles 5, 6 and 9 of the MiFID Implementing Directive, and Article 6, paragraph (9), of MAD and Articles 7 to 10 of the MAD Implementing Directive 2004/72/EC*

General guideline

1. Investment firms should have policies and procedures in place to minimise the risk that their automated trading activity gives rise to market abuse (in particular market manipulation).

2. The sorts of market manipulation that might be of particular concern in a highly automated trading environment were described in guideline 5 (paragraph 2 under General guideline).

Detailed guidelines

3. In following the general guideline the policies and procedures of investment firms engaging in automated trading activities should at least include:

   a) Understanding, skill and authority of compliance staff

   - Investment firms should have procedures to seek to ensure that staff exercising the compliance function has sufficient understanding (of both regulation and trading activity) , skill and authority to challenge staff responsible for trading when the trading activity gives rise to suspicions of market abuse (in particular market manipulation).

   b) Training in market abuse

- Investment firms should provide initial and regular refresher training on what constitutes market abuse (in particular market manipulation) for all individuals involved in executing orders on behalf of clients and dealing on own account.

c) Monitoring activity

- Investment firms should monitor the activities of individuals/algorithms trading on behalf of the firm and the trading activities of clients, taking account of orders submitted, modified and cancelled as well as transactions executed. This should involve having adequate systems in place (including automated alert systems), using a sufficient level of time granularity, to flag any behaviour likely to give rise to suspicions of market abuse (in particular market manipulation), including (where the firm has sight of this) cross-market behaviour.

d) Arrangements for the identification and reporting of suspicious transactions and orders

- Investment firms should have arrangements to identify transactions, and it is recommended that these arrangements also cover orders, that require a STR to competent authorities in relation to market abuse (in particular market manipulation) and to make those reports without delay (if initial enquiries are undertaken, a report should be made as soon as possible if those enquiries fail to find a satisfactory explanation for the observed behaviour).

e) Periodic reviews and internal audits of compliance arrangements and procedures

- Investment firms should conduct periodic reviews and internal audits of procedures and arrangements to prevent and identify instances of conduct that may involve market abuse.

f) Frequently reviewed arrangements governing the access of staff to trading systems.

– Investment firms should keep, for at least 5 years, records of the arrangements and procedures to identify conduct that may involve market abuse covering the matters set out in points a) to e) above, including an effective audit regarding how each alert of possible suspicious behaviour is dealt with whether or not a report is made to the relevant competent authorities. These records should be sufficiently detailed to enable competent authorities to monitor firms' compliance with their relevant obligations.

Guideline 7. Organisational requirements for regulated markets and multilateral trading facilities whose members/participants and users provide direct market access/sponsored access

Relevant legislation.

Article 39, paragraph (b)), and 43(1) of MiFID for regulated markets.

Articles 14, paragraph (1), Article 13, paragraphs (2), (5) and (6), and Article 26(1) of MiFID and Articles 5 to 9 and Article 51 of the MiFID Implementing Directive for multilateral trading facilities.

General guideline

1. Trading platforms should have rules and procedures which seek to ensure that, where they allow members/participants or users to provide direct market access/sponsored access (DMA/SA), the provision of DMA/SA is compatible with fair and orderly trading. It is important that trading platforms and their members/participants retain control of and closely monitor their systems to minimise any potential disruption caused by these third parties to avoid that trading platforms are vulnerable to either the potential misconduct or market abuse of DMA/SA clients or to their inadequate/erroneous systems.

Detailed guidelines

2. In following the general guideline, trading platforms should set out whether or not it is permissible for their members/participants or users to offer DMA and/or SA. Where they allow members or participants to offer DMA and/or SA, their rules and procedures should at least take account of the following:

a) Ultimate responsibility for messages, including orders, and eventual interventions and sanctions

- Trading platforms should make clear that the member/participant or user is solely responsible for all messages, including orders entered under its trading codes and therefore may be subject to interventions (including cutting the access of the member/participant or user to the trading platform) and sanctions for any breaches of the rules or procedures in respect of those orders.

b) Subsidiary responsibility when providing DMA/SA

- DMA/SA arrangements between trading platforms and a DMA/SA provider firm should stress that the direct market access/sponsored access provider firm remains responsible to the trading platform for all trades using their market participant ID code or any other identification.

c) Requirements for members/participants to provide DMA/SA

- As per guideline 3, trading platforms should require members/participants or users to have adequate systems and effective controls, including pre- and post-trade controls, to ensure that the provision of DMA/SA does not adversely affect compliance with the rules of the regulated market or multilateral trading facility, lead to disorderly trading or facilitate conduct that may involve market abuse. This applies equally where a member/participant or user provides DMA/SA.

d) Due diligence prior to provision of DMA/SA

- Trading platforms should require members/participants or users to conduct due diligence on clients to which they provide DMA/SA.

e) Rights of access

- Trading platforms should be able to refuse a request from a member/participant or user to allow a client to be provided with SA where the regulated market or multilateral trading facility is not satisfied that this would be consistent with its rules and procedures for fair and orderly trading. In relation to naked SA please refer to guideline 8.

f) Monitoring of orders

- Trading platforms should, as part of their obligations to monitor their markets under guideline 3, monitor orders sent to their systems by a member/participants' SA clients.

g) Potential interventions over SA

i) Trading platforms should be able to suspend or withdraw the SA after it has been granted where the regulated market or multilateral trading facility is not satisfied that continued access would be consistent with its rules and procedures for fair and orderly trading.

ii) Trading platforms should have the ability to stop orders from a person trading through SA separately from the orders of the member or participant sponsoring that person's access by assigning unique customer IDs to clients that are accessing the market via SA.

iii) Trading platforms should be able to carry out, where necessary, a review of a member/participant or users' internal risk control systems in relation to their sponsored access or direct market access clients.

i) Record keeping

– Trading platforms should keep records of their policies and procedures relating to DMA/SA and any significant incidents relating to SA trading. The records should be sufficiently detailed to enable competent authorities to monitor compliance with relevant obligations of trading platforms. Market operators and investment firms operating multilateral trading facilities should keep the records for at least 5 years. Market operators operating regulated markets should keep them for at least as long as required by their home competent authority.

Guideline 8. Organisational requirements for investment firms that provide direct market access and/or sponsored access

Relevant legislation. *Articles 13(2), (5) and (6) of MiFID and Articles 5, to 9, Articles 13 and 14 and Article 51 of the MiFID Implementing Directive*

General guideline

1. Investment firms offering DMA/SA to clients ('DMA/SA clients') are responsible for the trading of those clients. They must establish policies and procedures to ensure the trading of those clients com plies with the rules and procedures of the relevant trading platforms to which the orders of such clients are submitted and enables the investment firm to meet its obligations under MiFID and other relevant Union and national law.

Detailed guidelines

2. In following the general guideline, investment firms should at least take account of the following:

a) Due diligence on direct market access/sponsored access clients

- Investment firms must conduct due diligence on prospective DMA/SA clients, as appropriate to the risks posed by the nature of the clients, the scale and complexity of their prospective trading activities and the service being provided. Due diligence might, as appropriate, cover matters such as the training and competency of individuals entering orders, access controls over order entry,

allocation of responsibility for dealing with actions and errors, the historical trading pattern/behaviour of the client (when available), and the ability of clients to meet their financial obligations to the firm. In the process of due diligence investment firms can take into account whether the prospective client is regulated under a directive, the national law of a Member State or under the law of a third country and their disciplinary history with competent authorities and trading platforms. The due diligence assessment should be periodically reviewed.

b) Pre-trade controls

i. Pre-trade controls on the orders of DMA/SA clients of the sort covered in paragraph 2 of Guideline 4 on organisational requirements for investment firms to promote fair and orderly trading in an automated trading environment, including in-built and automatic rejection of orders outside of certain parameters.

ii. There should be absolute clarity that the investment firm should solely be entitled to modify the parameters of the pre-trade controls (i.e. the DMA/SA client should not be able to do so).

iii. Investment firms offering DMA/SA can use pre- and post-trade controls which are proprietary controls of the investment firm, controls bought in from a vendor, controls provided by an outsourcer or controls offered by the platform itself (i.e. they should not be the controls of the direct market access/sponsored access client). However, in each of these circumstances the investment firm remains responsible for the effectiveness of the controls and has to be solely responsible for setting the key parameters.

c) 'Naked' or 'unfiltered' market access

- 'Naked' or 'unfiltered' access to a regulated market or MTF, where a client's orders do not pass through pre-trade controls before being sent to a regulated market or MTF, is prohibited under MiFID. Therefore, an SA client should never be able to send an order to a trading platform without the order passing through pre-trade controls of the investment firm.

d) Monitoring

i) The monitoring of orders (including on a cross-market basis) that investment firms are required to carry out under guideline 4 should apply to all order flow including that from DMA/SA clients, and likewise the systems that investment firms are required to have under guideline 6 for identifying possible instances of market abuse (in particular market manipulation) should apply to orders from and transactions by DMA/SA clients.

ii) To comply with these obligations investment firms will need to be able to separately identify orders and transactions of DMA/SA clients from other orders and transactions of the firm.

iii) Investment firms should also have the ability to immediately halt trading by individual direct market access/sponsored access clients.

e) Rights and obligations of the parties

- Investment firms should establish clarity about the rights and obligations of both parties in relation to the DMA/SA service.

f) Record keeping

- Investment firms should keep, for at least five years, records of the matters covered in points a) to e) above that are sufficiently detailed for competent authorities to monitor firms' compliance with their relevant obligations. This should include at least the results of due diligence carried out on potential direct market access/sponsored access clients and subsequent reviews, and the rights and obligations of both parties in relation to the direct market access/sponsored access service.

Annex II

Opinion of the Securities and Markets Stakeholder Group [3]

I. BACKGROUND

Q1: Do you agree with ESMA that it is appropriate to introduce guidelines already before the review of MiFID covering organisational arrangements for trading platforms and investment firms in relation to highly automated trading, including the provision of DMA/SA?

ESMA's Securities and Markets Stakeholder Group (hereafter "the Group") believes that the revision of the Markets in Financial Instruments Directive and of the Market Abuse Directive will have a significant impact on the regulation of the issues related to highly automated trading, in particular in respect to the systems and controls required from trading platforms and investment firms.

While the revision of these two directives is necessary to better regulate the above mentioned issues, the Group believes that by the meantime, ESMA's guidelines could have a valuable role in clarifying the requirements for trading platforms and investment firms under the current regulatory framework, and in ensuring that these requirements are applied consistently across all Member states and to all market participants, including trading platforms. However, it needs to be ensured that unsubstantiated regulation of HFT does not adversely affect the liquidity of trading venues and their innovation.

The Group therefore welcomes ESMA's initiative but believes that these guidelines will require adaption after the finalization of the MiFID and MAD. In the future, the regulation of the issues related to a highly automated trading environment, and, in particular, to high frequency trading (hereafter "HFT") should aim at applying the same rules to all trading platforms, including over-the-counter trading (hereafter "OTC"), so as to ensure a level playing field and avoid any distortions. In this respect, the Group believes that ESMA should play a role in this harmonisation enterprise, through notably, the adoption of legally binding technical standards.

III. 2. ORGANISATIONAL REQUIREMENTS FOR TRADING PLATFORMS AND INVESTMENT FIRMS IN A HIGHLY AUTOMATED TRADING ENVIRONMENT

a) TRADING PLATFORMS

Q2: Do you think that the draft guidelines adequately capture all the relevant points relating to the operation of trading platforms' electronic trading systems?

Yes, the Group believes that the suggested guidelines adequately capture all relevant points relating to the operation of trading platforms' electronic trading systems, except for the business continuity and resilience arrangements. Not only system failures should be addressed, but also incidents which could render

[3] Securities and Markets Stakeholder Group's Position Paper on these topics, available on http://www.esma.europa.eu/popup2.php?id=8042

unavailable staff, workspace or suppliers required to continue to operate the trading platform and related services.

In addition, the Group believes it important to apply the same guidelines to regulated markets and multilateral trading facilities (hereafter "MTFs") considering that HFT firms operate equally on these two types of trading platforms.

Q3: Are there areas where it would be helpful to have more detail on the organisational requirements applying to trading platforms' electronic trading systems?

No, the Group believes that the organisational requirements are appropriate. Eventually, competition will ensure a high quality of the resilience of the trading systems.

Nonetheless, the Group believes that the guidelines on organisational requirements could include specific obligations on the prevention of conflicts of interests. In fact, there is a significant scope for conflicts of interests when the same firm combines activities such as the routing of client orders and of its own proprietary flow with the operation of and shareholding in a multilateral trading platform. The measures for the prevention of the conflicts of interests that may arise could take the form of greater disclosure obligations for firms combining the above mentioned activities (regular disclosures of the volumes of orders sent to the platforms the firms have a shareholding in, regular disclosures of the investigations carried out and the sanctions taken on the platform, ...). An alternative to these stricter disclosure requirements would be to place limits on the ownership of platforms by users.

Regarding records, it would be useful to have a harmonized minimum time for which it is mandatory to keep the records.

Also, regarding review, there are countries where an external review is mandatory. It would be useful to harmonize the type of review necessary (internal / external), in order to maintain the level playing field. Publicity of the audit opinion (or conclusion of evaluation) may be considered, in order to provide better protection for investors.

Q4: Do you have additional comments on the draft guidelines on organisational requirements for trading platforms' electronic trading systems?

The Group has two additional comments:

Trading platforms should have appropriate capacity limits for volumes; however, the figures as suggested by ESMA are implausible (e.g. it is unrealistic to increase capacities to a multiple of up to 20 times the level of order flow of a peak day). Nowadays trading venues already monitor their system load very closely and calibrate their systems respectively in order to provide sufficient headroom at all times.

It is not clear why ESMA differentiates between members, participants and users which is confusing and misleading. The recommendation is to refer only to "members", because it does clarify that they have a legal relationship with the trading venue and therefore addresses the right entity in the context of this guideline.

b) INVESTMENT FIRMS

Q5: Do you think that the draft guidelines adequately capture all the relevant points related to the operation of trading algorithms?

Yes, the Group believes that the suggested guidelines adequately capture all the relevant points relating to the operation of trading algorithms, except for the business continuity and resilience arrangements. Similarly to trading platforms, not only system failures should be addressed, but also incidents which could render unavailable staff, workspace or suppliers required to continue to operate the trading.

In principle, it is important to stress that risk management at the source of the order flow is necessary and that therefore investment firms should have sophisticated risk management tools and safeguards in place.

Q6: Are there areas where it would be helpful to have more detail in the guidelines applying to the organisational requirements for investment firms' electronic trading systems?

No, the Group believes that the organisational requirements are appropriate.

Q7: Do you have additional comments on the draft guidelines relating to organisational requirements for investment firms' electronic trading systems?

Please refer to our response to question 3 and to comment (2) in question 4.

III.3. DRAFT GUIDELINES ON ORGANISATIONAL REQUIREMENTS FOR TRADING PLATFORMS AND INVESTMENT FIRMS TO PROMOTE FAIR AND ORDERLY MARKETS IN A HIGHLY AUTOMATED TRADING ENVIRONMENT

a) TRADING PLATFORMS

Q8: Do the draft guidelines on organisational requirements for trading platforms to promote fair and orderly trading offer a sufficiently comprehensive list of the necessary controls on order entry?

Yes, the Group believes that all major aspects are covered. However, the Group believes that the suggestion to have "standards covering the knowledge of persons within members/participants and users that will be using order entry systems" would be best applied at the level of national regulators (through the adoption, for instance, of harmonised certification mechanisms) rather than at the level of the trading venues themselves, in order to ensure the consistency of these standards across the European Union.

In addition, the Group believes that identical circuit breaker and control rules should apply to all trading venues, in order to level the playing field and ensure an identical level of protection across all markets. On the contrary, if the rules were not the same, participants could continue trading on certain platforms without appropriate price-controls, as demonstrated by the "Flash Crash" example. These circuit-breaker and control rules should be adapted to the different financial products at stake.

Q9: Are there any areas of the draft guidelines on organisational requirements for trading platforms to promote fair and orderly trading where you believe it would be helpful to have more detail?

No, the group believes that the organisational requirements are appropriate.

Q10: Do you have additional comments on the draft guidelines on organisational requirements for trading platforms to promote fair and orderly trading?

Yes, the Group has three additional comments:

A. There are two topics that are not correctly located at the chapter trading platforms. The part "standardised testing to ensure that the systems that members are using to access the venue have a minimum level of functionality that is compatible with fair and orderly trading on the venue" and "IT compatibility" should rather be included in the guidelines on organisational requirements for investment firms to promote fair and orderly trading. Investment firms are at the source of orders and ESMA correctly indicates that increased measures and controls are necessary.

B. Please refer to our comment (2) in question 4.

C. The Group strongly supports the concept of circuit breakers as they have a stabilising effect on the markets. However, further clarification and discussion on details which have not yet been discussed in this guideline is required (e.g. definition, scope and applicable instruments).

b) INVESTMENT FIRMS

Q11: Do the draft guidelines on organisational requirements for investment firms to promote fair and orderly trading offer a sufficiently comprehensive list of the necessary controls on order entry?

The Group believes it necessary to draw a list of the necessary controls on order entry for investment firms, so as to promote fair and orderly trading. However, the Group has the following three comments:

A. From an exchange perspective, it is necessary that parties responsible for operating algorithms must be accessible at all times. In addition, it is essential for surveillance functions to request all information concerning transactions and order entries (ask for beneficial ownership and/or trading intention) to constitute an initial suspicion. Due to the fact that the human trader has been (or is increasingly becoming) replaced by machines, it becomes harder for supervisors or trading venues and partly market participants to distinguish the final originator of the order. This should be part of the guidelines.

B. From a supervisory authority point of view it might be useful to receive the data necessary for investigation and back testing options. This would include the recording of all input and output parameters to be able to reconstruct the behaviour of the systems.

C. The Group recommends including the requirement that "Investment firms should ensure that the systems that they are using to access the venue have a minimum level of functionality that is compatible with fair and orderly trading on the venue". This point was addressed in the guideline for trading venues to promote fair and orderly trading. However, as this is within the responsibility of the investment firm and not of the trading venue, it should rather be included for investment firms.

Q12: Are there any areas of the draft guidelines on organisational requirements for investment firms to promote fair and orderly trading where you believe it would be helpful to have more detail?

No, the Group believes that the organisational requirements are appropriate.

Q13: Do you have additional comments on the draft guidelines on organisational requirements for investment firms to promote fair and orderly trading?

No, the Group does not have additional comments.

III.4. DRAFT GUIDELINES ON ORGANISATIONAL REQUIREMENTS FOR TRADING PLATFORMS AND INVESTMENT FIRMS TO PREVENT MARKET MANIPULATION IN A HIGHLY AUTOMATED TRADING ENVIRONMENT

a) TRADING PLATFORMS

Q14. Are there any areas of the draft guidelines for trading platforms on organisational requirements for regulated markets and MTFs to prevent market manipulation where it would be useful to have extra detail?

The Group believes that the organisational requirements are appropriate However, the it is crucial to ensure that all trading platforms bear the same organisational requirements to prevent market manipulation. The Group therefore recommends that in addition to the suggested guidelines, ESMA harmonise, as far as possible, the requirements both in terms of real-time and non-real time market surveillance for regulated markets and MTFs. Currently, only regulated markets are required to perform non-real time market surveillance, yet this function is crucial for the detection of market abuse, and should therefore be required from all trading platforms, be they regulated markets or MTFs.

More specifically, in respect of market abuse implemented through the use of HFT, the Group believes it important to differentiate between HFT (a technology) and the implementation of abusive strategies per se. HFT can facilitate the implementation of such strategies, but there is no intrinsic link between HFT and these strategies.

In addition, certain strategies facilitated by HFT can be considered as abusive in nature, while others should be judged on a case-by-case basis. In this respect, intention is an important element to take into account, and a clear line should be drawn between intentional and unintentional events. Along the same line, not only market abuse should be punished but also attempts at performing market abuse.

By way of example, the interaction of different algorithm models run by the same HFT player, can aim at implementing abusive strategies but not necessarily, and should therefore be assessed on a case-by-case basis. Similarly, ping orders and momentum ignition do not necessarily constitute market abuse, and should be assessed on a case-by-case basis, considering the intention, effects (notably in respect to the price of the instrument compared to its usual prices) and time span of the activity. On the contrary, the practice of quote stuffing is abusive by its very nature, since its aims at slowing down the trading processes of other participants.

It would be useful for the guidelines to include an Annex with a detailed consolidated list of practices which may constitute possible signals of market abuse, as already identified by the MAD.

Q15. Do you have additional comments on the draft guidelines on organisational requirements for RMs and MTFs to prevent market manipulation?

The Group has two additional comments.

A. Please refer to our comment 2 in question 4.

B. The Group believes that, in addition to the monitoring of market abuse on individual trading venues, it is necessary to adopt mechanisms to monitor market abuse carried out on a cross-market basis. Such cross-platforms market abuse prevention and detection should be under the responsibility of competent authorities (level 1) and a centralised approach at the European level should ensure the

coordination of these authorities (level 2). In this respect, ESMA could play an important coordination and monitoring role, with information flowing up from trading venues, to their competent authorities and then to ESMA and flowing down from ESMA to other competent authorities and to trading venues under their jurisdiction.

b) INVESTMENT FIRMS

Q16: Are there any areas of the draft guidelines on organisational requirements to deal with market manipulation for investment firms where you believe it would be helpful to have more detail?

The Group believes that the guidelines on organisational requirements to deal with market manipulation for investment firms are sufficiently detailed.

Q17: Do you have additional comments on the draft guidelines relating to organisational requirements to deal with market manipulation for investment firms?

Yes, the Group has three additional comments.

A. The Group suggests extending point 3 by adding "They should be able to provide supervisory authorities with necessary data for investigation and back testing options, when required. This would include the recording of all input and output parameters to be able to reconstruct the behaviour of the systems." This will eventually help competent authorities.

B. Please refer to our response to questions 3.

C. Please refer to our response to question 7.

IV. ORGANISATIONAL REQUIREMENTS FOR DIRECT MARKET ACCESS AND SPONSORED ACCESS

a) TRADING PLATFORMS

Q18: Do the draft guidelines on organisational requirements for trading platforms whose members/participants or users offer DMA/SA deal adequately with the differences between DMA and SA?

The Group believes that the suggested guidelines deal adequately with the differences between DMA and SA. However, the Group believes that the definition of DMA/ SA should include the aspect of due diligence (i.e. clients that should be subject to adequate due diligence) for both DMA / SA and the fact that the risk layer is part of the exchange venue and not at the member level for SA. In principle, it should be stressed that the responsibility of the service offered ultimately lies with the service provider.

In fact, the Group believes it important to differentiate between DMA and SA. Under DMA schemes, the operator of the trading platform establishes general rules and conditions but does not monitor the granting of DMA on a case-by-case basis. On the contrary, in respect to SA, the operator of a trading platform should have the ability to refuse the granting of SA by one of its users to a client, should be able to suspend or withdraw the SA and to stop the orders sent by a sponsored client separately from those of the sponsoring firm.

Q19: Are there any areas of the draft guidelines on organisational requirements for trading platforms whose members/participants or users offer DMA/SA where you believe it would be helpful to have more detail?

No, the Group believes that the organisational requirements are appropriate.

Q20: Do you have additional comments on the draft guidelines relating to organisational requirements for trading platforms whose members/participants or users provide DMA/SA?

Yes, the Group has one additional comment on the point "require the member to conduct adequate pre-checks of their clients due diligence on any client to which it provides direct market access/ sponsored access". It would be useful to add a short explanation of due diligence in the explanatory notes. It is important to have an adequate due diligence, however, it should be related to the business risk involved from the DMA/SA user.

b) INVESTMENT FIRMS

Q21: Do the draft guidelines on organisational requirements for investment firms providing DMA/SA deal adequately with the differences between DMA and SA?

The Group believes that the suggested guidelines deal adequately with the difference between DMA and SA. However, the group believes that due-diligence issues should be dealt with within the guidelines, as explained in our response to question 18.

Q22: Are there any areas of the draft guidelines on organisational requirements for investment firms providing DMA/SA where you believe it would be helpful to have more detail?

No, the Group believes that all major aspects are covered.

Q23: Do you believe that there is sufficient consistency between the draft guidelines on organisational requirements for investment firms providing DMA/SA and the SEC's Rule 15c3-5 to provide an effective framework for tackling relevant risks in cross border activity and without imposing excessive costs on groups active in both the EEA and the US?

The Group believes that the guidelines are appropriate taking into account the comments in this response.

Q24: Do you have additional comments on the draft guidelines on organisational requirements for investment firms providing DMA/SA?

No, the Group does not have any additional comments.

Q25: Does the explanatory text provided in addition to the guidelines (see Annex VII to this CP) help market participants to better understand the purpose and meaning of the guidelines? Should it therefore be retained in the final set of guidelines?

The Group believes that the explanatory text is useful. However, it should not be retained in the final set of guidelines, but rather be kept as an explanatory note.

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Annex III

Cost-benefit analysis of the guidelines on systems and controls in an automated environment for trading platforms, investment firms and competent authorities

The responses to the consultation paper made three main sets of comments relevant to the cost-benefit analysis originally published in the Consultation Paper on Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities (Ref. ESMA/2011/224; cost-benefit analysis included below for information). These were:

- First, the costs of implementation would crucially depend on ESMA making clear that the guidelines should be applied on a proportionate basis, taking account of the nature and scale of a trading platform or investment firm's activities.

- Second, concern was expressed that certain elements of the guidelines would be more costly to implement than was taken account of in ESMA's cost-benefit analysis. These included such obligations as checking a client's financial position and holding of financial instruments before sending their order to a trading platform and requiring compliance staff to monitor in real time order flow.

- Third, suggestions that the guidelines would have adverse effects on competition. Some respondents were concerned about the fact that the same requirements applied to both regulated markets and MTFs, whilst others were concerned about the balance of competition between trading platforms on the one hand and Over the Counter (OTC) trading on the other.

ESMA has sought to take account of the first two concerns in redrafting the guidelines. It has made clear in the scope section of the guidelines that a proportionate approach should be taken in their implementation. The guidelines that caused most concern about the potential costs have been redrafted. In the light of these changes, ESMA believes that the analysis of costs published in the Consultation Paper remains valid.

With respect to the points about competition, the guidelines relate to the existing legal framework. There is a significant degree of overlap between the obligations on regulated markets and MTFs in MiFID in relation to the operations of their systems and the way in which their trading procedures must work. Aside from pre-trade transparency obligations for systemic internalisers dealing in liquid shares, there are no venue specific obligations for OTC trading in MiFID. However, automated OTC systems are subject to systems and controls requirements in MiFID. They are therefore covered by guideline 2 which ESMA has consciously sought to align with the guideline for regulated markets and MTFs. Therefore the competition concerns that respondents identified are issues arising out of the existing legal framework rather than issues created by the guidelines themselves.

I. Executive Summary

The cost-benefit analysis impact assessment of the draft guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities indicates the following aggregated cost impacts across the concerned stakeholders based on the weighting set out in detail below.

	The overall cost of the ESMA guidelines					
Stake-holders	**Compe-tent au-**	**Trading plat-**	**Invest-ment**	**Aggrega-tion of**	**Non-regulated**	**Overall impact**
One-off	√	√	√√	√√	√	**Low/Medium**
Ongo-ing	√	√	√√	√√	√	**Low/Medium**

Impact of the benefit of the guidelines		
Stakeholders	**Benefits for all market participants**	**Overall impact**
One-off	√√	**Medium**
Ongoing	√√	**Medium**

In conclusion the guidelines appear to deliver higher benefits than costs.

Summary of the impact assessment		
	Costs	**Benefits**
One-off	**Low/Medium**	**Medium**
Ongoing	**Low/Medium**	**Medium**

I. Background

1. According to Article 16 of the ESMA regulation, "*The Authority shall, where appropriate, conduct open public consultations regarding the guidelines and recommendations and analyse the related potential costs and benefits. Such consultations and analyses shall be proportionate in relation to the scope, nature and impact of the guidelines or recommendations*".

2. Over the last few years, the European marketplace has experienced significant changes in the market microstructure with the advent of algorithmic trading (AT) and, as part of it, of HFT[4], fuelled by technological innovation and market fragmentation. The increasing role played by automated trading can be illustrated by evidence of the importance of HFT in the European equity market. According to answers received to the questionnaires ESMA sent to trading platforms, HFT firms accounted for between 40% and 70% of the total equity index trading volumes in Q4 2010 on individual trading platforms. In the futures market, HFT firms accounted for between 10% and 60% of total equity index fu-

[4] A provisional definition of HFT is given by "Trading activities that employ sophisticated, algorithmic technologies to interpret signals from the market and, in response, implement trading strategies that generally involve the high fre-quency generation of orders and a low latency transmission of these orders to the market. Related trading strategies mostly consist of either quasi market making or arbitraging within very short time horizons. They usually involve the execution of trades on own account (rather than for a client) and positions usually being closed out at the end of the day."

tures trading volumes on individual trading platforms over the same period and HFT firms accounted for up to 95% of all orders sent and 97% of all orders cancelled for one trading platform.[5]

3. Estimates of the level of HFT trading depend on the definition of HFT being used, but the figures from the responses to the ESMA questionnaire are similar to figures from other sources. According to the answers to a call for evidence of CESR[6], two equity trading platforms representing a significant market share in Europe indicated that HFT trading on their platforms accounted for 13% and 40% of the total volume traded; banking trade associations estimated that between 50% and 80% of trading on European equity trading platforms came from HFT firms; whereas HFT firms themselves estimated they accounted for 25% to 45% of trading on European equity trading platforms. According to a Tabb group study[7], HFT accounted for 35% of the total turnover in the UK in 2010, and 77% for continuous markets. The HFT market share is expected to grow to 45% in 2012 according to Aite Group.[8] In the U.S., estimates suggested that HFT accounted for 40% to 67% of trading volume at end 2009.[9]

4. The ESMA fact-finding exercise more generally confirms the perception that the role of AT and HFT with regard to both the liquidity provision and the price formation processes that occur on European securities trading platforms is material and significant.

5. At the same time, new forms of market access have emerged such as DMA, whereby an investment firm (IF) allows a client to use its ID to electronically transmit orders for executions to a trading platform through the investment firm's infrastructure and SA, whereby the client uses the investment firm's member ID without using the intermediary's infrastructure. According to answers received to the ESMA questionnaire from trading platforms, the percentage of market members providing DMA ranges from 25% to 100%. For trading platforms that allow SA, the figure ranges from 3 to 5%.

6. An overall assessment of the balance of costs and benefits of recent changes in market structure gives rise to a number of conceptual and empirical difficulties that have been partly addressed by on-going academic analysis but largely remain to be explored. Appendix IV provides a survey of academic studies on the impact of AT and HFT on market quality.

7. Overall, according to the academic literature, the effects of algorithmic trading are mixed. On the one hand, AT and HFT have some positive effects: i) improve instantaneous measures of liquidity by reducing bid-ask spreads and often post the markets' best quotes, and ii) improve price discovery. On the other hand, AT and HFT can decrease other types of liquidity (increase in realised spreads, reduction in traded volumes and market depth), especially under stress conditions. According to the CFTC-SEC's report on the 6 May 2010 'flash crash', "*the interaction between automated execution programs and algorithmic trading strategies can quickly erode liquidity and result in disorderly markets*". Indeed Kirilenko et al. (2010)[10] show that during the 'flash crash', HFT had a negative impact on liquidity: HFT became directional (selling pressure in a downward spiralling market) as HFT firms had to unwind their positions and balance their net positions. As a result HFT firms competed for liquidity

[5] The shorter duration of HFT orders leads to emphasize their number. An average of the number of orders weighted by their duration might thus appear more relevant. Calculating such an indicator would however raise significant computational difficulties.

[6] See "Consultation responses to Call for Evidence on Micro-structural Issues of the European Equity Markets http://www.esma.europa.eu/index.php?page=responses&id=158.

[7] "Breaking down the UK equity market. Executable liquidity, dark trading, high frequency and swaps", January 2011.

[8] See Aite Group "The European Equity Electronic Trading Landscape: How Deep is Your Pool", March 2010.

[9] The estimate of TABB Group (Sep. 2009) is 61%; that of Rosenblatt Securities (30/09/09)"approx. 66%"; Celent (Dec. 2009) is more conservative (42%).

[10] Kirilenko, A., A. Kyle, M. Samadi and T. Tuzun (2010): "The flash crash: the impact of high frequency trading on an electronic market", working paper CFTC and University of Maryland.

(‘hot potato effect’), amplifying the price impact of the initial selling pressure, as they sold when price decreased and bought while it increased, resulting in higher volatility.

8. The survey of the academic studies mentioned above has been taken into account in preparing the cost-benefit analysis below. However, ESMA believes that a further review of the relevant literature would be necessary if more stringent regulatory measures were envisaged in the context of the revision of MiFID and MAD.

II. Cost-benefit analysis

9. The development of algorithmic trading strategies, including HFT, has brought considerable change in the order processing chain at trading venues. While market infrastructures have been developed to accommodate a wider range of trading needs, the processing of orders has become much more technology intensive and much more complex and new risks have emerged as a result. Developments observed in the European marketplace linked to algorithmic trading and new forms of access to trading platforms by persons who are not members of those platforms triggers various types of market failures which require adapting applicable regulatory frameworks.

II.1. Market failure analysis

10. The massive increase in message traffic sent to trading platforms may disrupt electronic trading systems if institutions operating those systems do not have adequate systems and controls to deal with capacity constraints. This generates collective costs (**negative externalities**) that are borne not only by firms using algorithms, but rather by all market participants, increasing uncertainty and reducing financial stability.

11. The increasing complexity of algorithms reduces the capacity of firms using them - as well as that of other market participants – to assess the impact of their implementation in the market. This creates uncertainties for various types of market participants (such as trading venues and buy-side), and is particularly likely to have an impact in times of stressed market conditions; firms without appropriate development and testing processes may also implement trading algorithms without assessing their likely impact on the market. Whereas, this effect is in principle partly mitigated by the incentive of firms that send orders to the market to bear the financial and reputational consequences of inappropriate implementation of their algorithms, imperfect information could result in firms lacking incentives to sufficiently assess the likely impacts of their algorithms on the market, as well as the potential negative externality.

12. Another **information asymmetry** can arise from the volume and complexity of algorithmic trading. It is becoming harder for competent authorities to promote market integrity, including detecting market abuse, due to the costs and time needed to process the massive amount of information sent by algorithms to the market and to the increased complexity of algorithmic trading behaviour. New types of manipulation strategies can also be implemented using algorithms (such as spoofing, layering and quote stuffing). According to answers received to the ESMA questionnaires, some investment firms had observed instances of unusual market activities such as last order modification or spoofing/layering and discussions with people in charge of market surveillance have indicated that market abuse is indeed harder to spot. One individual involved in market surveillance told ESMA that efforts to compress data to make it more manageable through aggregation are likely to hide much more than they reveal and the number of false positives thrown out by systems designed to alert on abusive behaviour to rise.

13. Direct access to a trading platform, where the person or institution receiving access trades in the name of a member/participant or user of the trading platform, can create **both negative externalities and information asymmetries**. Particularly in the case of SA, firms accessing trading platforms directly may lack incentives to have an adequate risk management framework as the SA provider is legally responsible for the trading of their clients. Firms using SA may implement riskier strategies than they would otherwise do under alternative market access, given that they do not have to use their intermediary's infrastructure (moral hazard). SA may attract riskier firms for the same reason, resulting in adverse selection. This would increase reputational and credit risk for the investments firms providing SA. From discussions with market participants, it appears that some investment firms do not provide SA for these particular reasons. At the same time, fierce competition for clients between investment firms may result in a 'race to the bottom', whereby firms providing SA may have little incentive to require their clients to strengthen risk management and not be willing to bear the costs of monitoring them by themselves.

14. Market-driven solutions may be insufficient to address such market failures:

- Market participants – including HFT firms, investment firms and trading venues – do not always have incentives to internalise the costs of their actions on all market participants. While this may be mitigated partly by high (reputational) costs of market disruptions and dysfunctions, risks may also be increased by the consolidation of market infrastructures (potentially any given problem disrupts more trading activity than would otherwise be the case) or of market participants (problems in order entry might be multiplied across a wider number of orders);

- Given the fierce competition for order flow including the provision of DEA and, in particular, SA market-based solutions may be insufficient for managing the risk these activities pose. Such competition between trading venues and/or investment firms for attracting clients may thus lead to a 'race to the bottom' and reduce risk management standards.

II.2 Regulatory objectives at risks

15. The development of algorithmic trading and direct access to the market is perceived to create risks to the following regulatory objectives:

Investor protection: Investors may individually take risks that they are not aware of when trading in a market relying on algorithmic trading. More generally, risks to market stability and integrity may have direct consequences for them if they crystallise.

Fair and orderly trading: Insufficient systems and controls for managing the risks related to algorithmic trading, investment firms' direct electronic access, and trading venues infrastructures may imply that trading techniques used could have a detrimental impact on the market (such as slowing trading but also leading to "erroneous" trades).

Market integrity: Insufficient detection of fraud and abusive behaviour may reduce the participation of investors in the markets by diminishing their confidence that they will be fairly treated when using markets. A lower level of trading activity could reduce liquidity and raise transactions costs on secondary markets, increasing the costs of raising capital through markets in financial instruments.

Financial stability: Disruptions in the functioning of secondary market have consequences on the provision of liquidity and on the formation of public prices. This could cause problems for individual institutions and more generally add to moments of stress in financial markets with repercussions for the functioning of financial intermediaries as a whole.

II.3 Why is intervention necessary?

16. Trading platforms, investment firms providing access to the market, and investment firms using algorithmic trading lack incentives to bear the full cost of managing the risks and negative impacts of their trading strategies and the necessary organisational arrangements for their activities linked to trading. There are limits to the market's capacity to mitigate such detrimental effects. Related shortcomings are considered to be market failures that justify some form of regulatory intervention.

17. Moreover, under the existing legal framework provided by MiFID (such as Articles 39(b), (c) and Article 42(1) to (3) for RMs, Articles 14(1) and 26 for MTFs and Articles 13 and 5 to 9 of the MiFID Implementing Directive for investment firms) and MAD (Article 6(6) for RMs and Article 6(9) for investment firms), no specific clarification has been given at the EU level to address the concerns related to the recent developments of electronic trading including algorithmic trading and DMA and SA in the European marketplace.

II.4 Regulatory policy response

18. Dealing with risks induced by algorithmic trading leads to consideration of two options:

1) do nothing; or

2) provide regulatory guidance, aimed at:

   a) ensuring that trading venues and investment firms have the technical and human capabilities, as well as the appropriate procedures, to manage the risks incurred by algorithmic trading; and

   b) ensuring that processes are in place for monitoring market activity.

19. It should be noted that MiFID provisions currently do not allow for imposing prescriptive rules. ESMA can only adopt guidelines as provided for in Article 16 of the ESMA Regulation. In drafting the guidelines in this paper ESMA has sought to provide greater clarity on the obligations in current legislation whilst staying within the confines of what is permitted under Article 16. The adoption of more prescriptive rules on a national level might lead to regulatory arbitrage. In addition, the adoption of guidelines, preferably to binding rules, should be expected to mitigate concerns about proportionality and unintended effects of regulation. However, because guidelines are not binding, the do not bring the legal certainty of legislation and rules and cannot deal with issues – such as the fact that some HFT firms are exempt from MiFID – which would require a change in the legislative framework.

20. Beyond the scope of the present guidelines binding rules might be envisaged at a later stage, should amendments to the MiFID requirements provide the vires to do so. More specifically, ESMA could be granted powers to issue Binding Technical Standards (BTS) with regard to the issues under consideration. Such legislative changes might in particular lead to:

   a) the power to turn guidelines into BTS;

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b) requirements involving improved information collection and consolidation for market surveillance purposes;

c) regulation of some specific aspects of the market structure such as, for example, co-location, tick size or fee schedules, which may have direct impacts on low latency trading and related risk management frameworks; and

d) implement technical features to reduce the amount of information sent to trading venues and slow down trading.

21. In response to CESR's call for evidence (Annex V) and ESMA's fact-finding questionnaires concerns were expressed by market participants about the consistency of the application of the current rules. ESMA therefore believes that it is appropriate to move on from the current position by adopting guidelines. They will help clarify competent authorities' expectations for trading platforms and investment firms in a highly automated trading environment and provide a common platform for the more consistent application of the rules by competent authorities.

II.5 Methodology

22. In order to assess the costs and benefits linked to the guidelines, ESMA has identified the costs and benefits they have in terms of their potential impact on the following stakeholders:

- market participants (all stakeholders in general: investors, issuers, etc.);
- competent authorities;
- trading platforms;
- investment firms; and
- non-regulated trading firms.

23. The costs and benefits that have been considered in this analysis are set out below:

Costs

a) for competent authorities:

- supervisory costs

b) for trading platforms:

- compliance costs
- operational costs

c) for investment firms:

- compliance costs

- operational costs

c) for non-regulated trading firms:

- indirect compliance and operational costs

Benefits

- investor protection improvement
- fairer and more orderly trading
- greater market integrity
- lower risk of financial instability.

Key impact of the overall costs and benefits of the draft ESMA guidelines		
High	Medium	Low
√√√	√√	√

24. The final impact assessment is made by calculating the impact of the overall costs and benefits. This requires the calculation of a single figure for the costs for different stakeholders: i) competent authorities, ii) trading platforms, and iii) investment firms.

a) Costs

i) Impact on competent authorities

Supervisory costs

25. Set-up costs. Competent authorities in the EU will have to review existing guidance to trading platforms and investment firms to ensure that it is consistent with these guidelines and replace it where it is not. This is likely to have a small cost as it appears that whilst some competent authorities have publicly commented on some of the issues covered by these guidelines, there is little explicit guidance of other national authorities on the issue. The costs of reviewing existing guidance against the new guidelines and making any necessary amendments should therefore be small across the EU as a whole.

26. Ongoing costs. Competent authorities will also need to ensure that in their supervision of trading platforms and investment firms they take account of these guidelines and review their implementation over time. This should not add significantly to the existing costs of supervision. Competent authorities are already engaging with trading platforms and investment firms on the issues covered by the guidelines. Ensuring that the guidelines are being observed should not require significant new supervisory effort, although in the short term competent authorities might need to devote more time and effort to engaging with trading platforms and investment firms on their compliance with the guidelines.

Overall assessment

27. The overall supervisory costs of the guidelines should therefore be low, although slightly higher in the short term than in the medium to long term.

Costs for competent authorities	
One-off	Ongoing
√	√

ii) Impact on trading platforms

28. According to ESMA's MiFID database there are 142 regulated markets in the EEA and 92 MTFs. There is a smaller number of operators of regulated markets and MTFs because many operators operate more than one market. The regulated markets and MTFs trade a wide range of the different types of financial instruments covered by MiFID.

Compliance costs

29. Trading platforms will need to review their existing policies and procedures against the guidelines. Based on the responses to the ESMA fact-finding questionnaire t it is probable that there is already a relatively high degree of compliance with the standards set out in the guidelines. Therefore, once trading platforms have completed an assessment of their compliance against the guidelines, and although some policies and procedures may need to be updated, it is unlikely that trading platforms will have to completely rewrite their policies and procedures. Once their policy and procedures have been updated as necessary, there should not be a substantial additional increase in compliance costs in the medium to long term because there should not be a significant set of additional issues for compliance functions to have to concern themselves with.

Operational costs

30. Some trading platforms will probably need to adapt their electronic trading systems and associated controls in order to comply with the guidelines. The costs of such changes would include the costs of IT staff and other personnel who would be required to be involved in the development plus the costs of software and hardware. Additional ongoing costs for the maintenance of the enhanced trading systems and controls are expected to result from it. The guidelines are however believed to be based on current best practice of a number of operators, given their answers to the ESMA questionnaires, and should thus involve only limited incremental costs. A possible cost of the guidelines could be caused by a change in the business models of some trading platforms, as they may require more staff, resulting in higher operational costs. This could reduce competition between trading platforms as it would raise the barriers to entry to new competitors.

Overall assessment

31. Modest compliance costs are expected for trading platforms in complying with the guidelines. More significant costs are expected for any trading platforms that need to adjust their trading systems and associated controls.

Costs for trading platforms	
One-off	Ongoing
√	√

iii) Impact on investment firms

32. Based on data from national competent authorities there are 5,000 investment firms in the EU and 4,500 credit institutions. A smaller number of entities will be affected by these guidelines as not all of the firms mentioned above will be members/participants or users of regulated markets and MTFs. A broad indication of the numbers affected (it obviously does not cover entities who are members/participants and users of trading platforms who deal on own account and do not execute orders on behalf of clients) is probably given by the number of entities who have permission to execute orders on behalf of clients. This includes approximately 2,500 investment firms and 3,100 credit institutions.

33. The responses to QVI of ESMA's fact-finding questionnaire to trading platforms (summarised in Annex VI) provides some information on the extent to which members/participants of regulated markets and MTFs offer SA. It is not possible to provide any significant data on the prevalence of DMA.

Compliance costs

34. Investment firms will need to review their existing policies and procedures against these guidelines and make changes as necessary and then take these guidelines into account as part of their ongoing monitoring and review of their organisational arrangements. Based on the responses to the ESMA fact-finding questionnaires it would appear that these guidelines represent what is currently best practice amongst investment firms in the areas they cover. However, this means that not all investment firms will have organisational arrangements which meet all aspects of the guidelines and they will need to revise them as necessary. Once the revisions have been made then they should be taken into account in a firm's existing processes for monitoring and reviewing its organisational arrangements.

35. An upper limit for the costs is found in a comparable exercise of the SEC in the United States and points to limited additional costs of compliance for investments firms.[11] Indeed, one would expect some investment firms to need to upgrade existing trading controls in Europe but not for investment firms to build control systems from scratch, as this would represent a serious compliance failure under present rules. Where firms upgrade their existing systems this is likely, as in the US, to be associated with increased ongoing costs as well.

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[11] See the cost-benefit analysis of the SEC related to the adoption of its Rule 15c3-5 on risk management controls for brokers or dealers with market access, which dealt with issues raised by ESMA's proposed guidelines 4 and 8 and, to an extent, 9.
The SEC estimated that for broker-dealers covered by rule 15c3-5, one-off compliance costs would approximately amount to $32,200 per broker-dealer or a total of $44.3mn across all the 1,375 broker dealers. The costs include 15 hours work each by a compliance lawyer and a compliance manager and 5 hours work by a CEO. Almost two-thirds of the total costs reflect the work of the CEO whose time it was estimated would cost $4,005 an hour. The SEC estimates the annual increment to compliance costs to be approximately $34,800 per broker dealer for a total of $47.9 million across all 1,375 broker dealers. Again, two-thirds of estimated costs relate to the cost of 5 hours work by a CEO. Such cost estimates per firm are likely, to overestimate the costs of complying with comparable standards in European guidelines for several reasons, including that: The SEC's assessment relates to the introduction of a binding rule, not of guidelines; SEC rules require CEOs to sign off on risk controls. In the EU senior management are collectively responsible for compliance under Article 9 of the MiFID Level 2 Directive; SEC rules embed a new specific annual review and CEO certification of the review. There is already such a requirement in the EU namely to review, monitor and report, at least annually, to senior management under Article 9 of the MiFID Level 2 Directive.

Operational costs

36. Investment firms will potentially have to upgrade their electronic trading systems and related controls under the guidelines. Such upgrades will require time from IT and other staff and potentially new software and hardware costs followed on by additional ongoing costs of maintenance. Here again, and for the same reasons as previously mentioned, the similar exercise of the SEC provides an upper bound to the operational cost estimate.[12]

Overall assessment

37. Guidelines themselves should not cause significant new compliance costs given that investment firms will already have had to assess the rules under which the guidelines sit when the rules were implemented. However, there might be significant operational costs for some firms where existing trading systems and controls do not meet the best practice set out in the guidelines.

Costs for investment firms	
One-off	Ongoing
√√	√√

[12] The SEC estimates that, for broker-dealers covered by rule 15c3-5, one-off operational compliance costs would reach $70.1Mn and ongoing annual costs $65Mn. The one-off cost figure is based on the assumption that 5% of the 1,375 firms covered build control systems from scratch. For them the SEC estimates that they would spend approximately $167,904 per firm on technology staff (for a total of 720 hours of work) and $102,500 per firm on hardware and software. The SEC estimates that the other 95% of firms would spend some $27,984 per firm on technology personnel (120 hours of work) and approximately $11,517 on hardware and software costs. Ongoing costs assume each firm to pay $47,300 annually on maintaining an in-house risk management system. This includes $26,800 for technology personnel (115 hours of work) and $20,500 on hardware and software. The main reason for believing that costs in the EU would, for comparable standards, be lower than in the US relate to the previously mentioned difference between rules and guidelines.

iv) Impact on non-regulated trading firms

38. ESMA has no information on the number of non-regulated firms who might be affected by the guidance.

Compliance costs

39. Non-regulated trading firms are outside the scope of the guidelines. However, firms using SA and DMA may incur some indirect costs given that investment firms providing direct market access would require them to have appropriate systems and controls. Based on the responses to ESMA's fact-finding questionnaires it would appear that these guidelines represent what is currently best practice amongst non-regulated trading firms in the areas they cover. However, for some firms that do not have adequate systems and controls, the cost may be significant.

Operational costs

40. Non-regulated trading firms will potentially have to upgrade their electronic trading systems and related controls under the guidelines. Such upgrades will require time from IT and other staff and potentially new software and hardware costs followed on by additional ongoing costs of maintenance.

Overall assessment

41. Guidelines themselves should not cause significant new compliance costs for non-regulated trading firms given that some of them will already have had to assess the rules under which the guidelines sit when the rules were implemented. Moreover, only non-regulated trading firms using DEA would incur the costs linked to the guidelines. However, there might be significant operational costs for some firms where their existing trading systems and controls do not meet the best practice set out in the guidelines.

Costs for non-regulated trading firms	
One-off	Ongoing
√	√

b) Benefits

42. As noted previously the rules under which the guidelines sit are designed to promote investor protection, fair and orderly trading, market integrity and financial stability. In relation to these regulatory objectives the main benefit of the guidelines themselves, as opposed to the benefit of the rules under which they sit, should be to bring about a greater consistency of compliance across the EU by setting out clearly what competent authorities expect of trading platforms and investment firms in the areas covered by the guidelines. This should add a marginal benefit in relation to each of the objectives.

Investor protection: Implementation of the guidelines should ensure that investors are more consistently protected against investment firms making errors when entering their orders. More generally, more robust and resilient trading systems should mean that investors are able to trade when they want to do so.

Fair and orderly markets: If the risks of erroneous order entry is controlled then there should be less 'noise' in financial markets making it easier for investors to interpret trading information and to make more effective investment decisions. This would result in greater confidence and less uncertainty in trading.

Market integrity: More consistent organisational arrangements by trading platforms and investment firms should help to diminish the risk that there will be an attempt to manipulate markets for financial instruments through trading on trading platforms. If the risk of market manipulation is reduced this should help to give investors greater confidence and potentially aid liquidity and price formation thereby delivering markets involving lower costs for investors and issuers of capital.

Financial stability: Better control of operational, credit and market risk by investment firms through controls on their systems and trading activity could mitigate the risks they pose to the system. The same objective would be achieved if the same controls were implemented by regulated trading firms and non-regulated trading firms. In addition, for firms providing DMA and SA, the proposed guidelines would lead to the potential benefit of a reduction in credit risk and reputational risk arising from their clients' risk taking and trading behaviour.

43. As stressed in paragraph 23 above, the benefits will be dependent on the responses of trading platforms, investment firms and competent authorities. The benefits will only arise if trading platforms and investment firms (who are subject to these guidelines) implement them and they are integrated in the supervisory practice of competent authorities.

Overall assessment

44. The guidelines should strengthen the significant benefits which flow from the rules under which they sit by ensuring greater uniformity in the supervision against the rules and greater uniformity in the way in which trading platforms and investment firms approach compliance with the rules.

Benefits for market participants	
One-off	**Ongoing**
√√	√√