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Financial Services Authority

Short selling

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Annex 1: Literature review on short selling

Annex 2: Statistical analysis: assessing the effects of the short selling ban

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Annex 4: List of questions

The Financial Services Authority (FSA) invites comments on this Discussion Paper. Comments should reach us by 8 May 2009. This DP contains a number of questions for respondents, so we have created an electronic response form. We would prefer you to use this electronic form when sending us your responses. Comments should be sent by electronic submission using the form on our website at (www.fsa.gov.uk/Pages/Library/Policy/DP/2009/dp09_01_response.shtml).

Alternatively, please send comments in writing to:

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It is the FSA's policy to make all responses to formal consultation available for public inspection unless the respondent requests otherwise. A standard confidentiality statement in an e-mail message will not be regarded as a request for non-disclosure.

A confidential response may be requested from us under the Freedom of Information Act 2000. We may consult you if we receive such a request. Any decision we make not to disclose the response is reviewable by the Information Commissioner and the Information Tribunal.

Copies of this Discussion Paper are available to download from our website – www.fsa.gov.uk. Alternatively, paper copies can be obtained by calling the FSA order line: 0845 608 2372.

1 Overview

Background

- 1.1 On 18 September 2008 we introduced temporary short selling measures in relation to stocks in UK financial sector companies on an emergency basis. We did this at a time of extreme market turbulence, manifested in the forms of high and prolonged price volatility and downward pressure on the prices of financial stocks in particular. We were concerned by the heightened risks of market abuse and disorderly markets posed by short selling in these conditions. The temporary measures effectively banned the active creation or increase of net short positions in the stocks of UK financial sector companies and required disclosure to the market of significant short positions in those stocks.
- 1.2 Last month, after consulting on an expedited basis, we extended the disclosure requirement, subject to a small amendment on disclosing changes in short positions, but allowed the temporary ban to expire. We took the view that the circumstances that led us to introduce the emergency measures had changed, not least as a result of financial policy initiatives by the government, and that the risks that had caused us the greatest concern had eased. The principal factor in this determination was the fact that in September it was apparent that sharp share price declines in individual banks were likely to lead to pressure on their funding and thus create a self-fulfilling loop. The policy interventions in the intervening period have reduced this risk and indeed this effect has not been visible since we lifted the ban. We nevertheless considered it appropriate to continue to mitigate these risks by retaining a disclosure regime in relation to short positions in stocks in UK financial sector companies. We also made it clear that we were prepared to reintroduce the temporary ban, without consultation if necessary, should circumstances require it.
- 1.3 When we introduced the temporary measures, we said we would conduct a comprehensive review of short selling – and this Discussion Paper (DP) sets out our analysis and conclusions. The review has sought to cover all the key issues in this area, as we saw them, including the issue of short selling in stocks of companies undertaking rights issues; we introduced disclosure requirements regarding short positions in companies undertaking rights issues on 20 June 2008. In this DP our thinking has been informed by information and commentary from a wide spectrum of external stakeholders.

- 1.4 Of course, we are not the only financial services regulator to have intervened in the short selling space in recent months. Measures restricting short selling and requiring disclosure of short positions, most temporary but some permanent, have been introduced around the world. In turn, this has led to the establishment of several international initiatives to review the regulatory approach towards short selling. As we say later on in this paper, we consider international consensus on the key issues to be extremely important and, in order to achieve that, we are participating fully in these initiatives, supported by the findings of this review.

Structure and summary of this paper

- 1.5 This paper is set out as follows:

- This chapter provides an overview of the DP.
- Chapter 2 provides a brief description of short selling, the market participants who tend to engage in it, their reasons for doing so and the different methods used. It also provides some detail on the context in which short selling takes place.
- Chapter 3 examines the pros and cons of short selling and reiterates our long-standing message that short selling is normally a legitimate trading activity that tends to enhance price efficiency and liquidity. We also note, on the negative side, that it can be used to commit market abuse and can contribute to disorderly markets.
- Chapter 4 provides an analysis of some of the potential constraints on short selling including: various types of prohibition on short selling (e.g. a blanket ban, bans restricted to ‘naked’ short selling); circuit breakers; and tick rules. We conclude that none of these options would represent proportionate responses to the risks posed by short selling – although we do reserve the right to intervene to ban short selling on an emergency basis should market conditions require. The heightened potential risks of short selling of stocks of companies engaged in rights issues is also discussed in Chapter 4. On balance, we conclude that banning such activity would not be warranted, although we do propose a tighter disclosure regime.
- Chapter 5 examines the options for enhanced transparency. We have considered a regime based on disclosure of aggregate short positions, but we do not consider that the benefits of such a system, which relies on a marking or flagging system, justify the very high costs to the market that are involved. Instead, we favour an amended version of our current disclosure obligation but extended to cover all UK stocks. This means that we favour disclosure of positions in specific stocks by individual position holders to the market as a whole. We do not think that private disclosure to the FSA would achieve our regulatory objectives. We also discuss important technical issues concerning this disclosure regime, such as the level at which disclosure thresholds should be set and how market participants should calculate their short positions. However, we are clear that we consider it

highly desirable to find an international consensus in this area, and we are therefore not making definitive detailed proposals at this stage.

Who should read this paper?

- 1.6 The paper will be of interest to UK financial sector companies, short sellers of stock, consumers, other firms and trade bodies and their advisers.

2 What is short selling?

- 2.1 This chapter provides a brief description of short selling, the market participants who tend to engage in it, their reasons for doing so and the different methods used. It also provides some detail on the context in which short selling takes place.
- 2.2 Although a short sale is not a legally defined term in the UK, market participants generally understand that it is the sale of a security that the seller does not own. Short selling can be accomplished by using a number of different derivative instruments, as well as by short sales in the cash markets. However, if derivatives are used to create a short position then this can result in a short sale in the cash market in order to hedge the position. The two basic types of short selling are ‘covered’ and ‘naked’.

(a) ‘Covered’ short selling

- 2.3 A covered short sale usually involves a series of transactions. In the first stage, the short seller normally borrows the number of shares that are being short sold so that they can be delivered to the buyer at settlement.¹ The short seller will normally get cash on delivery of the stocks. In the second stage, they short sell the shares. In the third stage, which occurs at some point in the future, they purchase the same number of shares so they can be returned to the original lender. At stage four, the replacement shares are returned to the original lender and the series of transactions is complete.

(b) ‘Naked’ short selling

- 2.4 In a naked short sale, the seller sells shares they do not own, without having set aside any shares to settle the transaction. Since they did not borrow the shares that have been sold, the short seller does not have to pay any borrowing fees. They would normally be subject to any fees that the broker requires to hold the position open. When it is time to exit the short position, the short seller relies on the same number of shares being available so they can buy them back – closing the short position. Obviously, naked short selling carries settlement risk in a way that covered short

¹ The shares are often borrowed from a long-term share holder, such as an insurance fund or a pension fund, who in turn receives lending fees from the borrower. For as long as the short position is held open, the short seller continues to pay the fees. Borrowing fees reflect the availability of the stock, including the demand for borrowing.

selling does not. Naked short selling is often used for intraday trading, where the position is opened and then closed at some point later in the day. Also, if a market maker does not have a sufficient supply of a particular share to meet client demand then the market maker may employ naked short selling in order to meet that demand.

(c) A risky strategy

- 2.5 Short sellers must, at some point in the future, buy back an equivalent number of shares to those that were sold short. This would be true whether they were to replace the number of borrowed shares in the case of covered short selling or simply close out the short position in the case of naked short selling. In either scenario, the short seller is exposed to the risk that the shorted shares will go up in price. If the price rises while the short position is open, then the short seller will be required to either close out the position at a loss or to pledge more cash to keep the position open. Stock prices may rise for any number of reasons and if this occurs quickly and is sustained for a period of time then short sellers are caught in what is called a 'short squeeze', with the covering of short positions driving up prices further.
- 2.6 A particular risk for naked short sellers is where they are unable to find shares to buy, making it difficult for them to close out their short position. This is more likely to occur where a particular share is illiquid. By contrast, covered short sellers face the risk that the borrowed shares could be recalled by the lender – possibly making it difficult to find more of the same shares in order to close out their short position.

(d) Profits from relative price changes

- 2.7 A common assumption is that short sellers only want to profit directly from falling share prices. To a certain extent this is correct, but short sellers can benefit in other ways too. For example, some strategies profit from changes in relative prices. One example of this would be a 'pairs trade' where a trader shorts one stock (A) and then goes long in a different stock (B). They are effectively taking the view that stock B is under priced relative to stock A and will profit if B outperforms relative to A irrespective of the absolute change in prices. So in both a falling and rising market they can profit from relative price changes.

(e) Derivative methods of short selling

- 2.8 Selling shares in the cash market is by no means the only way of taking a short position. There are many derivative equivalents to short selling, although some of these methods can be hedged by selling in the cash market.
- 2.9 For example, a short position can be taken through single stock futures, index futures and options, spread bets, CFDs and total return swaps (based either on a particular share or on an index).

(f) Who short sells and why?

- 2.10 Taking short positions is an investment technique popularly associated with hedge funds. However, it is used by a wide variety of market participants including

traditional fund managers such as pension funds and insurance companies, and investment banks. Market makers also use short selling to help them fill client orders when they do not immediately hold shares they have sold.

- 2.11 Any of these investors could use short selling for speculative purposes or to hedge a long position that they hold. For example, they could simply take a short position in a comparable share in which they hold a long position. If the share price goes down, then they can limit their losses through the rise in the value of the short position. This is a common practice and is used in most of the developed financial markets. Short selling can also be used to hedge a position in a different instrument related to the same stock, for example shorting the underlying stock when purchasing a convertible bond. A holder of a long position in a security may also hedge himself by purchasing a put option.
- 2.12 Investment banks may short sell a stock when trading for their own book – this is called proprietary trading. If they take a negative view on a company then short selling would be a relevant strategy for them. Using this strategy does not necessarily mean that they will simply short shares in the cash market – they could use a combination of some of the derivative-based methods that have been described above. They may also short sell for clients when acting in a prime broker capacity.
- 2.13 Hedge funds use short selling as a strategy and will often combine a short position with a long position, using pairs trading or even trading two stocks that are in different sectors, but that are correlated to one another in some way. The profit would come from the price differential between the two stocks. They may also use derivatives to create short positions.
- 2.14 Although they normally tend to buy shares and hold them for the long term, buy-side fund managers, such as insurance funds, often use short selling to hedge some of market risk in their portfolios. This is seen as more efficient and less costly than other methods.
- 2.15 Individual investors also use short selling as part of their investment strategy. If they have a negative view on a particular stock then they short sell the stock in the cash market, buy put options or enter into short CFDs or spread bets. The proliferation of online trading has enhanced access to all of these investment methods for individuals and they are getting more popular each year.
- 2.16 Short selling trading strategies using derivatives are also employed by investors wanting short exposure to multiple shares of different companies in the same sector. Rather than selling short each individual share the investor could simply take a short position in an index that included each of the shares. This would be cost effective and a simpler way of taking the position than shorting each individual share. Again, using some of these methods to short sell can also involve a short sale in the cash market to hedge the strategy.

- 2.17 Market makers use short selling to fill client orders when the stock they need is not immediately available. They are an important participant in the UK's financial markets and provide liquidity through their market making activities. Put simply, when meeting customer demand market makers may need to go short if they do not already hold sufficient stock on inventory. Sometimes market makers take a negative view on a particular stock and sell the stock short in the cash market or use a combination of derivatives to create a short position in the stock for purely speculative purposes. When doing so they are not acting in their capacity as market maker.

Stock lending

In a practical sense, the term stock lending is used to describe the temporary transfer of securities by one party (the lender) to another (the borrower). The securities on loan are secured either by cash collateral or securities/asset collateral. Under the loan agreement, title to the securities passes to the borrower. This is therefore more akin to a sale and re-delivery than borrowing as such. Where lenders have agreed to take securities as collateral they are paid a fee.

If the lender takes cash as collateral, they pay the borrower interest at a lower than market rate known as the rebate rate. This allows the lender to reinvest the cash and make a return. However, the borrower is obliged to return the securities to the lender either on demand or at the end of an agreed term.

A common reason to borrow securities is to cover a short position. However, this position may not necessarily be a result of speculative activity; it may arise from a dealer's need to borrow securities to provide them for customers making buy orders or as a result of failed settlement. Market makers borrow stock to fill client orders and ensure tight, two-way prices. Securities lending allows market makers to increase liquidity, which in turn helps the markets operate more smoothly and efficiently.

Borrowing of securities also occurs as part of financing strategies.

3 The impact of short selling

- 3.1 Regulatory intervention can be justified on the basis of identified market failures and if it is expected to deliver net benefits to the market. This chapter will explore the pros and cons of short selling and Chapters 4 and 5 will weigh up the net benefits of some of the regulatory options that could be introduced to mitigate the potential negative effects of short selling.
- 3.2 We recognise that short selling is regarded as a controversial technique by many, particularly in times of falling markets. There is a widespread conceptual problem with market participants being able to sell something which they do not currently own. Nevertheless economic theory and empirical studies support the view that short selling normally contributes to the efficient functioning of the market e.g. in Annex 1 we review published literature on the impacts of short selling. We share that view and have consistently made it clear that we regard short selling as a legitimate investment technique in normal market conditions.
- 3.3 If market participants are constrained from short selling, investors with negative information that do not hold stock inventory, will be constrained from selling and their information will not be fully reflected in stock prices. Therefore, restrictions on short selling can increase the magnitude of overpricing and subsequent corrections² or (if investors take account of short selling restrictions when forming their expectations and so do not systematically overvalue stocks) reduce the speed of price adjustment to private information³. Bris et al (2007)⁴ analyse cross-sectional and time-series information from 46 equity markets around the world for the period 1990-2001 to show that measures of efficiency tend to improve when short selling is feasible and practised.
- 3.4 Short selling can also enhance liquidity by increasing the number of potential sellers in the market. This increases efficiency by tending to increase trading volumes and reducing transaction costs (through a reduction in bid/offer spreads). Conversely, a

2 Miller, E., 'Risk, Uncertainty and Divergence of Options', 1977, *Journal of Finance* 32.

3 Diamond, D. W., Verrecchia, R. E., 'Constraints on Short selling and Asset Price Adjustment to Private Information', 1987, *Journal of Financial Economics* Volume 18 No 2.

4 Bris, A., Goetzmann, W. N., Zhu, N., 'Efficiency and the Bear: Short Sales and Markets Around the World', 2007, *Journal of Finance*, Vol 62, No 3.

ban on short selling removes potential sellers and also those that use shorting techniques as part of wider trading strategies. Short sellers do, of course, need to buy back the shares they have sold at some point so do provide demand as well as supply.

- 3.5 So generally, in normal market conditions, we can expect short selling to improve market efficiency through more accurate price formation and enhanced liquidity. However, short selling can lead to four potential problems which we shall elaborate on below:
- (a) market abuse;
 - (b) disorderly markets;
 - (c) transparency deficiencies; and
 - (d) settlement failures.

(a) Market abuse

- 3.6 Short selling can be used abusively to create misleading signals about the real supply, or the correct valuation of a stock. It can also be used abusively in conjunction with ‘scaremongering’ tactics to push down the price of a stock being shorted. Firms whose existence depends on the confidence of their customers and counterparties in the stability of the institution (e.g. financial sector companies) may be particularly susceptible to market manipulation of this kind, especially in a climate of severe market turbulence and uncertainty.
- 3.7 The potential for abuse is greater for naked short selling relative to covered short selling. This is because for covered short selling the requirement to cover (e.g. borrow) inhibits both the speed and extent of short selling. The speed of short selling is constrained by the need to ‘cover’ the short sale before trading; and the extent of short selling is limited by the ability to borrow stock in the market. However, naked short sellers are not subject to those constraints; they can short sell as quickly as they can find willing buyers and can short sell over 100% of the issued share capital⁵. Naked short sellers also have greater potential to give a false or misleading impression as to the supply of shares on offer for sale – as a naked short seller does not have the shares to sell at the time of sale.

Vulnerability of companies undertaking rights issues to short selling

- 3.8 A company undertaking a rights issue may be particularly vulnerable to the negative impacts of short selling identified above. This is because there is an incentive for short sellers to attempt to drive down the share price below the rights issue price so they can both:
- (i) profit from their short selling strategy; and
 - (ii) bolster the supply of shares available for purchase (from the underwriters), thereby improving their ability to close out their short positions.

⁵ For example in the ‘Room Service’ case one party short sold 252% of the issued share capital of a company. See www.fsa.gov.uk/pubs/final/evolution_12nov04.pdf.

- 3.9 In this way, short sellers can make a low-risk profit to the detriment of issuers and passive investors. These risks are heightened where an issuer is raising capital to underpin its operations (rather than to finance expansion) as continued confidence in the firm might be more fragile. In these circumstances it is easier for short sellers to tip the share price of a firm into a downward spiral.

(b) Disorderly markets

- 3.10 As mentioned above, short selling can convey a signal to the market that a firm is overvalued. If investors act appropriately on this signal, this improves the accuracy of the valuation of the stock in question. However, if investors over-react (e.g. in the context of a general lack of confidence in some financial services stocks), the price decline may be excessive. Such volatility reduces the ability of a firm to raise equity capital or to borrow money and makes it harder for banks to attract deposits. In exceptional circumstances, prophecies of financial difficulties may even become self-fulfilling. Indeed, Bris et al (2007) find that, while short sales do not affect the frequency of extreme negative returns, they may increase the size of the negative returns.
- 3.11 If short selling precipitates the collapse of an issuer, this may have further implications for market confidence, leading to contagion for related stocks. For example, in extreme circumstances, the vulnerability of certain financial sector companies can sustain an atmosphere of fear which is conducive to the use of short selling strategies, possibly in concert with others, to distort and drive down share prices. Potential buyers may lack sufficient confidence to match the increased supply at or near prevailing market prices and so share prices can plummet, further fuelling fears in the particular sectors/institutions being shorted and/or on a systemic level. Banks targeted in this way might ultimately experience a depositor 'run'. Through this process, a short selling strategy may become a rapid self-fulfilling prophecy resulting in the collapse of those targeted by the short sellers and potentially contagion of related stocks.
- 3.12 Such a shorting strategy might be viewed as rational on the part of the short sellers as it can reap substantial profits. However, the contagion effect can ultimately result in disorderly markets, not only in the shares of a particular issuer but more generally. These issues can be particularly severe if the issuer is a systemically important firm and in times of severe market stress.
- 3.13 We have recently been experiencing an interaction of these and many other factors in global financial markets which have seen levels of volatility that are unprecedented in terms of persistence and magnitude. Some observers have commented that short selling has been a major contributory factor. We have not found conclusive evidence to support that hypothesis e.g. poor results from companies and rumours have played a significant part in the upsurge of volatility; but it was our view that market conditions in the autumn of last year led to a heightened (and unacceptable) risk of abusive behaviour and resultant disorderly markets through short selling which had the risk of being self-fulfilling through the impact on financial institutions' funding mechanisms. This prompted the emergency measures we took in September 2008. Whilst we note that there was a debate around market efficiency in this period, as we

have said already, the primary justification for intervention was not the impact on stock market efficiency but rather the functioning of the institutions themselves. In the current period this risk has not been visible.

(c) Transparency deficiencies

- 3.14 Information asymmetries between informed short sellers and uninformed market participants could result in price inefficiency. Information about the aggregate short position in a single stock could help the market judge the extent to which short selling is driving the price of that stock and the amount of the overhang that would need to be covered at some point by short sellers purchasing shares. Alternatively (or in addition), information about significant short positions of individual investors could be beneficial in shedding light on the individual funds/ participants who were driving trading.
- 3.15 In the absence of mandatory disclosure/reporting requirements this information would normally not be made available to the public because it is private information held by a short seller and it is not normally in his or her interests to disclose (as to do so would incur costs and might subject him/her to the risk of a ‘bear squeeze’).
- 3.16 However, from an economic point of view the optimum level of transparency is not necessarily full transparency. Studies demonstrate that excessive transparency can reduce liquidity because traders are unwilling to reveal their trading strategies. More generally, lack of full information on intentions or reasons for purchase and sales is a fundamental element of markets as information is costly to obtain. With full transparency, investors actually have less incentive to gather new information as they would not get compensation for the resources they expend.⁶
- 3.17 It is not clear whether a lack of transparency about the level of short selling and the identity of short sellers gives rise to a material market failure. Further there is the question whether the benefits of any mandatory disclosure requirements exceed the costs. This depends on the nature of the disclosure requirement and will be developed in Chapter 5; it is also discussed in the literature review (Annex 1).

(d) Settlement issues

- 3.18 Naked short selling gives rise to the risk that the seller is unable to deliver stocks to the buyer i.e. there is the risk of settlement failure. This may impair the proper functioning of the market resulting in enhanced transaction costs and sub-optimal levels of trading. We have made it clear that short selling without any intention or reasonable plan to settle the short position will be considered to be market abuse and have taken enforcement action on this in the past.⁷
- 3.19 Additionally, in practice there are mechanisms in place to mitigate this risk. For example the London Stock Exchange (LSE) can instruct members that short sell (even where it is for an underlying client) to source the stock in the market to enable settlement. Or at the request of the buyer, the LSE may itself intervene to source the stock to facilitate the settlement process.

6 See Grossman, S.J. and J.E. Stiglitz, ‘On the Impossibility of Informationally Efficient Markets’, 1980, American Economic Review, Vol. 70, No. 3.

7 For example see the ‘Room Service’ Final Notice at www.fsa.gov.uk/pubs/final/evolution_12nov04.pdf.

Conclusion

- 3.20 Short selling can generally be expected to increase market efficiency but can have negative impacts. In times of extreme market turbulence and for firms engaged in rights issues these risks are heightened. The fact that short positions are not normally disclosed to the market may also result in market transparency failure. Nevertheless, given that short selling has clear benefits, restrictions on it do appear to come at a cost (i.e. reduced market efficiency).

4 Regulatory options: potential constraints on short selling

- 4.1 In this chapter we consider a variety of constraints that we could apply directly to short selling. These range from an outright prohibition of short selling to regimes that require one or more conditions to have been satisfied before a short sale can occur e.g. a rule only permitting short selling where the preceding transaction resulted in a share price increase (an ‘up-tick’ regime). We set out our cost benefit analysis of the options considered in this paper in Annex 3.

A short selling prohibition

- 4.2 Clearly, the most radical option for constraining short selling would be to impose a complete or partial ban. This section considers the various prohibition options and their associated costs and benefits; a prohibition would only be justified where we are satisfied that there are net benefits.

(a) Prohibit short selling of all stocks

- 4.3 One way to address the negative impacts of short selling would be to introduce a blanket ban on short selling, covering both naked and covered short selling of all stocks traded on a prescribed market. We can look to the impacts of our temporary ban to help assess the benefits and costs of such a policy.

Benefits

- 4.4 A ban on short selling, if complied with, would, of course, eliminate the scope for the potential negative effects of short selling (the potential for market abuse, disorderly markets, market transparency deficiencies and settlement issues).⁸
- 4.5 To help examine the potential impact of a blanket ban on short selling we have conducted statistical analysis on the effects of our temporary ban (see Annex 2). However, we note that it is very difficult to establish whether our temporary ban had any empirically significant effects and causation cannot be assumed, even if there is

8 As identified in Chapter 3.

perceived correlation between our temporary ban and share price changes. Also the statistical analysis needs to be interpreted with caution as observations are likely to have been affected by events other than the temporary ban.

Costs

- 4.6 Introducing a short selling ban would result in indirect costs.

Pricing efficiency: a short selling ban would reduce the speed of price adjustment to information contained in short sales and could increase the magnitude of overpricing and subsequent corrections.

Liquidity: a short selling ban would tend to reduce trading volumes and widen bid-ask spreads as potential sellers are removed from the market. This was observed in relation to the relevant stocks while our temporary ban was active.

Foregone profits: a ban could also result in opportunity costs in the form of foregone trading profits resulting from reduced market activity. This was widely reported to us as one major side-effect of our temporary ban, although respondents were generally unable to provide an estimate of this.

- 4.7 Our statistical analysis (Annex 2) concludes that, while the temporary ban may have had the unsurprising effect of widening bid-offer spreads in the restricted stocks, it does not appear to have negatively affected either share returns or volatility in the relevant stocks.
- 4.8 A ban on short selling would also impose one-off and ongoing compliance costs on firms. For example, we were informed that after we introduced our temporary ban firms took legal advice, adjusted their IT systems to prevent short selling of the relevant stocks, and monitored developments that affected the scope of the temporary ban. We lack data on the compliance costs associated with a ban of all stocks. However, we contacted 32 firms, as well as seven trade associations, to obtain data on the compliance costs associated with our temporary ban on selected financial stocks.
- 4.9 *One-off compliance costs:* based on nine responses to our survey, we calculate that the average initial compliance costs associated with our temporary ban amounted to £40,000 per firm.
- 4.10 *Ongoing compliance costs:* based on eight responses to our survey, we estimate that the average ongoing cost of complying with our temporary ban was approximately £6,500 per month per firm.
- 4.11 Given that for the vast majority of time, markets operate normally, we are firmly of the view that the positive benefits of short selling outweigh the negative impacts. Accordingly, we do not propose a permanent blanket ban. We also note that throughout recent extraordinary market conditions we kept our temporary ban as targeted as possible by restricting it to UK financial sector companies and making it time limited.

Q1: What are your views on the costs and benefits of a blanket short selling ban? Where possible please quantify.

Q2: Do you agree that there should not be a ban on all forms of short selling?

(b) Prohibit naked short selling

- 4.12 Some jurisdictions allow covered short selling but have had long-standing prohibitions on naked short selling. Others have temporarily introduced such prohibitions (whether generally or for particular sectors or companies) in the light of the very turbulent market conditions which occurred in autumn 2008.⁹ Some argue that a ban on naked short selling deals with a number of specific problems caused by this practice without having the disadvantages of a complete ban on short selling:
- (i) It reduces the risk of settlement failures brought about by the inability of a naked short seller to source stock to fulfil his delivery obligations. However, UK Recognised Investment Exchanges and Recognised Clearing Houses, between them, have arrangements in place to (a) ensure the timely discharge of the rights and obligations of parties to a transaction and (b) intervene where settlement doesn't occur. For example, Euroclear UK and Ireland (EUI) has a regime for penalising ongoing failures to match and deliver, and the LSE has a regime for buying in shares that have not been delivered. To the extent that non-delivery remains an issue, it is probably more proportionate to address that through tightening of settlement rules rather than by introducing a blanket ban on naked shorting. In any event, we are reviewing settlement issues that may arise as a result of the significantly increased fragmentation of equity markets that has followed the introduction of the Markets in Financial Instruments Directive (MiFID).
 - (ii) It limits the speed and the extent to which a short selling strategy can be executed and thus can act as a brake on more aggressive short selling (which would normally carry commensurate risks). This is because the short seller will have to expend time and resources locating and borrowing the stock and there will always be a cap on the amount of stock that can be borrowed, namely the amount of issued share capital. Neither of these limitations applies to naked short sellers who can, in theory, short more than 100% of the shares in issue. However, it is not clear to what extent naked shorting is used to take significant positions. Our contacts with market participants suggest that those wishing to take big positions do so on a covered basis.
- 4.13 In addition, a general prohibition on naked short selling would prevent legitimate behaviour which can provide beneficial market impacts. For example, a naked short selling prohibition would stop intraday naked short selling (e.g. by day traders), an activity generally accepted to be legitimate trading that provides valuable liquidity to the system and does not pose a significant risk of settlement disruption. In particular, such a prohibition would significantly impair the ability of market makers to function properly, as it is often a necessary part of their role to short sell to meet client demand for a stock (where their own inventories are exhausted). It is also unclear that taking a short position by means of an instrument which does not subsequently require delivery of securities by the position holder is a source of problems.

⁹ The following jurisdictions have or continue to operate some form of prohibition on naked short selling: Australia, Belgium, France, Germany, Iceland, Italy, Japan, Portugal, Singapore, Spain and Switzerland.

4.14 Although a prohibition on naked short selling (or the converse requirement for all short selling to be covered) would be less far-reaching than a prohibition on short selling generally, we consider that such restrictions would still have net negative impacts. We are therefore proposing that we should not pursue these options.

Q3: Do you think any further measures are necessary to deal with naked short selling. If so, what is required and why?

(c) Prohibit short selling of financial sector stocks

4.15 As indicated in Chapter 3, financial sector stocks are particularly vulnerable in times of market crisis and in particular to the risks of spiralling price declines fuelled by short selling. This was one of the major factors that led us to introduce the temporary ban on 18 September 2008. However, given the legitimate and beneficial market function that we consider short selling to have, we do not believe it would be proportionate to introduce a permanent ban on the short selling of financial sector stocks.

4.16 A permanent prohibition that is restricted to a particular sector might result in displacement of short selling to other sectors/stocks. Although the evidence on this issue gathered in relation to our temporary prohibition on short selling of UK financial sector stocks is not clear cut, we recognise there is a risk of this.

Q4: Should short selling of financial sector stocks be banned permanently?

(d) Prohibit short selling of companies engaging in rights issues

4.17 As outlined in Chapter 3, companies engaging in rights issues may be subjected to abusive trading strategies whereby traders, possibly acting in concert, short sell in order to drive the share price below the rights issue price. Nevertheless, we believe that a short selling rights issue ban would be disproportionate given that the present market abuse regime can address such misleading and distorting trading activity. Additionally a rights issue short selling ban would prevent legitimate short selling (e.g. hedging of long exposures arising out of rights issues) which we believe to be a common intention behind short selling trades during rights issues. We do, however, propose to maintain a transparency regime for significant individual short positions in stocks undertaking rights issues (see paragraph 5.56).

Q5: Do you agree that, subject to having a satisfactory disclosure regime, we should not ban short selling of the stocks of companies engaging in rights issues?

(e) Prohibit short selling by underwriters of rights issues

4.18 There is a particular question whether underwriters should be able to conduct short selling in relation to the stocks of companies whose issues they are underwriting until the rights issue has been fully completed. However, before considering whether additional short selling restrictions on underwriters of rights issues might be

warranted, we reviewed existing constraints. There appear to be five potential constraints on the ability of underwriters to short sell the shares in a firm which is launching a rights issue:

- (i) the contract between the lead underwriter and the issuing company may restrict short selling;
- (ii) the lead underwriter will have knowledge about the take up of the rights issue and were it to trade that might constitute insider dealing;
- (iii) issuers as professional clients benefit from the requirement, under the Conduct of Business Rules (COBS), that the lead underwriter must act honestly, fairly and professionally in accordance with the best interests of its clients;
- (iv) the Senior Management Arrangements, Systems and Controls (SYSC) sourcebook requires lead underwriters to take all reasonable steps to identify and manage client conflicts of interest; and
- (v) our current rights issue disclosure regime requires disclosure of short positions at the time that the 0.25% threshold is breached.

4.19 Nevertheless, concerns about whether these constraints are adequate persist, particularly as the underwriting market has changed over recent years, potentially increasing the conflicts of interest between issuers and their underwriters. There has been a move away from the traditional underwriting model where entire issues were sub-underwritten by institutional investors. Now the position is that lead underwriters may retain a portion of the risk themselves and there has been an increasing involvement in sub-underwriting by other market participants such as hedge funds, who may have a greater propensity to mitigate their underwriting risks through short selling hedging strategies. In the changed underwriting market the question arises as to whether additional protections are required and we consider here the case for a ban on short selling by underwriters of right issues.

4.20 A ban on short selling by underwriters of rights issues would have the benefit of removing the potential conflicts of interest outlined above. However, such a policy would bring with it substantial costs.

4.21 First, a short selling ban on underwriters of right issues might reduce the number of firms offering underwriting services to rights issuers. Such a reduction in competition might result in a decrease in innovation and/or an increase in underwriting fees which would effectively increase an issuer's cost of capital. The loss of the option to hedge through short selling by underwriters of rights issues could also result in underwriters being exposed to an increase in market risk. This has the following potential effects:

- the increase in risk might be reflected in an increase in underwriting fees and an increased cost of capital for the issuer; and/or
- the underwriters might issue the shares at a greater discount than they might otherwise have; and/or
- the risks remain concentrated in one entity when the optimal risk allocation might dictate dispersion/diversification more widely throughout the system.

4.22 Given the existing measures to manage the underwriter/issuer conflict of interest, on balance we think that the costs of a ban outweigh the benefits and conclude that short selling by underwriters of rights issues (with certain limitations/restrictions) has a place to play as a legitimate risk mitigation technique. We consider such a ban would be excessive and unduly fetter the free and proper operation of the market and so do not propose implementing one.

Q6: Do you agree that we should not ban short selling by underwriters of rights issues (of the shares they are underwriting for the duration of the underwriting process)?

(f) Prohibit short selling where there is urgent need

4.23 The short selling risk that we were particularly concerned with when we introduced our temporary ban is the potential to employ abusive short selling strategies, possibly on the back of false rumours and/or in concert with others, to drive down share prices. As indicated in Chapter 3, listed firms are particularly vulnerable to such abuse in times of extreme market stress. Consequently, we consider it desirable to have the flexibility to activate a ban on short selling, if necessary at short notice, should we reach the view at any time that the circumstances justify doing so. Such flexibility would enable the market to reap the benefits of short selling in normal conditions but allow regulatory intervention where it is felt that short selling has the potential to exacerbate share price declines to an unacceptable degree in times of market fragility.

4.24 We consider that the costs and risks of not intervening in such circumstances would far outweigh the potential cost in terms of the adverse effect on market efficiency.

4.25 It was on this basis that we intervened in September 2008 though we thought it proportionate to limit our temporary short selling ban to a relatively narrow sector (UK banks and insurers). When we allowed the temporary ban to expire on 16 January 2008, we nevertheless made it very clear that we stood ready to reintroduce a prohibition should this be warranted, if necessary without consultation.

4.26 The assumption is that we would use these emergency powers only in relation to UK financial stocks because of confidence issues but would not rule out the possibility that in some circumstances it might be necessary to intervene in other areas. We are exploring what legislative changes might be necessary to provide us with long-term powers to make these emergency interventions.

Q7: Should we intervene to ban short selling on an emergency basis where necessary e.g. to combat market abuse and/or to maintain orderly markets?

Other constraints on short selling

4.27 A number of other methods can be implemented which, although not expressed in terms of an express ban on short selling (in one form or another), have the effect of preventing short selling if certain pre-conditions are met (or not met, as the case may be).

a. Circuit-breakers

4.28 A circuit-breaker involves a suspension of trading in a share whenever there is an abnormal rise or fall in its price. For example, if a share price fell by more than 10% in a single day, the exchanges could be required to discontinue trading in the stock for the rest of the day. Additionally, it is often suggested that such a suspension could routinely be accompanied by a temporary ban (e.g. three days) on the shorting of the share. Traditionally, the UK has not used circuit-breakers and has generally halted trading only to address temporary imbalances (as described below).

4.29 At the moment, the LSE for instance, operates automatic execution suspension periods (AESPs) which are designed to provide a pause in trading in the form of a short intraday auction. An AESP (lasting five minutes plus a random 0 to 30 seconds) occurs during continuous trading when an execution would otherwise take place at a level that exceeds the preset threshold for each security. There are two different thresholds that if breached, would cause an AESP; one is a 'static' tolerance based on the last auction price or 'dynamic' tolerance based on the last traded price. These tolerances can range from 5% to 25% for equities. For example, FTSE 100 securities have a static tolerance of 10% and a dynamic tolerance of 5%.

4.30 We consider that these arrangements are sufficient and that requiring additional regimes to be implemented would not be a proportionate measure.

Q8: Do you agree that no additional circuit-breakers should be introduced?

(b) 'Tick' rule

4.31 There are two types of 'tick' rule. An up-tick (or plus-tick) rule provides that the last sale must have been at a higher price than the sale preceding it before a share can be short sold. A zero-plus tick rule provides that if the last transaction price is unchanged but higher than the preceding different sale then the stock can be shorted.

4.32 Tick rules allow relatively unrestricted short selling in a flat or advancing market, but prevent short selling at successively lower prices. So they mitigate the risk that short selling is used to drive down share prices and prevent short sellers from accelerating a declining market by exhausting all bids at one price level, which in turn could cause successively lower prices to be established by long sellers. Their proponents see them as an important measure against manipulation and disorderly markets. Tick rules are operated in a number of jurisdictions.

4.33 The UK has no direct experience of tick regimes but the US Securities and Exchange Commission (SEC) carried out a comprehensive study into the impact of its up-tick rule which had been in operation for approximately 70 years. This exercise involved

significant debate, consultation and a pilot test and led to the conclusion that the SEC 'should remove price test restrictions because they modestly reduce liquidity and do not appear necessary to prevent manipulation'.¹⁰ Another key finding was that there was no evidence that there was an association between extreme price movements and the absence of a tick regime. So in 2007 the SEC abandoned its up-tick rule. We are aware that the removal of their up-tick rule has subsequently been criticised by some commentators in the light of the turbulent market conditions associated with the credit crunch which started in the middle of 2007. We are also aware that it has been argued that there would have been less volatility had the up-tick rule been kept.

- 4.34 Nevertheless, we share the view that tick rules provide limited protection against the negative effects of short selling, at most acting to temporarily decelerate share price declines. What does seem clear is that tick rules come at substantial cost if none of the necessary infrastructure is already in place. Most significantly, in order to be effective, tick rules require a marking (or flagging) regime to be operated by market participants, exchanges and clearing and settlement houses alike. Without such a regime, individual trades cannot be identified as short sales and, should circumstances require it, be blocked. In addition, they have the potential to eliminate legitimate short selling strategies, making the price formulation process more inefficient and reducing liquidity. Additionally, given the increasing fragmentation of trading venues and the absence of a consolidated tape, the cross-exchange consistent application of such a rule would carry with it substantial compliance costs. Finally, tick rules apply only to the cash markets and, as we have highlighted already, there are many ways of achieving the same effect by use of derivatives.
- 4.35 In conclusion we do not consider a 'tick' rule to be a proportionate measure and do not propose adopting one.

Q9: Do you agree that we should not introduce a tick rule?

Conclusion

- 4.36 We do not think any direct constraints on short selling are currently justified. Nevertheless, extreme market conditions could re-emerge where the risks posed by short selling warrant some form of emergency intervention, most likely in the form of a prohibition. So we will continue to monitor markets and stand ready to reintroduce a prohibition should this be warranted, if necessary without consultation.

Q10: Are there any other direct constraints on short selling that you think ought to be considered? If so, please provide information regarding their costs and benefits.

10 www.sec.gov/news/press/2007/2007-114.htm

5 Regulatory options: enhanced transparency

- 5.1 When we published our Policy Statement in January 2009 on the future of the temporary short selling measures, we concluded there were arguments in support of enhanced transparency of short selling. We said we would undertake a more detailed analysis of the various options and the issues they raise in the course of this discussion. This chapter provides an overview of the case for enhanced transparency of short selling and discusses the options for achieving this.
- 5.2 We should note at the outset of this discussion that we are aware that the different disclosure measures on short selling taken by various regulators around the world have raised issues for those firms that operate cross-border. We know that market participants have encountered problems and significant costs in having to comply with the variety of different regimes introduced in the relevant jurisdictions. We recognise that it could be beneficial if any enhanced transparency requirements for short selling are applied on as wide a basis as possible (at least in an EEA context) to avoid market participants having to cope with a multiplicity of regimes. In this chapter we are therefore deliberately not setting out a detailed blueprint for a disclosure regime as we consider that, if agreement can be obtained on the basic approach, it would be best to obtain the widest possible international consensus on the actual mechanics of the regime. Both the International Organization of Securities Commissions (IOSCO) and the Committee of European Securities Regulators (CESR) have established working groups on short selling and we are contributing to their deliberations.
- 5.3 We see a case and need for new statutory powers to underpin the kind of longer term proposals set out in this paper which would require continuing obligations in relation to a much wider range of securities and for purposes extending beyond the control of potentially abusive behaviour. Any such solution would of course be influenced by the international discourse. At the same time, we remain able to act on the basis of our existing powers and if necessary on an urgent basis where we consider the market or market sectors are being exposed or potentially exposed to abusive practices.

The case for enhanced transparency

- 5.4 When we last reviewed short selling in late 2002 / early 2003, it was determined that some additional transparency in this area would be beneficial, along with some

measures to deal with settlement problems. Of the transparency options that were proposed in the Discussion Paper (DP 17), we decided to:

- (i) increase transparency through publishing (by CRESTCo) data on settlement failures in individual securities and provision of aggregate data on stock lending; and
- (ii) warn investors (by the London Stock Exchange and virt-X) in circumstances where settlement problems were building in a particularly illiquid security.

5.5 While these steps have improved transparency to a certain degree, the markets have evolved since this work was undertaken: trading tactics have become more sophisticated and the use of derivatives has expanded significantly. We believe that consideration should now be given to increasing transparency in short selling further to account for changing market practices and to provide some re-balancing of the costs and benefits of short selling. Neither the FSA nor UK trading platforms currently require a sale to be identified as a short sale, which makes it difficult to determine exactly how much short selling is occurring. We use a mixture of settlement data and market intelligence to get an idea of the level of short selling in a particular stock, but this is imperfect and cannot be relied upon for complete accuracy.

The benefits of enhanced transparency

- 5.6 The case for improving the transparency of short selling is essentially two-fold. It would provide additional valuable information to the market. Applying new disclosure obligations could also act as a mitigant to some of the problems associated with short selling.
- 5.7 Short selling can convey a signal to the market that a firm is overvalued. If investors appropriately act on this signal, this improves the accuracy of the valuation of the stock in question. Disclosure of short positions therefore plays an important role in this process and market participants have indicated that there is value in increasing levels of transparency regarding short positions in stocks. Initial soundings that we have taken indicate that there is some interest in the market in there being greater transparency for short selling on an ongoing basis. A disclosure obligation enhances transparency by disclosing to the market the size of significant short positions and the identity of significant short sellers in the relevant stocks. This provides insight into short sellers' price movement expectations and can improve pricing efficiency if the information is correctly interpreted. More information about the opinions that investors hold on a particular stock would be available to all investors.
- 5.8 A requirement to disclose short positions held could partially address some of the issues associated with abusive short selling. It would help in detecting short selling that is being used to commit market abuse. As the need to tackle market abuse remains one of our top priorities, any mechanism that might help reduce its incidence should be considered seriously.
- 5.9 We are also mindful that in certain conditions investors may sometimes over-react to abrupt price changes. Greater transparency through disclosure could help identify

when this is occurring and, crucially, give us more advance warning of conditions in which we may have to consider regulatory intervention.

- 5.10 Similarly, disclosure obligations can also act as potential decelerators and/or deterrents to those considering aggressively taking large short positions, which might contribute to disorderly markets, particularly in times of market turbulence. They would encourage market participants engaging in significant short selling to review their trading strategies as their positions approach the applicable disclosure threshold and would discourage further short selling by those market participants reluctant to disclose their positions. The benefits of reducing disorderly markets and abusive short selling can outweigh the costs associated with impaired market efficiency which may occur through any reduction of liquidity.

The costs of transparency

- 5.11 However, we recognise that there are also costs to increasing transparency. If any new transparency obligations (whether aggregate or individual) had the effect of significantly reducing the overall level of short selling, this could have an impact on price formation and liquidity in general. If short sellers adjusted their behaviour to stay under any disclosure limits, this would reduce the overall informational benefits. Individual market participants may also suffer as a result of constraints on the scale of their short selling due to their fears of exposing their positions and risking being squeezed as a result.
- 5.12 Depending on how disclosures are made, another indirect cost could be the possible ‘herding’ effect of other short sellers following a ‘big-name’ short seller. When an influential market participant disclosed his significant short position to the market, others could follow him and take out large short positions purely on trust. This has the potential to turn a downward price spiral into a ‘self-fulfilling prophecy’. This may also occur with publication of information about the level of aggregate short interest in a particular stock.
- 5.13 Finally, there are also the direct costs to firms that conduct short selling (staff hours needed to comply, funds needed to set up and maintain disclosure systems, and so on) in implementing and operating the systems in order to comply with new obligations. These would be magnified if they were faced with different obligations in different jurisdictions.

Conclusion

- 5.14 We believe that on balance the benefits of disclosure obligations outweigh the costs. Experience of the temporary short selling measures suggests that at least some short sellers are not deterred from holding positions above disclosure thresholds. And from the evidence available, the temporary ban on creating/new or increasing existing net short positions in financial stocks did not indicate that there had been any severe market disruption, albeit there had been an effect on liquidity and spreads. Moreover, to some extent the costs of increased disclosure are inevitably the obverse of the benefits. If disclosure provides a deterrent to significant aggressive short selling, then the benefits in reducing the risk of disorderly markets and potential for market abuse would flow from the constraints on the scale and timing of short sales. We recognise,

however, that the extent of the costs and benefits do depend on the method of disclosure chosen and these are considered below.

Q11: Do you agree, in principle, that the benefits of transparency around short selling outweigh the costs?

The scope of disclosure obligations

- 5.15 The current temporary disclosure measures apply only to UK financial sector stocks, although there is also a separate regime applying to stocks in which there are rights issues. Clearly, one of the key issues is whether any permanent disclosure obligations should apply to all stocks and their related instruments or merely a specified sub-set. We consider that the informational benefits from greater transparency of short selling apply across the board. Similarly, we consider that it is not possible to predict which market sectors might be vulnerable in future to abusive behaviour or disorderly markets through short selling, albeit that financial sector stocks can in some circumstances be especially vulnerable to a loss of confidence as a result of precipitous price falls.
- 5.16 Accordingly, we believe that extending the disclosure obligations to all stocks and their related instruments, as opposed to taking a sector-specific or company-specific approach is not only the preferred option but the logical option. This would help ensure a level playing field for issuers and reduce the likelihood of certain stocks being short sold as a proxy for other stocks if there is a differential application of transparency rules across the market.
- 5.17 Although we believe it is appropriate to extend the scope of any disclosure obligations across all sectors, we continue to believe it should be restricted to UK incorporated issuers as it would be more appropriate for an overseas regulator to take action in respect of short selling where the issuer is a non-UK incorporated issuer and/or the behaviour occurs overseas.

Q12: If disclosure obligations are introduced, do you agree that those obligations should apply to all equities and their related instruments rather than be limited to certain sectors or companies?

Q13: Do you agree that the disclosure obligations should be limited to the stocks and related instruments of UK issuers?

Types of disclosure requirement

- 5.18 There are generally two broad approaches that could be used to increase transparency in short selling (although it should be noted that they are not necessarily mutually exclusive):
- (i) disclosure of aggregate short positions for a particular security;

- (ii) disclosure of significant individual short positions either privately to the regulator or publicly to the market as a whole.

Both approaches provide benefits, but they are quite different in terms of costs to implement and maintain, as set out in the sections below.

Option 1 – Disclosure of aggregate short positions for a particular security

- 5.19 Disclosure of aggregate short positions would start with a client's short sales having to be flagged as such at the broker level. These would then be passed up to the trading platforms for further aggregation at the member level. The platforms would then pass their aggregated data to a different entity (whether to us or a private sector data consolidator) for further aggregation. The aggregate level of short interest in the various stocks would then at some point be disclosed to the public.
- 5.20 Our informal soundings in the market have revealed that information about the aggregate short position in a single stock could help the market judge the extent to which short selling is driving down the price of that stock and also the extent of the overhang of prospective buy orders when short sellers decide to close their positions. Indeed, some market participants are of the view that knowing the aggregate number of shares that have been sold short for a particular stock is more important than knowing who actually holds those short positions. It has also been argued that the aggregate disclosure regime has the benefit of not revealing information about the positions of any individual market participants.
- 5.21 We recognise that some other jurisdictions do have aggregate short position reporting obligations (often, though not always, in conjunction with a 'tick' regime). For example, the US has had such obligations in place for a number of years and all market participants' systems have grown over time to accommodate its requirements. In the US the aggregated information is published to the market but with a time lag which may limit its usefulness.
- 5.22 However, there are questions as to whether aggregated short position disclosures across the various stocks would provide significant additional value in the UK environment. First, equivalent information is already available to a large degree via stock lending data, although we acknowledge that this is an imperfect proxy for the level of short selling. As such, it may be questioned whether the benefits of producing more precise aggregated data would outweigh the costs involved (see Annex 3).
- 5.23 There is also the issue of how much more precision would actually be obtained by implementing such a regime. The mechanics of aggregation introduce inherent imperfections to the data. For instance, when an order is placed to sell a share, the order placer has to know whether it is a short sell or a long sell. This may not be straightforward for fund managers or other large entities that hold shares in different parts of their organisations, and one arm of the organisation may hold long positions in a certain stock while another arm may hold short positions. It may not be clear, overall, whether a sale is a short sale or simply the reduction of a long position. Similarly, questions might be raised about whether an order placer was being truthful when they placed the order, especially if they were trying to hide the fact that a sale was a short sale.

5.24 In addition, marking and aggregating short positions across all types of instrument would place a substantial cost burden on both market participants and on the entity that aggregated the short positions. For market participants the costs would come from changing their systems so that every sale was flagged as either a short sale or a long sale. Given the number of brokers who offer direct market access and automated trading facilities, we believe that the addition of flagging facilities for all of these different types of order execution would be substantial. The quantitative estimates provided by three large UK stock brokers show an average one-off compliance costs of £750,000 per broker (see Annex 3). Moreover, there would be the costs of the market-wide aggregation and disclosure of the information. The survey we have carried out with a selection of market participants and infrastructure providers indicate that the costs of implementing a marking and aggregation regime would be extremely expensive and far higher than those involved in disclosure of significant individual short positions.

Conclusion

5.25 While we recognise that there are some arguments in favour of disclosing the aggregate short interest in stocks, on the basis of the information available to us so far, we consider that the costs would far outweigh the advantages and we therefore think this is less preferable than pursuing the disclosure of individual short positions.

Q14: Do you agree that the costs of introducing a regime based on disclosure of aggregate short positions would outweigh the benefits?

Option 2 – Disclosure of significant individual short positions either privately to the regulator or publicly to the market as a whole

5.26 Disclosure of significant individual short positions would follow similar principles to the temporary disclosure obligations that we have introduced for significant short positions in UK financial sector stocks. The obligation to make a disclosure would start when a minimum threshold was reached. Further disclosures would then be required if and when the position reached other thresholds, with a final disclosure being necessary if the position fell below the minimum threshold to show that a disclosable position was no longer held.

5.27 This approach does not require short sales to be marked as such because disclosure is only necessary at or above a certain threshold. While individual position holders are required to have the systems necessary to calculate their overall short position and then disclose it if it reaches the threshold, our assessment is that these direct costs will be significantly less than those associated with an aggregate short position regime. However, it is worth noting that the system relies on the short position holder accurately reflecting and disclosing their true position, making it more difficult to monitor compliance with the obligations. This in turn means costs for us to ensure compliance with the obligations.

Private or public disclosure of significant individual short positions?

- 5.28 Some of the benefits of the disclosure of individual significant short positions apply to either disclosure only to the regulator or to the market. In both cases the disclosure may facilitate detection of short selling that is connected to market abuse. It enables the regulator to identify very quickly who holds the significant positions and as necessary follow up any enquiries with that market participant. The disclosures may also help identify unusual short selling activity potentially giving rise to price amplification effects (if markets ‘over-react’ to the negative price signal inherent in short selling), which in turn could help us determine whether intervention is required.
- 5.29 In terms of direct costs to market participants of having to implement and operate the necessary systems to comply with the disclosure obligations we do not see significant differences between the two alternatives. We consider that the bulk of the costs would be incurred in calculating the participants’ short positions to determine whether there was a disclosure obligation. The incremental cost of having to make a disclosure to the market as opposed to just the regulator is not a major factor.
- 5.30 The question is therefore whether the indirect costs of requiring public disclosures outweigh the benefits. We acknowledge that some market participants would prefer for any disclosures to be done privately to the FSA, arguing that public disclosure might have potentially harmful commercial effects. They are concerned that disclosures might make themselves vulnerable to being squeezed by competitors when it comes time to cover their short position.
- 5.31 Against this, without any form of public disclosure, much of the benefit of disclosure as a potential constraint on aggressive large-scale short selling leading to disorderly markets would be lost. In addition, the informational benefits to the wider market of having transparency of information on significant short positions would also be lost. We note that public disclosure is also consistent with the Disclosure and Transparency Rule (DTR) requirements for major shareholdings.
- 5.32 We have considered whether there might be some middle way whereby disclosures are made on a private basis to the FSA initially and made public at a later date. However, the same basic issues still arise under this model in deciding when the data would be made public. The greater the delay, the less the potential indirect costs to participants whose positions were disclosed but equally the lesser the benefits to the market in terms of informed decision making and constraining behaviour which might threaten orderly markets.
- 5.33 For the sake of completeness we should also note that we see little value in a regime which required disclosure of individual positions to the regulator and then us publishing aggregate information about those positions. It would only give partial and arguably misleading information about the extent of short positions in individual stocks.

Conclusion

- 5.34 On balance, we consider that the benefits of having public disclosure of significant short positions outweigh the costs and that the short selling disclosure regime should be on this basis.

Q15: Do you agree that benefits of public disclosure of significant short positions outweigh the costs?

Gross or net position disclosure

- 5.35 The current short position disclosure obligations and the rights issue disclosure obligations both require disclosures of net positions. This typically has the effect of reducing the size of the disclosure a person makes. The DTR 5 disclosure obligations, on the other hand, require the gross disclosure of voting rights held.
- 5.36 A benefit of a net regime is that it shows a person's overall exposure to an issuer which may be more useful than a gross figure. A gross position disclosure regime might be misleading – for example, if the holder of a disclosed gross short position also had a similar-sized long holding so their net position was in fact flat. Since we are not envisaging that the short disclosure thresholds should be symmetrical with those for long positions (see below), any long position in a stock would be unlikely to be subject to disclosure. (We believe there would be very few occasions when the holder of a disclosable short position would also have a long position above the DTR thresholds and in these cases the long position would be apparent to the market regardless of the basis on which the short disclosure was required.)
- 5.37 An alternative would be to require disclosure of both gross and net short positions but we question whether this would provide significant additional benefit as compared to a net only regime. Certainly, when we consulted on extending the temporary disclosure requirements for positions in financial sector stocks, no respondent argued that we should change to an obligation that only required the reporting of gross positions.

Q16: Do you agree that an individual significant short position disclosure regime should be on a net basis?

Disclosure thresholds

Initial disclosure trigger

- 5.38 Identifying a disclosure threshold that would generate meaningful information is important. If the disclosure threshold is set too high then the market may not receive enough information to help it make informed investment decisions. If the threshold is set too low then the compliance costs may be prohibitive. In addition, a high number of disclosures of positions that are not considered by the market to be meaningful are of questionable value. The following discussion is on the basis that a net disclosure regime is adopted. Higher thresholds would be warranted if disclosure was on a gross basis.
- 5.39 We have considered whether there should be different thresholds for different categories of security on the grounds that what might constitute a significant position in one stock might be unimportant in another. In general, we do not favour a differential approach.

This would make the regime more complicated and we are also influenced by the fact that the major shareholdings disclosure regime does not draw such distinctions. Hence, with one exception for stocks in rights issues (see below), we would propose a general regime applicable to all UK stocks traded on prescribed markets.

- 5.40 Some market participants have told us that they favour an exact mirror of the disclosure obligations that already exist for long positions held in certain stocks. These obligations require the disclosure of a long position when it reaches 3% of a company's issued share capital and further disclosures for each 1% that the long position increases. The obligations also include disclosures when those 1% thresholds are then reversed and the long position is reduced by that amount.
- 5.41 However, the long disclosure regime is not attempting to address the same risks as a short disclosure regime. A short disclosure regime should attempt to mitigate the risks posed by short selling to orderly markets and/or market abuse. In contrast, a long disclosure regime attempts to enhance transparency regarding who controls a company (by providing information about the voting rights people hold in companies). The 3% trigger threshold therefore needs to be seen against the background that all the shareholders may exercise their voting rights. A short position needs to be considered against the amount of market turnover in the security – which will normally be significantly less than the issued share capital. The average traded daily volume (compared to shares outstanding) is approximately 0.55% for restricted stocks and approximately 0.7% for the FTSE350. We therefore consider that the threshold for the size of a net short position to trigger a disclosure requirement should be considerably lower than that in the DTR regime.
- 5.42 Our analysis supports that theory; it shows that in practice short positions (in UK financial sector stocks at least) are very rarely greater than 3%. We do not favour mirroring the long disclosure obligations as we believe that 3% is too high for short position disclosures.
- 5.43 When we introduced the temporary short selling measures, the disclosure obligations were based on a minimum amount of 0.25% of the issued share capital of a company. Under the circumstances we believed that this was an appropriate amount to disclose as the obligations applied to a single sector. If we now move to disclosure obligations for short positions in all UK stocks then this amount may not be an appropriate level as there are varying degrees of size and liquidity to consider. Our own analysis shows that when firms made their first short selling disclosures to the market under the temporary measures, the mean short position size was approximately 1.05% and the median short position size was approximately 0.51%, indicating that these sizes may be meaningful to the market. This analysis was, of course, based on the current measures, which apply only to UK financial sector companies and require short positions to be calculated on a net basis – meaning that long positions can be offset against short positions.
- 5.44 Taking into account variations in the size of companies' market capitalisation, liquidity in the markets in companies' shares, and the sizes of positions that would be disclosed, we believe that 0.50% of a company's issued share capital could represent an appropriate threshold for triggering disclosure obligations for net short positions

held. Once a short-position fell below 0.50% then a further disclosure would be necessary to alert the market to the reduction in the position.

- 5.45 However, we have previously noted the desirability of seeking as wide as possible an international consensus on the short selling regime. The level of the threshold is a key feature of any disclosure regime and we would be prepared to consider alternative levels if this was required to achieve a consensus.

Q17: Do you agree that 0.50% would be an appropriate threshold for triggering disclosures under a net short position regime? If not, what alternative would you propose and what are your reasons for this figure?

Subsequent trigger points

- 5.46 If it is to be of value, a disclosure regime needs to track changes in significant short positions as well as identifying when they reach and fall below the initial disclosure threshold. The subsequent disclosures should be based on thresholds which involve a meaningful change in the size of the position otherwise the disclosures will be of limited additional value while imposing extra compliance costs on those subject to the disclosure requirements. On the other hand, too wide bands would equally reduce the usefulness of the disclosure regime.
- 5.47 In light of this we consider that, as with the current temporary regime for UK financial sector stocks, a banded approach to subsequent disclosures should operate in conjunction with the initial threshold. Once an initial net position disclosure has been triggered, no further disclosures should be necessary until the position has increased by a set minimum amount. The same would apply if a short position then subsequently reduced. If we have an initial threshold of 0.5%, we think that the bands should be fixed in increments of 0.1% (as applied in the temporary measures). However, again this is an issue where it would be desirable to achieve an international consensus.

Q18: Do you agree that a banded approach to disclosure should apply in conjunction with a minimum threshold? If so, do you agree that such a banded approach should be based on bands of 0.10% of a company's issued share capital?

Exemptions to disclosure obligations

Market makers

- 5.48 Both our existing short position disclosure regimes contain exemptions for market makers. For the purposes of these measures, we have defined market maker¹¹ as

11 For additional information on our short selling market maker exemption see our short selling FAQs at http://www.fsa.gov.uk/pubs/other/Short_selling_FAQs_V2.pdf.

being an entity that, ordinarily as part of their business, deals as principal in equities, options or derivatives (whether OTC or exchange-traded):

- (i) to fulfil orders received from clients, in response to a client's request to trade or to hedge positions arising out of those dealings; and/or
- (ii) in a way that ordinarily has the effect of providing liquidity on a regular basis to the market on both bid and offer sides of the market in comparable size. Trading in circumstances other than genuinely for the provision of liquidity is not exempt.

5.49 Market makers play an important role in the UK's financial markets through the provision of liquidity by offering two-way prices on an ongoing basis. This activity is vital to the efficient and effective running of our markets. We therefore accept that in any general disclosure regime based on individual short positions they would need an exemption.

5.50 The exemption would cover market makers only when, in the particular circumstances of each transaction, they are acting in that capacity. Market makers are afforded a certain level of flexibility in anticipating sales as long as this activity is genuine market making in line with its existing general levels of business. Consequently, we would not expect market makers to hold significant short positions, other than for brief periods. Proprietary trading where a firm is acting more as an investor or trader rather than liquidity provider, would not fall within the scope of market making and would not be exempt.

5.51 We recognise that, although there are higher thresholds applicable to them in the long position disclosure regime, market makers are not entirely exempted from the disclosure requirements. However, given that short positions do entail more risk for market makers, we think that their exemption under the short disclosure regime should be an absolute one.

Q19: If long-term disclosure obligations are introduced, do you agree that market makers should be exempt from those obligations when they are acting in the capacity of a market maker? If so, do you have any views on the definition of market maker that should apply for the purposes of such an exemption? Do you also agree that this should be an absolute exemption?

Disclosing short positions during rights issues

5.52 In June 2008 we introduced a short selling disclosure obligation for short positions that were held in companies undertaking rights issues. The obligation required the one-off disclosure of a net short position of 0.25% or above. The obligation covers any behaviour which occurs in the UK or is in relation to shares admitted to trading on a prescribed market.

5.53 The principal concern for introducing the disclosure regime was that short sellers can deliberately target the share price of such companies to drive it below the price at

which the new securities are being issued – if this happens, the shareholders are unlikely to take up their rights. Although rights issues may typically be underwritten, making funding for the issuer more certain, the underwriters are typically not natural long-term holders of the shares. Thus a widespread failure by shareholders to take up the rights is likely to result in a large block of shares being disposed of cheaply on the market by the underwriters, further depressing the price. This will result in an overhang of stock that could be bought cheaply by short sellers and used to close out short positions at a profit. The disclosure obligation we introduced is intended to mitigate the potentially abusive effects of short selling by increasing transparency.

- 5.54 It is important that the rights issue mechanism is able to facilitate the pre-emptive raising of capital at the correct economic price and without distortion. Reducing the potential for abusive short selling in rights issue periods may increase the likelihood of issuers raising capital by pre-emptive means rather than via other methods such as placings, which may tend to dilute existing shareholders' holdings.
- 5.55 We continue to believe that companies undertaking rights issues are more vulnerable than the generality of securities to short selling and we have therefore reviewed whether there may need to be more stringent disclosure thresholds in the case of rights issue stocks. We note as an analogy that there special disclosure requirements in relation to positions in stocks in offer periods (both offeror and offeree).
- 5.56 We believe that due to the very nature of the situation in a rights issue context, the disclosure threshold should remain the same as it is now, 0.25%. Such an approach would also be consistent with our analysis which shows that the (mean) average percentage disclosure notification was substantially lower for short selling disclosures made under our rights issues disclosure regime relative to those made under our temporary financial disclosure regime. However, as regards ongoing disclosure obligations, we consider that the same banded approach as for stocks generally is appropriate – i.e. 0.10%. Again, a final disclosure would need to be made if the position fell below the minimum 0.25% threshold.
- 5.57 There are compliance costs for providing disclosures, which would be similar in nature to the disclosure costs identified in Annex 3. We are also mindful of the reduced liquidity provision and lower price efficiency if disclosure actually reduces the expected returns to short sellers who first build up short positions and then buy the new shares to cover their short positions.
- 5.58 Another way in which some of the risks generated by short selling to rights issues might be managed is through the development of industry guidance. In its report to the Chancellor of the Exchequer, the Rights Issue Review Group (RIRG) concluded¹²:

‘There is scope for the FSA to facilitate the development by market participants of non-prescriptive guidance on the issues that an issuer could usefully consider when embarking on a capital raising by way of a rights issue.’

12 See paragraph 9.28 of the RIRG's report.

5.59 We are of the view that guidance developed by market participants could be used to clarify short selling expectations between underwriters and rights issuers. We are taking this work stream forward.

Q20: Do you agree that maintaining the current disclosure obligation of 0.25% of a company's issued share capital for rights issue situations is appropriate?

Q21: Do you agree that the ongoing disclosure obligations should be the same as the general regime?

Credit default swaps (CDS) and short selling

5.60 We recognise that there is a correlation between CDS spreads and equity prices. As such, traders might attempt to manipulate CDS spreads in order to potentially profit from short equity positions. For example, traders could take out a short position in a firm's stock. They could then try to widen that firm's CDS spreads through aggressive purchases. The wider CDS spread could then be reflected in a fall in the firm's share price and thus creating a profit on their short equity position.

5.61 However, this strategy could constitute market abuse in the form of market distortion and/or misleading behaviour – and we could police and detect such abusive behaviour. This is because we already receive CDS transaction reports and under our proposals we would receive disclosures of significant short positions. So we would be able to monitor those parties that are active in both markets and thereby identify those who might be trading abusively.

5.62 It has also been suggested to us that the effectiveness of the short selling prohibition was limited by not covering CDS. However, evidence from the period of the emergency regime does not support that proposition. A sample from the UK financial sector stocks subject to our temporary ban showed that CDS spreads fell whilst the ban was in place. Market participants canvassed on this subject also advised us that they did not consider that such regulatory avoidance strategies were being employed.

Q22: Do you consider that any further measures are necessary in respect of CDS?

Literature review on short selling

Introduction

1. This literature review aims to provide thoughts on the potential effects of short selling. We give an overview of studies that investigate the potential positive and negative effects of short selling (Sections 2 and 3). We also look at a few empirical evaluations of the consequences of recent US and UK short selling constraints (Section 4). Finally, we survey some studies on the effects of disclosure requirements; although these are not in relation to short selling we think that the lessons learned are nevertheless of relevance (Section 5).

Studies on the positive effects of short selling

2. Economic theory suggests that short selling can contribute to the accurate valuation of stocks. If investors are constrained from short selling, their unrevealed negative information will manifest itself only once the market is about to drop. Miller (1977) claims that short selling restrictions tend to increase the magnitude of overpricing relative to fundamental value. Diamond and Verrecchia (1987) show that the speed of price adjustment to private information will instead be reduced if investors take account of the effect of short selling restrictions when forming ‘rational expectations’ about future stock prices and so do not systematically overvalue stocks. Finally, Bai et al (2006) argue that stock prices may actually be lower with short selling restrictions because investors demand a higher risk premium. The empirical studies reviewed below shed some further light on these issues.
3. A related point is that short selling can contribute to liquidity. Liquidity is essentially the ease of completing a trade. In the absence of short selling restrictions, not only will short sellers themselves find it easier to trade (i.e. to sell stocks despite not yet owning them), but so will their trading partners, i.e. those from whom they borrow stocks in advance of short selling and those from whom they purchase shares later on to ‘cover the short’. Short selling is also a common hedging strategy, thus making transactions attractive that would otherwise be too risky.

The information content of short sales and efficient pricing

4. Senchack and Starks (1993) examine the effect of announcements of increases in short positions on prices using data for New York Stock Exchange (NYSE) and American Stock Exchange (ASE) companies whose short position figures are published in *The Wall Street Journal* in the period 1980-1986. Stocks with unexpected increases in short positions are associated with small negative abnormal (i.e. greater than expected) returns for a short period after the announcement date. This is evidence that announcements about increases in short positions contains negative information about a stock which is then reflected in prices. The authors also divide their sample into optioned and non-optioned stocks. They find that the short-term negative abnormal returns are less negative if the firm has tradable options. A likely explanation is that options can reduce the cost of establishing short positions and that options trading is publicly observable, reducing the information contained in an unexpected announcement of increases in short positions.
5. Asquith et al (1995) examine whether heavily shorted stocks subsequently exhibit negative returns. They analyse data on monthly short positions and returns for all NYSE and ASE stocks over the period 1976-1993. They are able to demonstrate a strong negative relation between short positions and returns, both during the time the stocks are heavily shorted and over the following two years. These results suggest that short positions conveys negative information about a stock which feeds into its valuation.
6. Desai et al (2002) assess the relationship between the level of short positions and stock returns of issuers listed on the National Association of Securities Dealers Automated Quotations exchange (NASDAQ) using data for the period 1988-1994. They find that heavily shorted firms exhibit significant negative abnormal returns even after controlling for other factors. The negativity of returns is positively related to the level of short positions. Heavily shorted firms are also more likely to delist from NASDAQ than firms with otherwise similar characteristics.
7. Ofek et al (2003) document the role of short selling constraints in the DotCom bubble. They demonstrate substantial practical short sale constraints for Internet stocks during the bubble. They also show that the burst of the bubble coincided with the expiration of lock-up agreements. These agreements prohibit insiders and other pre-IPO shareholders from selling any of their shares for a specified period and so their expiry implies a loosening of short sale constraints. The authors suggest this contributed to the subsequent price adjustment.
8. Bris et al (2007) analyse the cross-sectional and time-series information from forty-six equity markets around the world for the period 1990-2001 to assess whether short sales restrictions affect market efficiency. They use two measures of market efficiency, the relative co-movement of individual stock returns with the market (lower in more efficient markets as more information about individual stocks is available) and the cross-autocorrelation between market returns and individual stock returns with a one week lag (also lower in more efficient markets as information is incorporated into prices more quickly). They find that in countries in which short selling is feasible and practised, both measures indicate marginally but significantly

higher efficiency. To address concerns about unobservable differences between international markets, Bris et al also carry out an event study to analyse changes in short sales regulation in five countries in their sample (Hong Kong, Malaysia, Thailand, Sweden, Norway). In line with their earlier results, they find that removing restrictions on short sales leads to gains in efficiency.

9. In the absence of data on short selling, stock lending is often used as a – albeit imperfect – proxy for short selling. Payne (2008) investigates the relationship between stock lending in the UK and later negative abnormal returns in the period September 2003 to December 2006. He constructs zero-investment portfolios that are negatively related to the level of stock-lending. His preliminary finding is that portfolios that are constrained to contain only mid-cap stocks yield significant returns close to 10% a year. By contrast, portfolios constructed solely from blue-chip UK stocks generate smaller and statistically insignificant returns. This suggests that stock lending is negatively related to later negative abnormal returns, but only for less liquid stocks. Payne considers different possible explanations, including the greater costs inherent in establishing and maintaining loans for mid-cap stocks and the greater signalling effect of stock loans in mid-caps due to a less active derivative markets for these stocks.
10. Boehmer et al (2008a) examine NYSE short sale order flow data in the period January 2000 to April 2004 to assess which short sellers are informed. They show that risk-adjusted returns for heavily shorted stocks are lower than liquidly shorted stocks, suggesting that short sellers as a group are informed. They also divide the data according to account type (individual, institutional program, institutional non-program, member-firm program, member-firm non-program) and find that institutional non-program shorts tend to be the most informed. Finally, they stratify the data on the basis of order size. Their results suggest that investors shorting fewer than 500 shares are less informed while investors shorting more than 5,000 shares are very well-informed.
11. In summary, the empirical literature tends to confirm, with some qualifications, the theoretical proposition that short selling allows negative expectations about share price developments to feed more directly into the actual share price and thus contributes to efficient pricing. The research by Bris et al (2007) is perhaps the most persuasive in this regard. Other studies which merely document the relationship between shorting and subsequent negative returns are open to different explanations (including some of the possible negative effects of short selling discussed below).
12. If short selling contributes to price efficiency then, by implication, bans on short selling could reduce pricing efficiency. By contrast, aggregate disclosure requirements, depending on their design, may help investors to take advantage of the information content of short positions more quickly.

Short selling and liquidity

13. Other research we reviewed on the implications of short selling restrictions for liquidity are summarised in Section 4 below. Bris (2008) in particular suggests that the SEC 15 July 2008 Emergency Order (which required anyone completing a short sale

in a list of 19 financial services stocks to arrange beforehand to borrow the securities and deliver them at settlement and thus effectively prohibited ‘naked shorting’ of these stocks) was associated with a decline in the liquidity of these stocks.

14. In Section 5, we also review some research (not directly related to short selling) that may help to assess the possible effects of short selling disclosure requirements on liquidity.

Studies on the negative effects of short selling

15. Below, we review the empirical literature that addresses the negative impacts of short selling that are addressed in the main body of our DP.

Short selling and market instability

16. Bris et al (2007) assess the empirical significance of concerns about the destabilising effects of short selling. They analyse cross-sectional and time-series information from forty-six equity markets around the world for the period 1990-2001. They look at both the frequency of extreme negative market returns and the skewness of market returns. Their results suggest that short sales do not affect the frequency of extreme negative returns. However, without short selling restrictions, extreme returns become more negative. To better control for cross-country variations, Bris et al also conduct an event study of the impact of removals of short selling restrictions in five countries. Once short selling is permitted and practised in these countries, the negative skewness of market returns increases marginally.
17. We found no other research on the hypothesis that short selling may amplify price swings. This may be because this hypothesis is difficult to separate empirically from the hypothesis that short selling conveys negative information about stocks to the market and thus contributes to efficient pricing. Both hypotheses are consistent with the observation that increased short selling is followed by negative abnormal returns.

Short selling and market abuse

18. Christophe et al (2004) examine short sales transactions in the five days leading up to earnings announcements of 913 NASDAQ-listed firms in the autumn of 2000. They hypothesise that if short sellers possess private information, short selling activity should increase prior to negative earnings announcements and increase before positive earnings announcements. They carry out different tests on the connection between short selling ahead of announcements and share price changes after the announcement, including multivariate regression analysis and a non-parametric examination of the subset of cases where short selling activity is unusually high or low. These tests confirm that there is a negative relationship between short selling prior to an announcement and the post-announcement change in share prices and that abnormally large changes in short selling are often followed by substantial post-announcement share price movements. The authors also explore whether short sellers rely on fundamental analysis of publicly available data when choosing their targets. In general, short sellers appear to be more focused on stocks with low book-to-market valuations or low standardized unexpected earnings. However, information about the upcoming announcements of the individual firms is likely to

be a more significant driver of pre-announcement levels of short selling. The authors conclude that more extensive and timely disclosures of short selling activity could increase the amount of information available to investors and thereby improve market efficiency and the orderliness of movements in security prices.

19. The above study provides some evidence on the significance of informed short selling ahead of announcements of price-sensitive information to the market.

Rights issues and short selling

20. Safieddine et al (1996) examine the extent of short selling around seasoned equity offerings¹, the relationship between short selling and issue discounts and the effects of the SEC's adoption of Rule 10b-21 in 1988, which forbade short sales where the short position is covered by purchasing shares from the new offering where the short position was established between the filing of the registration statement and the beginning of the distribution of the offering. They look at seasoned equity offers by NYSE and Amex-listed firms over the period 1980-1991. They find that seasoned equity offers are preceded by abnormally high levels of short selling. They also show that higher levels of short selling are associated with reduced proceeds from the equity issue. Finally, they present evidence that Rule 10b-21 constrained short selling activity prior to seasoned equity offerings and therefore reduced their cost.
21. Kim et al (2004) also investigate the effects of the introduction of Rule 10b-21, using a larger sample of US equity offerings in the period 1983 to 1998. They observe significant seasoned equity offer discounts starting in 1988, the year the new rule went into effect. They also provide evidence that ex ante uncertainty and seasoned equity offer discounts are related. They conclude that the rule may have reduced how informative seasoned equity offer prices are and thus prompted greater discounts, especially in the presence of uncertainty.
22. Autore (2006) analyses price discounting of traditional and shelf-registered US discounting seasoned equity offerings in the period 1982-2004. Shelf-registered seasoned equity offerings, unlike traditional seasoned equity offerings, were exempt from Rule 10b-21. Autore uses the shelf-registered offerings as a control group to show that Rule 10b-21 did not lead to an increase in seasoned offer discounts. He concludes that increased discounts of seasoned equity offers are largely due to an increase over time in the share price volatility of issuers and greater pre-offer price uncertainty.
23. Henry et al (2008) examine whether short selling around seasoned equity offerings reflects informed or manipulative short selling. The authors use daily short-selling data for a sample of US seasoned equity offers in the period 2005-2006. They find that higher levels of pre-issue short selling are related to larger issue discounts and later post-issue price recoveries, evidence in favour of manipulative short selling. Moreover, these results are significant for the non-shelf registered but not for the shelf-registered offerings, which are less susceptible to manipulative trading as potential investors are generally not aware of a shelf offering until immediately prior to its occurrence. The authors also show that the SEC Rule 105 (which replaced and relaxed Rule 10b-21,

1 'Seasoned equity offers' include but are not restricted to rights issues.

prohibiting traders from covering short sales made within five days of the offering with shares obtained in the offering rather than extending to any short sales established between the initial filing and the offer date) constrains some, but not all manipulative trading. Henry et al suggest that their results differ from those of previous studies because they rely on daily rather than monthly short position data.

24. In summary, the studies on the impacts of short selling on seasoned equity offerings (including rights issues) reach differing conclusions. However, two of the studies do find that short selling can negatively impact seasoned equity offerings. We consider that one of these could be accorded extra weighting due to the use of a more robust measuring methodology (daily rather than monthly data).

Empirical evaluations of recent short selling restraints in the UK and the US

25. A few studies (in addition to those already reviewed above) specifically evaluate recent short selling restrictions in the UK and the US.
26. A recent study by Marsh and Niemer (2008) is of particular interest as it evaluates recent short selling restrictions adopted in a number of countries, including the UK. Using stock return data over the period 1 January 2008 to 31 October 2008, they calculate a number of metrics that can help to assess the impact of short selling restrictions, including mean and median daily returns, their standard deviation, skewness and kurtosis, and their first order autocorrelation and the goodness of fit for the market model of daily returns. They compare these metrics for companies subject to the restrictions and companies not subject to the restrictions in a particular country, for companies subject to the restrictions before and after they were imposed in a particular country, and for similar companies subject to different short selling restrictions in different countries. They find no strong evidence that restrictions on short selling in the UK or elsewhere changed the behaviour of stock returns. They also detect no sign that stock market efficiency declined as a result of the restrictions.
27. Clifton and Snape (2008) focus on the liquidity effects of the FSA's decision on 18 September 2008 to (temporarily) ban short selling in selected financial stocks. They examine changes in a number of liquidity measures (bid-ask spread, bid and ask depths, number of trades and volumes traded, and number of shares transacted over the number of shares on issue) for a sample of stocks on the restricted list and a sample of control stocks also included in the FTSE 100 Index. They find that after the temporary ban, stocks on the restricted list have lower liquidity compared to the control stocks and after controlling for market-wide changes such as increased volatility.
28. Bris (2008) assesses the effects of the SEC 15 July 2008 Emergency Order, referred to in paragraph 13 above. He compares stock returns, firm fundamentals, measures of market quality and pricing efficiency of the affected financial stocks with those of a matching sample of financial stocks from the US and abroad with a US listing. He finds that while the share price performance and market quality (liquidity and volatility) of the affected stocks is worse than that of comparable stocks prior to the Emergency Order, this cannot be attributed to short selling activities. Moreover, the affected stocks suffered a significant decline in market efficiency (measured with

reference to the co-movement of individual stock returns and the market and the cross-autocorrelation between previous-day market returns and stock returns) and in market quality (liquidity and volatility) following the Emergency Order.

29. Boehmer et al (2008b) evaluate the decision taken by the SEC in September 2008 to temporarily ban short selling in nearly 1,000 financial stocks. They compare a selection of NYSE-listed stocks on the restricted list with NYSE-listed comparator stocks not subject to the ban. They show that stocks on the restricted list experienced a share price increase at the start of the ban and a temporary share price decline when shorting resumes after the end of the ban. However, market quality for these stocks, as measured by spreads, the five-minute price impacts of trades, and intraday volatility, decreased.
30. These studies help to assess the costs and benefits of recent short selling restrictions and sense-check our own quantitative research in this area, presented in Annex 2.

Studies on the effects of disclosure requirements not related to short positions

31. While we found no literature specifically assessing the effects of requirements to disclose individual short positions, the literature on the disclosure of trades of corporate insiders and on Major Shareholder Notifications (MSNs) may be relevant. We survey a number of studies in this category below, looking specifically on the effects of these disclosures on price efficiency and on liquidity.

Individual disclosure requirements and price efficiency

32. Regulation of short selling disclosure can either come in the form of an aggregate disclosure of short positions in a particular stock or as individual disclosures of different short positions in that stock. We already know from our survey of studies on the information content of short positions reviewed in Section 2 above that investors utilise information about aggregate short positions in a stock. A further question is whether they would also value information about the identity of short sellers with different short positions in a stock. While there is no literature specifically dealing with individual disclosure of short positions, the literature on Major Shareholder Notifications (MSNs) and on public disclosure of insider transactions may be relevant.
33. As part of the Consultation Paper on the disclosure of Contracts for Difference, we conducted a study on the impact of MSNs on share prices.² The analysis covers a sample of MSNs in the UK from January 2006 to August 2006. MSN disclosures related to sales show significant price falls, whereas announcements related to purchases show insignificant price rises. The study tries to separate the effects of the transaction and the subsequent announcement. It finds significant price movements around the time of the transaction with some further price impact of the MSN announcement. This suggests that MSN disclosures contain valuable information.

2 See CP 07/20: Disclosure of Contracts for Difference, Annex 3, http://www.fsa.gov.uk/pubs/cp/cp07_20.pdf.

34. Mikkelsen/Ruback (1985) analyse price reactions for SEC Schedule 13D filings in the US in the period 1978 – 1980. These filings require the disclosure of ownership of more than 5% within ten days after the purchase of the shares. They find statistically significant positive price impacts after the initial announcement by a shareholder.
35. Friederich et al. (2002) analyse price impacts of directors' dealings reported to the London Stock Exchange from October 1986 to 1994. They find statistically significant positive abnormal returns for buy trades and statistically significant negative abnormal returns for sell trades directly after the announcement of directors' dealings. However, the size of the returns is not very large.
36. For the United States Lakonishok / Lee (2001) analyse corporate insider trades that are reported to the SEC on NYSE, NASDAQ and AMEX from 1975 to 1995. They report abnormal returns for a five day period after the trading date and the reporting date. On average they find positive abnormal returns for buy trades and negative abnormal returns for sell trades. Again, the size of the returns is small (generally less than 0.5%) and market reactions are smaller for the period after the reporting date compared to the period after the trade date.
37. Korczak/Lasfer (2008) distinguish between the price impact of directors' dealing of UK companies that are either only domestically listed or cross-listed in the US. They analyse directors' dealings in a period from 1995 to 2003 and find that trades by corporate insiders in the UK are likely to be informative as they result in significant post-event abnormal returns. However, they find significant differences in the information content of directors' dealings between cross-listed and domestically-listed firms. Statistically significant returns mainly occur for domestically listed firms and price impacts are lower for cross-listed firms.
38. The empirical analysis of individual disclosures of trades by corporate insiders and MSNs suggest that disclosing individual long positions may provide valuable information to the market. However, these results cannot be directly read across to mandatory individual disclosure of short positions. The individual disclosure of long positions provides an indication whether a shareholder has potential influence over the company via voting rights. This is information which the disclosure of short positions does not contain.

Disclosure and liquidity

39. There is a large body of literature on the impacts of transparency on liquidity. We have provided a review of this literature in Annex 1 of Discussion Paper 05/5, *Trading transparency in the UK secondary bond markets*.³
40. On the one hand, greater transparency tends to increase liquidity as it allows dealers to manage their risks more effectively against market participants with better information. Higher transparency may thus also lead to higher investor participation in the market. On the other hand, greater transparency can decrease liquidity as it reveals trading strategies to other market participants.

3 http://www.fsa.gov.uk/pubs/discussion/dp05_05.pdf

41. For post-trade disclosure of individual short positions the key question is whether the revelation of the identity of the short seller increases their risk of margin squeeze and whether the cost of closing short positions can increase as the market becomes aware of the identity of short sellers and the size of their positions. Therefore, a disclosure requirement might reduce firms' willingness to take on short positions. While we did not find any study testing this particular hypothesis, there is some research on the liquidity effects of anonymity in other contexts.
42. Foucault, Moinas and Theissen (2007) analyse the consequences of anonymity in limit order markets. Limit orders are potentially costly as they expose traders to market fluctuations. When the market moves against the trader, the order will be executed. Therefore, the riskiness of limit orders increases with higher volatility. Foucault et al. assume asymmetric information between limit order traders, as some traders have more information about the volatility of the shares. In an anonymous market, traders cannot distinguish whether an order is placed by an informed or uninformed trader. Their model predicts a decrease in trading costs after a switch to anonymity when there is only a small fraction of informed traders in the market. Foucault et al. analyse data from Euronext Paris where limit orders became anonymous in April 2001. They find significantly lower bid-ask spreads after the introduction of anonymity, but lower informativeness of the bid-ask spread (i.e. lower connection between size of the spread and volatility).

Conclusion

43. We use the literature studies to help assess the short selling measures we introduced in September 2008.
 - a. *Ban on short selling in a list of financial stocks:* The literature highlights the positive effects of short selling on market efficiency (Senchack and Starks (1993), Asquith et al (2005), Bris (2007)). However, there is also a body of research on the adverse effects of short selling, including the potential for market abuse (insider trading) (Christophe (2004)) and the aggravation of severe negative abnormal returns (Bris et al (2007)). Marsh and Niemer (2008) find no strong evidence of either positive or negative effects of the FSA's recent ban on short selling, while Clifton and Snape (2008) find lower liquidity for the stocks on the restricted list. While the literature provides some grounds for taking a critical stance on restrictions on short selling in many circumstances, it does not rule out the possibility that, if appropriately targeted, designed and implemented, they can have positive effects in specific contexts.
 - b. *Disclosure of significant short positions:* We are unaware of any research that directly examines what effect a regime requiring disclosure of individual short positions would have. However there may be some read-across from the literature on the disclosure of significant long positions (Major Shareholder Notifications and disclosure of dealings by corporate insiders), which suggests that such announcements have some impact on share prices. The empirical literature suggests that data on aggregate short positions contains information about the future performance of stocks.

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Statistical analysis: assessing the effects of the temporary short selling ban

Executive summary

1. This annex provides descriptive statistics on returns, liquidity and volatility of the shares that have been subject to the temporary short selling ban in comparison to movements of the market as a whole. The results can give indications about the stock market impacts of the temporary short selling ban.

What does economic theory suggest will happen?

- **Returns:** A criticism of short selling is that it amplifies price declines forcing stock prices below their fundamental value. An effective short selling ban would reduce extreme negative returns for restricted shares and possibly also increase average returns for restricted shares.
- **Volatility:** Ideally, the short selling ban would lead to lower volatility for restricted shares (when compared to the market).
- **Liquidity:** Based on economic theory we would expect lower traded volumes and higher bid-ask spreads for shares on the restricted list.

What did we observe happening?

- **Returns:** Behaviour of share returns has not changed significantly after the introduction of the temporary ban. In the 15 days after we introduced the temporary ban restricted stocks performed better than the FTSE 350. However, in other periods average returns for the restricted stocks are generally in line with the returns on the FTSE 350 pre- and post-ban. In the 30 days before the introduction of the temporary ban we do not find evidence that short selling is amplifying negative returns, i.e. there is no link between negative abnormal stock returns and the level of stock lending.
- **Volatility:** Volatility in the market has risen sharply in the time after the introduction of the temporary short selling ban on 18 September, but has come down to levels observed before the introduction of the temporary ban. This also holds for the restricted stocks. Results for the relative change in volatility of

restricted stocks compared to the market after the introduction of the temporary ban are inconclusive. On the one hand, the percentage increase in volatility for the restricted stocks is considerably lower than the increase for the FTSE 350 as a whole. On the other hand, when analysing matched-pairs of stocks (i.e. comparing a firm on the restricted list with a FTSE 350 firm with similar market capitalisation and similar stock lending levels), the volatility increase for the shares on the restricted list is broadly similar or slightly higher than for the matched sample.

- **Volume traded:** Immediately after the introduction of the temporary ban, trading volume for restricted shares increased relative to the market. However, since then we observe a marked decrease in trading volume for the restricted shares.
- **Bid-ask spreads:** Bid-ask spreads have increased marketwide after the introduction of the temporary ban. However, spreads for the restricted stocks have risen considerably more than they have for the market as a whole.

Introduction

2. On 18 September 2008, we announced a temporary ban on the short selling of UK financial sector company stocks. The ban was allowed to expire on 16 January 2009. The analysis below gives indications about the market impacts of the temporary short selling ban. However, the results have to be interpreted with caution, as other information on restricted firms and the market in times of great turbulence will also have had its impact on the results.
3. Specifically, we consider the returns, liquidity and volatility of the shares that have been subject to the temporary ban⁴ in comparison to movements of the market as a whole.

Returns

4. A criticism of short selling is that it amplifies price declines forcing stock prices below their fundamental value. An effective short selling ban should reduce the probability of large negative returns for the restricted shares and lead to higher average returns.
5. We compare the average returns on shares subject to the temporary short selling ban to the returns on the FTSE 350 Index and to the returns on other financial services stocks not subject to the temporary short selling ban for the following periods: 90, 60, 30 and 15 trading days before the temporary short selling ban and 15, 30 and 60 trading days after the temporary short selling ban as well as the complete period when the temporary ban was in place (i.e. 82 trading days).
6. Behaviour of share returns has not changed after the introduction of the temporary ban. On an equally weighted basis average returns on the shares subject to the temporary ban are generally in line with the average market return in the time before and after the introduction of the temporary short selling ban. The connection is

4 The analysis does not include the firms that have been added to the restricted list at a later stage (i.e. Aberdeen, F&C and Provident), removed from the list or ceased to be traded (Bradford&Bingley, Alliance&Leicester, Highway Insurance Group, London Scottish Bank) as this would distort the results.

slightly weaker in the 15-day period after the temporary short selling ban, when returns on financial services stock on the restricted list are higher than returns for the wider market.

7. The picture is slightly different for market-capitalisation weighted returns. In the 15-day period after the temporary short selling ban market-capitalization weighted returns for stocks on the restricted list are slightly positive. However, over the whole period market-capitalisation weighted returns are more negative than for the market as a whole. However, these figures have to be interpreted carefully, as they are driven by a few shares with high market capitalisation. For example, HSBC has a weight of more than 40% in the period after the ban in our sample.

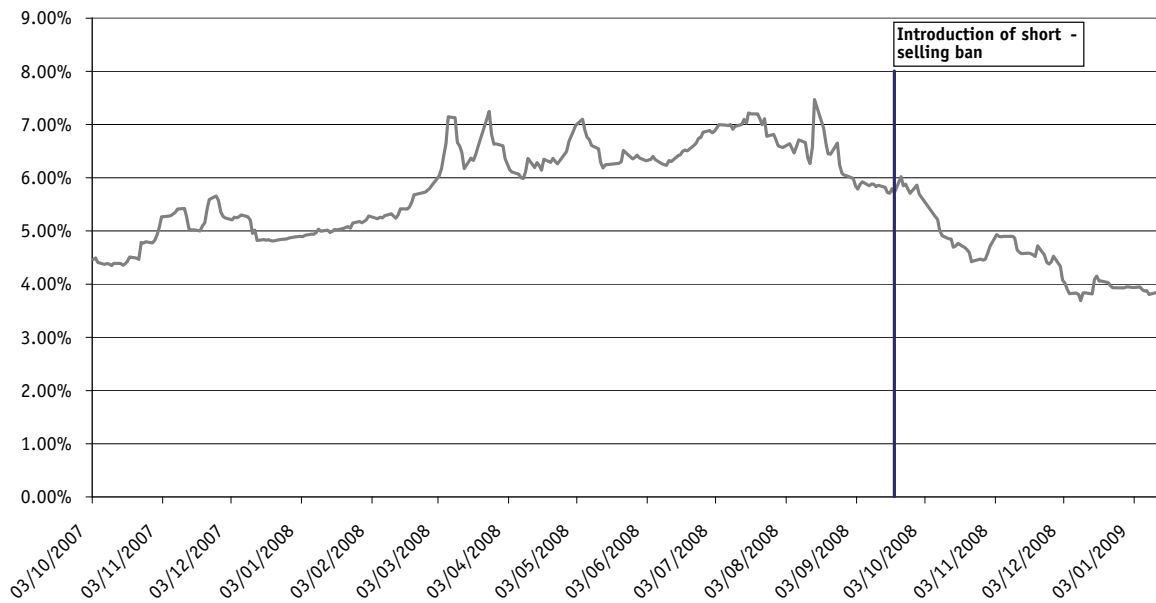
| Average Return | Over the 90 days before the ban | Over the 60 days before | Over the 30 days before | Over the 15 days before | Over the 15 days after the ban | Over the 30 days after the ban | Over the 60 days after the ban | Over the whole ban |
|----------------------------------------------------|----------------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------|
| Shares subject to ban (equally weighted) | -0.24% | -0.15% | -0.30% | -0.77% | -0.29% | -0.39% | -0.09% | -0.19% |
| Shares subject to ban (market-cap weighted) | -0.30% | -0.17% | -0.52% | -0.98% | 0.09% | -0.38% | -0.18% | -0.41% |
| Market return | -0.25% | -0.23% | -0.36% | -0.87% | -0.77% | -0.40% | -0.14% | -0.17% |

Level of stock lending and negative returns

8. We have obtained stock lending data from EUI starting from October 2007 until the end of the temporary short selling ban on 16 January 2009. We can use this data as a – albeit imperfect – proxy for the level of covered short positions.⁵ The graph below shows the development of the average level of stock lending for the firms on the restricted list for the period October 2007 until 15 January 2009.

5 Stock lending is an imprecise proxy for covering short positions as a result of short selling. Stock lending can be undertaken for many reasons, e.g.: A) Clients may borrow stock to cover short positions that may well be the result of stock not being delivered to them, and not as a result of short selling. This facilitates settlement and improves liquidity; B) Clients may also borrow stock to be able to influence voting and other corporate action events (as legal title passes to the borrower); C) Firms use stock lending to facilitate their sometimes complex trading and investment strategies, and for their hedging and arbitraging activities; D) Lenders clearly lend to increase returns via the charge of fees.

**Average Percentage of Stock on Loan for Shares on Protected List:
3 October 2007 - 15 January 2009**



9. As described above, a criticism of short selling is that it amplifies price declines forcing stock prices below their fundamental value. A relationship between stocks with higher levels of stock lending and those with a higher number of days with statistically significant negative returns would be an indicator for an amplification effect of short selling. We looked at the period 30 days before the introduction of the temporary short selling ban and used stock lending data supplied by EUI and Dataexplorers as a proxy for the level of short positions.
10. We tested this link in two ways. The first test is a correlation measure. A positive correlation between the level of stock lending and the number of days with significant negative abnormal returns would indicate an amplification effect. However, we observe that negative abnormal returns and stock lending levels are virtually uncorrelated in the 30 days before we introduced the temporary short selling ban.
11. The second test is a regression analysis where we used changes in the level of stock lending, stock price volatility, liquidity and the market value of the companies' equity to explain the number of days with significant negative abnormal returns. Again there was no link between negative stock returns and increased levels of stock lending.

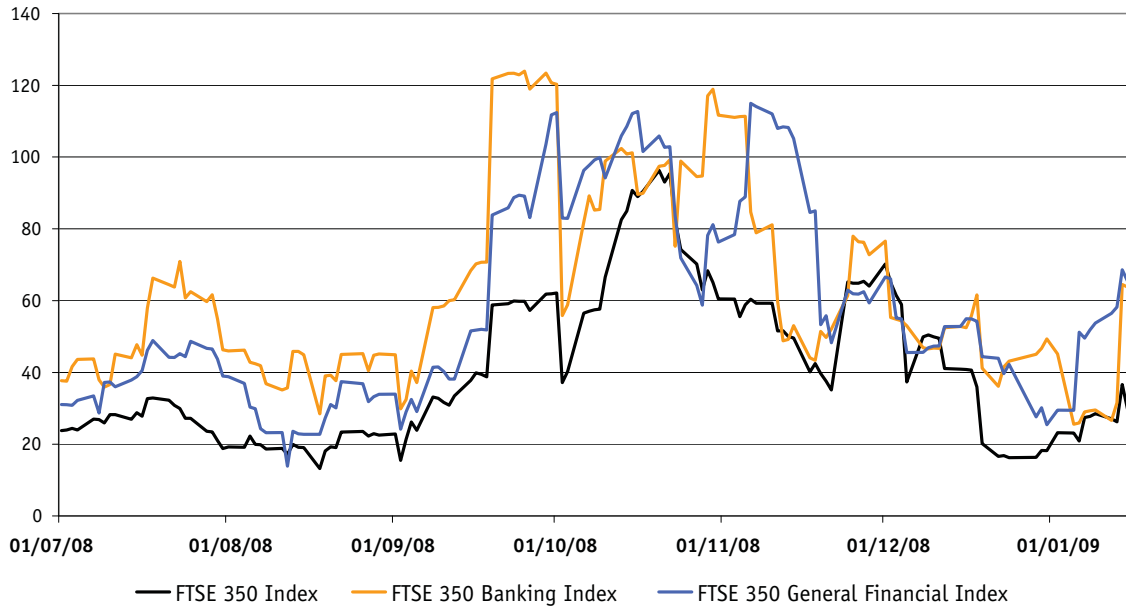
Volatility

12. Ideally, the temporary short selling ban would lead to lower volatility for restricted shares (when compared to the market).
13. Share price volatility⁶ has increased quite substantially in the time after the introduction of the temporary short selling ban until the end of October. Since

⁶ We use the 10-day Bloomberg measure for price volatility. The Bloomberg measure is calculated from the standard deviation of day to day logarithmic historical price changes. The 10-day price volatility equals the annualized standard deviation of the relative price change for the 10 most recent trading days' closing price, expressed as a percentage.

November we observe a marked volatility decrease to around the still very high levels observed in mid-September before the introduction of the temporary short selling ban. This observation holds for the FTSE 350 as well as for shares on the restricted list. The graph below shows the volatility levels for the FTSE 350 and the financial sector since July 2008.

Volatility levels for the FTSE 350 and financial sector indices from July 2008 to 15 January 2009



14. Except for a period in December 2008 volatility levels for financial sector shares were substantially higher than for shares in the FTSE 350 in general.
15. However, the percentage increase in volatility for shares on the restricted list during the whole period of the temporary short selling ban when compared to the period of 90 trading days before the introduction of the temporary short selling ban is lower than the increase for the FTSE 350. This result also generally holds – to a varying extent – for other observation periods.

| | Increase (whole period of ban /90days before the ban) | Increase (60 days after / 60 days before) | Increase (30d/30d) | Increase (15d/15d) |
|--------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------|---------------------------|---------------------------|
| Average increase in volatility of shares subject to temporary ban | 108.5% | 103.3% | 126.2% | 89.4% |
| Average increase in volatility of FTSE 350 | 135.9% | 145.2% | 176.4% | 88.1% |

16. We further aim to validate this result by conducting a matched-pairs analysis. We compare a particular stock on the restricted list with a FTSE 350 member which has similar average market capitalisation and a similar average level of stock lending (as far as this is possible) in the 30 days before the introduction of the temporary short selling ban (e.g. Schroders and ICAP). In total we have 20 matched-pairs.
17. We then test whether the change in volatility before and after the introduction of the temporary short selling ban for the two samples is statistically different.
18. The differences are not statistically significant. We observe a broadly similar increase in volatility for the shares on the restricted list and the matching sample in the period 60 days before and after the introduction of the temporary ban. However, in the period 30 days before and after the introduction of the temporary ban we observe a – statistically insignificant – higher increase in volatility for the shares on the restricted list.⁷

Volumes

19. As described in our literature review (see Annex 1) economic theory suggests that liquidity may be lower when short selling is restricted. As one measure of liquidity we analyse volumes traded after and before the introduction of the temporary ban.
20. Immediately after the introduction of the temporary ban, we do not observe reduced volumes. In the period 15 trading days after the introduction of the temporary ban trading volume increased by 22% for restricted stocks and 5% for the FTSE 350 compared to the 15 days before the temporary ban.
21. Since then, however, we observe a marked decrease in volume. In the period 60 days after the introduction of the temporary short selling ban, trading volume for restricted stocks decreased by 31%, whereas trading volume in the FTSE 350 decreased by 2% compared to the 60 days before the temporary ban. For the whole period of the temporary short selling ban when compared to the 90 days before the temporary ban, volume decreased by 36%, whereas trading volume in the FTSE 350 decreased by 11%.
22. Our matched-pairs analysis shows a similar result. Traded volume is statistically significantly lower post-ban relative to pre-ban for the shares on the restricted list when compared to the matching sample.

⁷ For the 60-day period we observed a volatility increase of 91% for our matching sample and 92% for the stocks on the restricted list which are included in the matched-pairs analysis. For the 30-day period the respective figures are 102% for our matching sample and 119% for the stocks on the restricted list which are included in the matched-pairs analysis. It should be noted that the figures for the restricted stocks in the matched-pairs analysis differ from the overall results, as the matched-pairs analysis does not contain shares which are not members of the FTSE 350.

| Average Volume | Change (whole period of ban / 90 days before ban) | Change (60 days after / 60 days before) | Change (30d / 30d) | Change (15d/15d) | Change (15d/90d) |
|--------------------------------------------------------|---------------------------------------------------|-----------------------------------------|--------------------|------------------|------------------|
| Average change in Volume traded: Shares subject to ban | -36.1% | -31.3% | -9.6% | 21.7% | 19.9% |
| Average change in Volume traded: FTSE 350 | -11.4% | -2.0% | 21.4% | 4.5% | 19.8% |

Relative bid-ask spreads

23. We also analyse bid-ask spreads as a further measure of liquidity. Again, we calculate percentage changes in the relative bid-ask spreads between the 15, 30, 60 or 90 day period leading up to the imposition of the temporary ban and a 15, 30, 60 day period following the temporary ban as well as the whole period of the temporary short selling ban. As spreads vary considerably, we calculate the average as well as the median percentage changes (the latter reported in brackets) across the samples. The table below shows our results.

| | Change (whole period of ban / 90 days before the ban) | Change (60 days after / 60 days before) | Change (30d / 30d) | Change (15d/15d) |
|----------------------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------|--------------------|-------------------|
| Mean (median) percentage change in relative bid-ask spreads – stocks on protected list | 225.0% (180.6%) | 205.9% (165.4%) | 231.0% (149.9%) | 109.2% (89.5%) |
| Mean (median) percentage change in relative bid-ask – FTSE 350 stocks | 89.8% (65.4%) | 68.6% (46.6%) | 62.2% (39.9%) | 44.0% (30.9%) |

24. As can be seen, spreads increased much more for the sample of stocks on the restricted list than for the sample of FTSE 350 stocks. This result is again confirmed by the results of our matched-pairs analysis, with a statistically significant higher increase in spreads for the firms on the restricted list than for the matched sample.

Cost benefit analysis

Introduction

1. The CBA assesses the economic costs and benefits of the proposed policy options being considered. When proposing new rules, we are obliged⁸ to undertake and publish a CBA unless we believe there will be incremental costs of no more than minimal significance. The CBA should contain an estimate of the costs and an analysis of the benefits arising from the proposals.
2. However, in this Discussion Paper we are setting out our views on a number of policy questions. It does not propose fully developed new rules or guidance on rules. Therefore, we do not attempt to offer a full cost benefit analysis of the policy options considered in this paper. However, we explain in general terms the benefits and costs that could arise from implementing any of these options and support this with quantitative estimates where possible.
3. To assist the policy development process we issued a survey on the effects of the proposals to firms with significant short selling activities (we contacted 29 firms and three trade associations and received ten responses). We also issued a survey on the potential costs of an aggregate disclosure regime to 16 trading platforms and received eight responses.

Potential constraints on short selling (see Chapter 4)

Prohibition of short selling in all UK stocks

Benefits

4. A ban on short selling, if complied with, would eliminate the risks associated with short selling, as identified in Chapter 3 (market abuse, disorderly markets and settlement issues). However, these potential benefits of a ban on short selling in financial stocks depend on market conditions and our ability to manage risks to our statutory objectives by other means.

⁸ Sections 121 and 155 of the Financial Services and Markets Act 2000.

5. To help examine the potential impact of a blanket ban on short selling we have conducted statistical analysis on the impacts of our temporary ban that was limited to selected financial stocks (see Annex 2). Behaviour of share returns has not changed significantly after the introduction of the temporary ban. In the 15 days after we introduced the temporary ban restricted stocks performed better than the FTSE 350. However, in other periods average returns for the restricted stocks are generally in line with the returns on the FTSE 350 pre- and post-ban. However, the results of our statistical analysis need to be interpreted with great caution. We cannot control for the effect of other market events around of the time of the imposition of the temporary ban and so a causal link between the temporary ban and the performance of the stocks on the restricted list is very difficult to establish.

Costs

6. A ban on short selling would impose compliance costs on firms. These include, for example, legal advice and adjustments of IT systems to prevent short selling of the relevant stocks. We lack data on the compliance costs associated with a ban of all stocks. However, we contacted 32 firms, as well as seven trade associations, to obtain data on the compliance costs associated with our temporary ban on selected financial stocks:
 - *One-off compliance costs:* Based on nine responses to our survey, we calculate that the average initial compliance costs associated with our temporary ban amounted to £40,000 per firm.
 - *Ongoing compliance costs:* Based on eight responses to our survey, we estimate that the average ongoing cost of complying with our temporary ban was approximately £6,500 per month per firm.

This data provides an indication of the magnitude of the compliance costs associated with a more comprehensive ban.

7. The introduction of a short selling ban would also result in indirect costs.
 - *Pricing efficiency:* a short selling ban could reduce the speed of price adjustment to information contained in short sales and increase the magnitude of overpricing and subsequent corrections.
 - *Liquidity:* a short selling ban could lead to a reduction in liquidity as certain trades can no longer be executed. Our statistical analysis in Annex 2 shows that our temporary short selling ban was accompanied by reduced trading volumes and wider bid-ask spreads.
 - *Foregone profits:* a ban could also result in opportunity costs in the form of foregone trading profits. This was widely reported to us as one major side-effect of our temporary ban, although respondents were generally unable to provide an estimate of this. Clearly, a ban that extends to short selling in all UK stocks would impose greater losses on short sellers than our temporary ban.
8. In addition, of course, there would be direct costs to the FSA associated with monitoring and enforcing compliance with a short selling ban.

Prohibition of naked shorting in all UK stocks

9. This approach would involve banning naked shorting while permitting covered shorts.

Benefits

10. A ban on naked shorts would limit the speed and the extent to which a short selling strategy can be executed. Traders would need to expend time and resources locating and borrowing the stock prior to short selling it. There will always be a cap on the amount of stock that can be borrowed for this purpose, namely the amount of issued share capital. Therefore, a ban on naked shorting would put a damper on aggressive short selling strategies that could lead to price amplification effects.
11. A ban on naked short would address the risk of settlement failures brought about by the inability of naked short sellers to source stock to fulfil their delivery obligations. However, as mentioned in Chapter 4, we believe that settlement risks are adequately mitigated in the UK by Recognised Investment Exchanges and Recognised Clearing Houses which have appropriate arrangements in place to (a) ensure the timely discharge of the rights and obligations of parties to a transaction and (b) intervene where settlement does not occur.

Costs

12. A prohibition on naked short selling would impose compliance costs on firms associated with adjusting their systems to prevent trades within its scope, seeking legal advice and monitoring regulatory developments in this area. We lack estimates of these costs, but believe that the data on the costs of complying with our temporary ban on all short selling in selected financial stocks (see paragraph 6) provides an indication of magnitude.
13. The introduction of a ban on naked shorting could also result in indirect costs as described in paragraph 7, though to a lesser extent than a blanket ban on all shorting.
14. In addition, of course, there would be direct costs to us associated with monitoring and enforcing compliance with a ban on naked shorting.

Prohibition of short selling in financial sector stocks

15. Another policy option would be to restrict a ban on short selling to financial sector stocks that have been particularly vulnerable in recent times. This was the option we endorsed when introducing our temporary ban on short selling in a list of financial stocks on 18 September 2008.

Benefits

16. A ban on short selling in financial sector stocks can, if complied with, eliminate the potential negative effects of short selling in these particular stocks (market abuse, disorderly markets and settlement issues).⁹ As mentioned in paragraph 5, the behaviour of share returns has not changed significantly after the introduction of the temporary ban.

⁹ As identified in Chapter 4.

Costs

17. A prohibition on short selling of financial stocks would impose compliance costs on firms associated with adjusting their systems to prevent such trades, seeking legal advice and monitoring regulatory developments in this area. We estimated the costs of complying with our temporary ban on short selling in selected financial stocks in paragraph 5 (£40,000 initial costs and £6,500 ongoing costs per firm).
18. The introduction of a ban on short selling in financial stocks could also result in indirect costs as described in paragraph 7, though to a lesser extent than a blanket ban on all shorting.
19. Additionally, a short selling prohibition that is restricted to a particular sector might result in displacement of short selling to other sectors/stocks. Although the evidence on this issue gathered in relation to our temporary prohibition on short selling of UK financial sector stocks is not clear cut on this issue, we recognise there is a risk of this.
20. In addition, of course, there would be direct costs to the FSA associated with monitoring and enforcing compliance with a ban on short selling of financial stocks.

Prohibit short selling of companies engaged in rights issues

21. A ban could theoretically also be imposed on short selling of companies engaged in rights issues.

Benefits

22. As discussed in Chapter 3, a company undertaking a rights issue may be particularly vulnerable to short selling. A ban on short selling during rights issues would address this concern.

Costs

23. A ban on short selling during rights issues would impose compliance costs on traders as they need to adjust their systems to prevent such trades while allowing others and maybe seek legal advice and monitoring regulatory developments in this area. We have no specific data on these costs, but expect these to be lower than the compliance costs gathered in connection with our temporary short selling ban.
24. A ban on short selling during rights issues would also have indirect costs. Some mutually beneficial trades could no longer be executed, with adverse effects on liquidity and price formation. Underwriters and sub-underwriters in particular would lose opportunities to hedge the risks associated with providing their services.
25. There would also be costs to us associated with monitoring and enforcing compliance with a ban on short selling by underwriters.

Prohibit short selling by underwriters of rights issues

26. Underwriters' ability to short sell the shares in a firm which is launching a rights issue is already constrained, as explained in Chapter 4 of this paper. However, the question has been raised whether additional protections may be warranted.

Benefits

27. A blanket ban on short selling by underwriters would remove conflicts of interest for underwriters, who may be in possession of confidential information about the prospects of a rights issue.

Costs

28. A ban on short selling by underwriters during rights issues would impose some compliance costs on them as they need to adjust their systems to prevent such trades while allowing others and maybe seek legal advice and monitor regulatory developments in this area. We have no specific data on these costs.
29. With a ban on short selling by underwriters during rights issues, underwriters would lose any remaining opportunities to hedge risk associated with the services they provide to issuers through short selling (though they can still engage different sub-underwriters to spread the risk). Therefore, underwriters may be less willing to offer their services in relation to rights issues and charge higher underwriting fees to issuer.
30. There would also be costs to us associated with monitoring and enforcing compliance with a ban on short selling by underwriters during rights issues.

Circuit-breakers

31. A circuit-breaker involves a suspension of trading in a share whenever there is an abnormal rise or fall in its price. For example, if a share price fell by more than 10% in a single day, the exchanges could be required to discontinue trading in the stock for the rest of the day. Additionally, it is often suggested that such a suspension could routinely be accompanied by a temporary ban (e.g. 3 days) on the shorting of the share.
32. The LSE already operates automatic execution suspension periods (AESPs) which are designed to provide a pause in trading. E.g. when a SETS order entered exceeds 5% from the last automated order book trade, this triggers an automatic suspension of trading of five minutes plus a random 30-second end period.

Benefits

33. Circuit breakers and similar measures give us and market participants time to react to unusual trading patterns. We lack evidence on the extent to which this can reduce the risk that investors over-react to the negative signal inherent in short selling or that market abuse connected to short selling is committed.

Costs

34. The operation of additional circuit breakers and similar measures could impose compliance costs on trading platforms. It also prevents trades in a stock for a certain duration and can therefore affect the continuity of the price formation process and liquidity.

'Tick' rule

35. There are two types of 'tick' rule. An up-tick (or plus-tick) rule provides that the last sale must have been at a higher price than the sale preceding it before a share can be short sold. A zero-plus tick rule provides that a stock can be shorted if the last transaction price is unchanged but higher than the last preceding different sale.

Benefits

36. Tick rules provide only limited protection against the negative effects of short selling, at most acting to temporarily decelerate share price declines. A study by Diether et al (2007)¹⁰ of the effects of the SEC mandated temporary suspension of tick rules for a set of pilot securities in May 2005 suggests they had only small effects on market quality for these stocks.
37. As set out in Chapter 5 flagging of short sales may not always be accurate. To the extent that data reliability is limited in practice, this will reduce the benefits of a 'tick' rule.

Costs

38. In order to be effective tick rules require a marking (or flagging) regime to be operated by market participants, exchanges and clearing and settlement houses alike. Without such a regime, individual trades cannot be identified as short sales and, should circumstances require it, be blocked. This involves substantial compliance costs for brokers and trading platforms as well as substantial costs for us. Estimates of the costs of a flagging regime are provided in the cost benefit analysis below.
39. Tick rules distort order flow as short sales can be executed only when the valuation of a stock remains constant or increases, but not when it falls. Diether et al (2007) find in their abovementioned study that the suspension of tick rules in the US resulted in a more natural order flow pattern.
40. We would also incur costs when monitoring and enforcing compliance with tick rules.

10 Diether, K., Lee, K-H, Werner, I., *It's SHO Time: Short-sale Price Tests and Market Quality*, 2007, Dice Centre Working Paper 2006-13, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=910614.

Enhanced short selling transparency (see Chapter 5)

Disclosure of aggregate short positions for a particular security

41. This approach would start with flagging' or 'marking' of all individual short sales by brokers so that they can be aggregated across brokers by trading platforms and aggregated across trading platforms by the FSA. We would, at some point, pass the data on the aggregate level of short positions in different stocks to market participants.

Benefits

42. Information about the aggregate short position in a single stock could help the market judge the extent to which short selling is driving down the price of that stock as well as the overhang of prospective buy orders when short sellers decide to close their positions. However, some of this information is already available to market participants. Specifically, they can purchase stock lending data, which is an imperfect proxy for the level of short selling. This would limit the information benefits of dissemination of aggregate data on short positions in different stocks (possibly with a time lag and possibly subject to errors).
43. As set out in Chapter 5 the aggregation process may lead to imperfections in the aggregate short selling data. This issue has also been raised by several respondents to our survey. To the extent data reliability is limited in practice, this will reduce the benefits of an aggregate disclosure regime.
44. Better information about aggregate short positions might also help us detect unusual short selling behaviour. However, we already have access to stock lending data as well as other trading data.

Costs

45. Marking and aggregating short positions would place a substantial cost burden on both market participants (and potentially the FSA).
46. A flagging regime would affect a large number of brokers and would lead to substantial costs for systems and controls (e.g. IT systems, training and compliance procedures). The cost implications will vary widely across the industry. In our survey, we received three quantitative cost estimates from larger brokers with a range of the estimate from several hundreds of thousand pounds to around £2 million. We also received one quantitative estimate from a smaller broker, with estimated systems costs of at around £20,000.
47. The first stage of aggregation would occur at the trading platform level. Platform would need to adjust their systems to receive market short sale data submitted from brokers and to aggregate this data for each member of the trading platform. They may also need to recruit additional staff to ensure the smooth execution of these tasks. We surveyed 16 trading platforms to collect data on these compliance costs and received eight responses. On the basis of the four quantitative responses received, we calculate average one-off compliance costs for trading platforms to be £40,000. With approximately 50 trading platforms in the UK, the industry compliance costs

would amount to £2 million. One respondent also provided an estimate of ongoing monthly compliance costs of £3,000.

48. The final stage of aggregation could occur at the FSA or by some other service provider. We would also need to monitor and enforce compliance with the marking and aggregation obligations placed on brokers and trading platforms respectively.

Disclosure of significant individual short positions in UK stocks to the market

49. Public disclosure of significant individual short positions would follow similar principles to the temporary disclosure obligations that we have introduced for significant short positions in UK financial sector stocks, but extend to other UK stocks. The obligation to make a disclosure would start when a net short position reaches a minimum threshold of 0.5%. Further disclosures would then be required in steps of 0.1% if the short position changed.

Benefits

50. Public disclosure of short positions could facilitate detection of short selling that is connected to market abuse. It enables the regulator to identify very quickly who holds the significant positions and as necessary follow up any enquiries with that market participant. Without some kind of disclosure regime, identification of significant short sales would be extremely resource-intensive. However, we recognise the limits to these benefits, as abusive short sellers might operate below the disclosure threshold or fail to comply with the disclosure obligation.
51. The disclosures may also help us to identify unusual short selling activity potentially giving rise to price amplification effects (if markets ‘over-react’ to the negative price signal inherent in short selling) at an early stage and to determine whether intervention is required.
52. Finally, the disclosure requirement would generate information for market participants on the size of significant short positions above the disclosure threshold and the identity of significant short sellers in the relevant stocks. This provides insight into short sellers’ price movement expectations and can improve pricing efficiency (if the information is correctly interpreted).
53. Generating appropriate information on significant short positions depends on the choice of the disclosure threshold. Essentially the choice of the threshold is a trade-off between providing too much information which is not meaningful (in case the threshold is set too low) and a loss of potentially important information if the threshold is set too high.

Costs

54. Disclosures of individual short positions would impose compliance costs on short sellers associated with monitoring their short positions, making appropriate disclosures to the market, and seeking legal advice on the nature of their disclosure obligations. We carried out a survey of 29 firms with short selling activities and three

trade associations to gather data on these costs. The cost estimates were based on a disclosure threshold of 0.25% and disclosure for every position change above this threshold. Based on five quantitative responses to our survey, we estimate the average one-off compliance costs to be around £50,000. We estimate that approximately 400 firms are substantially affected by the Disclosure Obligation and therefore, based on the information supplied and the assumption that the average cost holds pan-industry, we estimate total one-off compliance costs of about £20 million. We received six quantitative estimates of monthly ongoing compliance costs. Based on these responses we estimate these costs to be around £7,000 per firm or £2.8 million for the whole industry.

55. In our cost survey we also asked firms about the cost impact of higher or lower disclosure thresholds and the introduction of disclosure bands. Respondents stated a minimal impact on the one-off compliance costs. Some respondents stated that ongoing compliance costs would probably be slightly lower due to a lower number of disclosures. As we now propose a disclosure threshold of 0.5% and disclosure bands of 0.1% above this threshold, our estimate for ongoing compliance costs probably is an upper bound for the actual costs.
56. When considering compliance costs, it is also worth noting that the operation of two different disclosure thresholds – one for the general obligation to disclose short positions and one for the specific obligation to disclose short positions in the context of rights issues (see below) – could add to firms' compliance costs. A few of the respondents to our survey expressed concern about this. One respondent stated that this would raise monthly compliance costs to the disclosure regime by £ 1,000.
57. Public disclosures of short positions might also have harmful commercial effects on short sellers. Several of the respondents to our survey expressed concern this may have competitive disadvantages (if others follow their short selling strategy) or increase the costs of closing their short positions (if others are alerted to their need to do so). Therefore the Disclosure Obligation might reduce firms' willingness to hold short positions, however the extent is unclear. To the extent this happens in practice, this will also reduce liquidity in the market.
58. It should also be noted, that the actual level of the disclosure threshold is relevant to the size of this potential cost, with a higher threshold associated with lower indirect costs.
59. Another indirect cost of public disclosure of short positions concerns potential over-reactions by market participants to the information provided, which is a risk that is heightened in times of severe market stress. This may lead to an increase of short selling due to herd-like behaviour, resulting in excessive sales of shares and price declines following disclosures of short positions to the market. This concern was raised by a few respondents to the survey.
60. Finally, there would be costs to the FSA as compliance with the disclosure requirement needs to be monitored and, if necessary, enforced.

Disclosure of significant individual short positions in UK stocks to the FSA

61. Instead of disclosing short positions directly to the market, short sellers could disclose them initially to the FSA only. We could then pass the information on to the market with a suitable time lag.

Benefits

62. Like public disclosure, disclosing individual short positions to the FSA may help us to detect short selling that is connected to market abuse (see paragraph 9 for further discussion of this point).
63. Also like public disclosure, such a requirement may help us to identify unusual short selling activity potentially giving rise to price amplification effects (if markets 'over-react' to the negative price signal inherent in such short sales).
64. If we passed information about individual short positions on to the market with a time lag, market participants would learn, with a delay, about the size of significant short positions above the disclosure threshold and the identity of significant short sellers in the relevant stocks. However, the longer the time lag, the less useful the information will be for trading decisions.

Costs

65. Disclosures of individual short positions would impose compliance costs on short sellers associated with monitoring their short positions, making appropriate disclosures to the market, and seeking legal advice on the nature of their disclosure obligations. We would expect these compliance costs are similar to those associated with public disclosure of short positions (see paragraph 54).
66. Disclosing information about short positions to the FSA alone would not present any commercial risks to short sellers. However, if we pass the information on to the market with an insufficient time lag, some risks will re-appear as some short selling strategies may be vulnerable to imitation and some short positions remain to be closed. Herding behaviour, too, might then become a risk. The extent of these risks would decrease with the length of the publication delay.
67. Finally, there would be costs to us, as compliance with the disclosure requirement needs to be monitored and, if necessary, enforced.

Introducing a banded approach to disclosures of short positions in firms engaged in a rights issue

68. We already require one-off disclosures of short positions above a threshold of 0.25% that are held in companies undertaking rights issues. The proposal is to introduce a banded approach to these disclosures in line with the general disclosure regime. The means that changes in short positions above the initial disclosure threshold would need to be disclosed in steps of 0.1%.

Benefits

69. The aim of introducing a banded approach for disclosures of short positions held in companies undertaking rights issues is to provide investors with better information about the size of these short positions. However, our proposed general disclosure proposal already requires disclosure of changes greater than 0.1% in short positions above an initial disclosure threshold of 0.5%. Therefore, the banded approach will improve the flow of information about individual short positions during rights issues only marginally.
70. A more graded disclosure of short positions during rights issues may also help us in our market monitoring tasks.

Costs

71. More frequent disclosures in line with the banded approach will lead to an increase in compliance costs for firms engaging in short selling of stocks during rights issues. However, we note that above the general disclosure threshold, a banded approach would apply in any case. Therefore, additional compliance costs arise only for incremental changes in short positions between the 0.25% rights issue disclosure threshold and the general disclosure threshold. Therefore the key question probably is, how the operation of two different disclosure thresholds – one for the general obligation to disclose short positions and one for the specific obligation to disclose short positions in the context of rights issues – could add to firms' compliance costs. A few of the respondents to our survey expressed concern about this. One respondent stated that this would raise monthly compliance costs to the disclosure regime by £1,000.
72. More frequent disclosures of short positions during rights issues may also have competitive disadvantages for short sellers (if others follow their strategy) or increase the costs of closing their short positions (if others are alerted to their need to do so). Again, however, the operation of the general banded disclosure requirement for short positions above 0.5% means that some of these indirect costs will be borne by short sellers already.

List of questions

- Q1: What are your views on the costs and benefits of a blanket short selling ban? Where possible please quantify.
- Q2: Do you agree that there should not be a ban on all forms of short selling?
- Q3: Do you think any further measures are necessary to deal with naked short selling. If so, what is required and why?
- Q4: Should short selling of financial sector stocks be banned permanently?
- Q5: Do you agree that, subject to having a satisfactory disclosure regime, we should not ban short selling of the stocks of companies engaging in rights issues?
- Q6: Do you agree that we should not ban short selling by underwriters of rights issues (of the shares they are underwriting for the duration of the underwriting process)?
- Q7: Should we intervene to ban short selling on an emergency basis where necessary e.g. to combat market abuse and/or to maintain orderly markets?
- Q8: Do you agree that no additional circuit-breakers should be introduced?
- Q9: Do you agree that we should not introduce a tick rule?
- Q10: Are there any other direct constraints on short selling that you think ought to be considered? If so, please provide information regarding their costs and benefits.

- Q11: Do you agree, in principle, that the benefits of transparency around short selling outweigh the costs?
- Q12: If disclosure obligations are introduced, do you agree that those obligations should apply to all equities and their related instruments rather than be limited to certain sectors or companies?
- Q13: Do you agree that the disclosure obligations should be limited to the stocks and related instruments of UK issuers?
- Q14: Do you agree that the costs of introducing a regime based on disclosure of aggregate short positions would outweigh the benefits?
- Q15: Do you agree that benefits of public disclosure of significant short positions outweigh the costs?
- Q16: Do you agree that an individual significant short position disclosure regime should be on a net basis?
- Q17: Do you agree that 0.50% would be an appropriate threshold for triggering disclosures under a net short position regime? If not, what alternative would you propose and what are your reasons for this figure?
- Q18: Do you agree that a banded approach to disclosure should apply in conjunction with a minimum threshold? If so, do you agree that such a banded approach should be based on bands of 0.10% of a company's issued share capital?
- Q19: If long-term disclosure obligations are introduced, do you agree that market makers should be exempt from those obligations when they are acting in the capacity of a market maker? Do you also agree that this should be an absolute exemption?
- Q20: Do you agree that maintaining the current disclosure obligation of 0.25% of a company's issued share capital for rights issue situations is appropriate?
- Q21: Do you agree that the ongoing disclosure obligations should be the same as the general regime?
- Q22: Do you consider that any further measures are necessary in respect of CDS?

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