

10/7**

Financial Services Authority

Taping: Removing the mobile phone exemption

March 2010

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The Financial Services Authority invites comments on this Consultation Paper. Comments should reach us by 14 June 2010.

Comments may be sent by electronic submission using the form on the FSA's website at (www.fsa.gov.uk/Pages/Library/Policy/CP/2010/cp10_07_response.shtml).

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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.

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1 Overview

Introduction and purpose

- 1.1 In March 2008, the FSA published rules (PS08/1) on recording voice conversations and electronic communications¹ ('the taping rules'). These rules require firms² to record 'relevant communications' and keep them for six months. 'Relevant communications' refer to voice conversations and other electronic communications that involve the receipt of client orders and negotiating, agreeing and arranging transactions in the equity, bond and financial and commodity derivatives markets. For more detail on the scope of the Conduct of Business Sourcebook (COBS) 11.8 taping rules, see the 'scope of proposal section below.
- 1.2 These rules, which became effective from March 2009, were aimed mainly at tackling market abuse – although our taping rules also assist us in our conduct of businesses supervision – by ensuring we have access to high quality, contemporaneous evidence to help monitor, investigate and prosecute such cases.
- 1.3 Mobile phones and mobile communications (except emails) were excluded from these rules. Their exclusion was primarily based on concerns that the technology to capture these communications was insufficiently developed.
- 1.4 However, we stated in PS08/1 that we would review this exclusion towards the end of 2009. As part of this review we have met with technology suppliers, trade associations and economic consultants to test the feasibility (both from a technology and cost perspective) of applying a taping requirement to mobile phones.
- 1.5 This Consultation Paper (CP) seeks feedback on a proposal to remove the exemption for relevant communications (except emails) '...made with, sent from or received on a mobile telephone or other mobile handheld electronic communication device.'³

1 The term electronic communications includes fax, email, chat and instant messaging – but, obviously, is not limited to those.

2 There is an exemption for discretionary investment managers.

3 COBS 11.8.6R (1), from our COBS 11.8 taping rules

- 1.6 Removing this exemption would require firms to tape relevant communications on mobile phones issued by the firms for business use. We also propose to introduce a rule requiring firms to take reasonable steps to prevent employees or contractors from using private communication equipment (which may not be recorded due to privacy laws) to make such communications.
- 1.7 Should a decision be taken to remove the exemption, we would allow a sufficient transition period for firms to make the necessary changes. We anticipate a transition period of a year from the time a decision is taken to alter the rules (which we would not expect to happen until Q4 2010) to implementation by firms.

Structure of this CP

- 1.8 The first part of the CP sets out what changes have prompted us to consider removing the exemption now. We then explain how removing the exemption would work in practice and the scope of its application. The final sections of the CP detail the costs and benefits associated with removing the exemption. Specific questions are included after each section.

Drivers for change

- 1.9 We see this consultation as a necessary step to respond to two key developments:

- 1) *Closing a loophole/enhanced enforcement*

With the exemption in place, individuals can currently divert fixed line traffic onto an un-taped mobile line. By removing the scope to circumvent the rules, we would enhance our market monitoring and enforcement functions.

- 2) *Technology advances*

- 1.10 The technology to record, store and retrieve mobile communications has advanced. Firms now have a choice of ‘hosted’⁴ or ‘in-house-integrated’⁵ solutions and a wide range of suppliers to capture relevant mobile communications. Europe Economics (pages 28 to 29 of their report in Annex 1) say that major suppliers of telephony services to city financial firms now also offer mobile recording solutions in the UK.
- 1.11 Removing the exemption will provide an additional source of contemporaneous voice conversations and electronic communication evidence, which can be used to provide evidence regulations. This can also help us to counter market abuse, one of our key priorities.

4 Hosted solution: where a technology provider manages the recording and storage of the firm’s communications on their own proprietary server.

5 Integrated solution: where a firm integrates the mobile technology with its existing communications infra-structure to manage its own server to record and store mobile communications

Proposed changes to taping rules

- 1.12 We propose to extend the current taping obligations to require the recording and storage of all ‘relevant communications’ made with, sent from or received on mobile phones. We propose to apply this rule only to those mobile phones that are **issued by firms for business purposes**. To support this, we also propose to introduce a new rule requiring firms to take reasonable steps to ensure that such communications do not take place on private communication equipment which firms cannot record mainly for privacy reasons. This includes private mobiles, private handheld mobile electronic communication devices as well as and private non-mobile electronic communication devices.

Privacy issues

- 1.13 We have carefully considered privacy issues that arise from taping an individual’s communication devices, and are aware of industry concerns raised in discussions during this review. Applying the taping rules to conversations and communications made with, sent from or received on private mobile devices (i.e. mobiles not issued by firms) increases the scope for capturing non-relevant, non-business related conversations, which potentially raises privacy law issues under the Data Protection Act 1998 and the Regulation of Investigatory Powers Act 2000 (RIPA).
- 1.14 The taping rules require firms to take ‘reasonable steps’ to record or retain a copy of relevant conversations or relevant electronic communications. This does not mean that firms should breach applicable privacy laws. Therefore, we do not intend or expect firms to apply the taping obligation to private communication devices owned by their employees or contractors (unless, for example, calls are routed to such devices via taped business lines). Consequently, we support the taping rule with a complementary proposal that requires firms to take reasonable steps to prevent conversations and communications caught by the taping rules from taking place on private communication equipment which the firm cannot record.
- 1.15 We aim to confine relevant conversations and communications that fall within the scope of COBS 11.8’s taping obligations to business lines or equipment that we expect the firm (and the firm should be able) to record. Should any relevant conversation (from voice, SMS to IM) be received or commenced on private communication equipment, we would expect the call to be terminated immediately and the conversation diverted to a recorded business line. We would expect firms to take all reasonable steps to ensure that any relevant conversation on an un-recorded line is curtailed and not reciprocated.
- 1.16 We think this is the most practical and proportionate way to implement recording requirements, and that this approach will allay most of the industry’s concerns about privacy issues.

Taping and European Union legislation

- 1.17 Article 12(1) of the Market Abuse Directive⁶ and Article 51(4) of the Markets in Financial Instruments Implementing Directive (MiFID)⁷ give Member States discretion to decide if investment firms have to record telephone conversations or electronic communications involving client orders. While many Member States have their own taping requirements, which can apply to fixed lines as well as mobile phones, regimes differ significantly across the European Union (EU).
- 1.18 The European Commission (the Commission) will review Member States' discretion to decide their own taping requirements. This work will be conducted as part of the Commission's wider MiFID review, which is expected to be completed by the end of 2010. The Committee of European Securities Regulators (CESR) will consult shortly on advice to the Commission on the taping review.
- 1.19 There is obviously a risk that any taping obligation agreed by the EU will differ from our existing rules, including the changes proposed in this CP. However, we do not believe that this is sufficient reason to postpone this consultation as any EU obligation is still some way off and some Member States do not exempt mobile phones conversations from their rules.

Q1: Do you agree that mandatory recording of mobile phones should be restricted to devices issued by firms for business purposes only? If not, why not?

Q2: What justifications are there for allowing 'relevant conversations' to continue to take place on private mobile phones? (We understand that some firms are highly dependent on private mobiles lines for business as well as personal calls.) What circumstances make 'relevant conversations' on private mobile phones essential and diversion/resumption to a fixed line impractical?

Scope of proposal

- 1.20 We do not propose to change the scope of the application of the rules from what is currently in place for fixed telephone lines. As such, all conversations, financial activities and firms currently within scope of COBS 11.8 would also be covered under the proposed mobile taping rules.

6 Directive 2003/6/EC

7 Directive 2006/73/EC

Table 1

In-scope	Fixed lines	Mobile lines
<p>Relevant conversations Voice conversations and other electronic communications that involve the receipt of client orders and the negotiating, agreeing and arranging of transactions across the equity, bond and financial commodity and derivatives markets, and to retain electronic communications relevant to these activities.</p>	✓	✓
<p>Relevant activities Proprietary trading and other principal dealing and agency broking and the associated sales functions.</p>	✓	✓
<p>Relevant firms Banks, stockbrokers, investment managers (including CIS managers and hedge fund managers), financial and commodity derivatives firms.</p>	✓	✓
<p>Record retention period Six months from the date of creation. We expect records to be held so they can be accessed for future reference; that corrections, amendments and content of records – before corrections/amendments are made- are easily ascertained, and that it is impossible for the records to be manipulated or altered. This is in accordance with MiFID's record-keeping standard.</p>	✓	✓

Technology solutions

- 1.21 Based on Europe Economics' report, we are satisfied that there is adequate choice of technology and suppliers for all firms. We do not anticipate smaller firms having major problems in identifying new technologies and their competing providers. We are confident that while the technology providers are new to the finance market, they will have every economic incentive to market effectively to all firms and grow market share.
- 1.22 Two primary technology solutions currently allow incoming and outgoing relevant communications made on mobile phones to be successfully recorded. Two primary solutions then allow these communications to be stored and subsequently retrieved:
- recording solutions: recording the relevant incoming and outgoing traffic can be done either:
 - on the handset itself; or
 - on a remote server. This is explained in more detail in Annex 1.
 - storage/retrieval solutions: relevant conversations can be:
 - stored on a server which is then managed by the firm and is located in-house on the firm's premises; or
 - on a hosted server which is managed by a third party/the technology provider away from the firm's premises.

Cost benefit analysis summary

Costs

- 1.23 We anticipate that this proposal will cover around 16,000 mobiles. On this basis, we estimate that the total one-off cost will be approximately £11m, with total on-going costs around £18m per annum.

Benefits

- 1.24 Removing the taping exemption for mobiles will contribute to realising the economic benefits outlined in PS08/1 'Recording of voice conversations and electronic communications'. As described in PS08/1, we expect the taping framework to bring economic benefits by the following mechanism:
- recorded communication increases the probability of successful enforcement; and
 - this reduces the expected value of exploiting private information and consequently reduces insider trading.

This, in principle, leads to increased market confidence and greater price efficiency.

2 Cost benefit analysis

- 2.1 To inform this cost benefit analysis we relied on information provided by firms and suppliers of mobile recording technology. Specifically, we:
- surveyed 675 randomly selected banks, stockbrokers and investment management firms to gather data on the current extent to which firms record mobiles and the costs of recording communications, including mobiles;⁸
 - commissioned the consultancy, Europe Economics, to undertake a study of mobile recording technology and associated costs. See the full report in Annex 1; and
 - consulted with technology suppliers to assess the number and viability of mobile recording solutions.
- 2.2 We also consulted with relevant trade associations and sought input from our internal policy, enforcement, market monitoring and legal experts.

Costs

- 2.3 In the section below we estimate the costs of removing the taping exemption for mobiles from a firm survey carried out in the fourth quarter of 2009. We also compare these costs with estimates presented in the Europe Economics report (see Annex 1), which include indicative quotes from suppliers of mobile recording technology.
- 2.4 To estimate the proposal's incremental costs, we begin by assessing the number of mobiles under the policy's scope, and the extent of current mobile recording currently in the market. We define this current situation as the 'baseline'. We then estimate the incremental impact the policy proposal is expected to have and seek to quantify its costs.

⁸ Overall, 110 firms responded to the survey (16% of our original sample). After cleaning of the data we exclude a further eighteen firms from the analysis because they did not provide key information on the number of mobile phones that the policy proposal would affect at their firm.

The baseline

Estimating the number of mobile within the scope of the proposal

- 2.5 In the firm survey, respondents reported approximately 4,800 mobiles within the scope of the proposal. To estimate the corresponding number of mobiles at industry level, we have compared the size of the survey sample relative to the industry. To do this, we used the number of fixed lines within the scope of the taping regime to determine this relative size. In PS08/1, our central estimate of the number of fixed lines within the scope of our rules was 63,000. We have revised this figure downwards by 15% to take into account the exemption applied to some investment managers from the taping rules and the effects of the recession on employment in the financial industry: (-5%).⁹ This gives a central estimate of 50,400 fixed lines for the industry. Surveyed firms reported around 11,000 fixed lines.¹⁰ On this basis, the sample represents 22% of the industry population. Since sample firms also indicated that approximately 4,800 mobiles were within the scope of the proposal, we estimate that, at industry level, the policy will affect around 22,000 mobile phones.

Current level of recording levels

- 2.6 Evidence from our firm survey and the Europe Economics' report (see Annex 1), indicates that the number of mobile phones currently being recorded is negligible. This can be explained by two factors. Firstly, mobile recording technology is relatively new, and while our analysis showed that a few firms have trialled mobile taping, almost none have adopted the technology to any significant degree. Secondly, many firms (particularly large banks) prohibit the use of mobile phones for taking client orders or dealing.
- 2.7 Therefore the costs of requiring firms to record mobile phones would be equivalent to full start-up and running costs across the industry.

Policy impact

Estimating the average costs per user from the firm survey

- 2.8 In assessing the cost impact of the policy proposal we assume all mobile phones are issued by the firm. We will address later the potential cost implications where mobile phones are considered 'private'.
- 2.9 Firms can comply with the policy proposal in at least two ways. They can:
- continue to use mobile phones to make/receive relevant conversations/communications but then record these conversations/communications; or
 - develop internal policies to prevent relevant conversations/communications from taking place on mobile phones.¹¹

9 UK National Statistics: Time Series – Workforce by Industry.

10 This is a scaling factor of 4.6.

11 In practice, firms have the option to ban some mobile phone functions and allow others. To calculate incremental costs we determined that firms would not incur the costs of recording where they reported they would prevent usage of *all* functions.

- 2.10 To estimate the incremental cost to firms, we have taken into account the number of firms that would choose to ban the use of mobiles for relevant conversations/communications altogether. Already, many firms ban the use of mobiles, particularly larger investment banks. However, some firms who currently allow mobile phones to be used for relevant activities as well as general business use, indicated in their survey response that they would ban the use of mobile phones for relevant conversations/communications if the mobile recording exemption was removed.
- 2.11 Should some firms ban the use of mobile phones, this would reduce the number of phones affected by the taping requirements. These firms would not bear the costs associated with mobile recordings. Around 60% of firms surveyed indicated they would ban the use of mobile phones should the exemption be removed. These firms accounted for approximately 30% of mobile phones in the sample. After adjusting figures to remove these firms, the number of mobile phones within the taping rules scope in our sample is around 3,400. As a result, we estimate that at industry level, approximately 16,000 mobile phones¹² would be affected by taping costs.

Average one off costs

- 2.12 One-off costs would include, among other things, the purchase of software/hardware, telecommunication system design and installation to record, store and retrieve taped records.
- 2.13 Overall, firms reported an average one-off cost per line of approximately £700.¹³ Taking into account those firms who would ban the use of mobile phones should the exemption be removed, we estimate the total one-off incremental costs to the industry to be £11m.

Average ongoing costs

- 2.14 Sample firms reported an average on-going cost per line of around £1,200 per annum. We anticipate that the bulk of incremental costs will arise through maintaining the recording equipment (software and hardware), storing records for six months and any retrieval of records. Taking into account those firms who would ban the use of mobile phones should the exemption be removed, we estimate total on-going incremental costs to be £18m per annum.

Table 2: FSA firm survey – Cost per user of recording mobile phones

Average cost per user	One-off (£)	On-going (p.a.) (£)
Average for all firms affected	700	1,200

¹² Our sample estimate of 3,400 phones was then multiplied up using the scaling factor.

¹³ The cost per user estimates are based on the 14 firms in our survey who provided cost information to us. These 14 firms varied in size and so make up a fairly representative sample of the wider population of firms. We did not observe a clear relationship between cost per line reported by these firms and the size of these firms.

Average cost per user – Estimates from Europe Economics (supplier estimates)

- 2.15 In their report, Europe Economics gathered indicative quotes from mobile recording technology suppliers. The estimates summarised below are split by firm size. The upper estimate for small firms is comparatively higher than for medium or large firms. One reason for this is because these upper estimates reflect the cost of a voice recording integrated¹⁴ solution, which is generally designed for medium and larger firms. Smaller firms typically opt for cheaper ‘hosted’ solutions.¹⁵ Larger firms may also benefit from economies of scale which would lower the average cost per user, compared to smaller firms.

Table 3: Europe Economics – Cost per user

Cost per line (upper estimate)	One off (£)	Ongoing (p.a.) (£)
Small	1,399	2,219
Medium	513	1,334
Large	355	1,292

Total cost estimates for the industry

- 2.16 The table below presents the total estimated costs for the industry, taken from our firm survey and Europe Economics supplier’s numbers. Please note that Europe Economics report estimates also consider around 16,000 mobile phones would be affected by the proposal.

Table 4: Estimated cost to the industry

Estimated cost for the industry	One off (£)	Ongoing (p.a.) (£)
FSA firms survey	11,000,000	18,000,000
Europe Economics (upper estimate) ¹⁸	7,000,000	21,000,000

- 2.17 The numbers are broadly comparable. Europe Economics estimates one-off costs to industry at £7m (upper estimate) with on-going costs of £21m per annum (upper estimate). The figures from our firm survey suggest one-off costs of around £11m with ongoing costs of around £18m per annum. It is likely that the true cost to industry will lie somewhere between Europe Economics’ estimate and our firm survey’s estimate.

14 Integrated solution: where a firm integrates the mobile technology with its existing communications infra-structure to manage its own server to record and store mobile communications. This solution is more expensive and is likely to be taken-up by firms with larger resources.

15 Hosted solution: where a technology provider manages the recording and storage of the firm’s communications on their own proprietary server.

16 In comparing the results, we consider Europe Economics ‘upper’ estimate because our own survey did not ask firms to specify a range so we assume estimated maximum costs were reported to us.

Other potential impacts

Private mobile phones

- 2.18 In estimating the incremental compliance costs above, we assumed all mobile phones are issued by a firm. However, if we allow a proportion of these mobile phones to be 'private' devices i.e. equipment that the firm did not provide to an employee or contractor, some firms may incur additional costs if they wish to continue using mobile phones for relevant communications since, in effect, these firms will need to provide employees and contractors with a firm-issued mobile device.
- 2.19 In an attempt to quantify this cost, we assumed that mobile phones reported by smaller companies are more likely to be 'private' phones. We assume that all mobile phones reported by sample firms with less than 100 fixed lines, currently allowing relevant communications, are private mobiles, and firms could provide employees with company mobile phones. With an average cost of issuing a mobile phone at £50 per month,¹⁷ the additional on-going cost to the industry would be around £500,000 per annum.
- 2.20 Instead of providing employees with a mobile device, a firm may decide to comply with the proposed policy by diverting their 'relevant communications' onto a fixed line. Firms may incur a small cost by doing so, as they may have to terminate a communication taking place on a private mobile and call their counterparty or client back from a taped landline.

Competition effects

- 2.21 To the extent that small firms are currently more inclined to use private mobiles to make relevant communications, they may be more likely to incur some costs associated with the proposal. However, we do not expect that these will have a material adverse effect on competition between firms.

Cost of retrievals

- 2.22 In our survey we asked firms about the cost of retrieving tapes at the FSA's request. These estimates are based on firms' experience of retrieval of landline records since the taping requirement came into force. On average, firms reported that retrieval requests require around six man hours. With an average hourly wage of £35,¹⁸ and assuming that retrieving mobile tapes takes a similar level of labour input as retrieving fixed line tapes, each mobile retrieval request would cost around £200.
- 2.23 However, firms indicated that at industry level, the frequency of such requests as a proportion of telephone lines is very small. Assuming the frequency of requests remains similar in the future, the industry cost to the industry would be less than £100,000 per annum. We do not have reason to believe that the frequency of retrieval would increase in the short term, but if it does, there may be some additional costs.

17 Estimate from plan charges (including handset) for small businesses reported on websites of two large UK providers of mobile telephone lines as of February 2010.

18 Estimate from June 2006 'Real Assurance Risk Management survey – Estimation of FSA Administrative Burden' (average of hourly wage for staff at small/medium and large firms), adjusted for rise in earnings (from Office of National Statistics).

Implementation period

- 2.24 As previously highlighted, we would give firms sufficient time to implement any necessary changes, should we decide to remove the exemption. We anticipate a transition period of a year from the time a decision is taken to implement the rules.
- 2.25 We also note that most suppliers who were surveyed/interviewed in depth by Europe Economics (see Annex 1) do not anticipate any major problems in absorbing the anticipated increase in demand without any change in price.

Benefits

- 2.26 We expect the proposal's main benefit will be to close a potential loophole in our current taping framework. If we keep mobile phone taping exemption, those wishing to circumvent the rules have incentives to move 'relevant conversations' on recorded fixed lines to unrecorded mobile phones. This undermines the taping regime's effectiveness. Therefore, removing the exemption will contribute to achieving the economic benefits identified in PS08/1. As described in PS08/1, we expect the taping framework will bring economic benefits as follows:

- recorded communication increases the probability of successful enforcement; and
- this reduces the expected value of exploiting private information and hence reduces insider trading.

This, in principle, leads to increased market confidence and greater price efficiency.

- 2.27 Recording mobile phones should further aid our market monitoring and enforcement functions in investigating market abuse cases by providing additional, contemporaneous evidence. We would expect an increase in the quality and volume of information available to enforcement in pursuing insider dealing and market abuse cases.
- 2.28 Removing the exemption for mobile phones will ensure regulatory consistency across all electronic communication media. If the policy is implemented, all relevant communication will need to be recorded and will not be allowed to take place on 'private' phones.
- 2.29 Finally, allowing mobile phones to be recorded should be perceived as being less intrusive than preventing any relevant communication from taking place on any mobile phones altogether. Firms will have the option to respond to the policy by either banning mobile phones or recording them.

Q3: Do you have any observation on this cost benefit analysis?

3 Compatibility statement

3.1 In this section we assess the compatibility of our proposal to:

- remove the current exemption applied to mobile phones; and
- introduce a requirement for firms to take ‘reasonable’ steps to ensure relevant communications do not occur on unrecorded private communication equipment. This is in line with our regulatory objectives under section 2(2) of the Financial Services and Markets Act 2000 (FSMA).

The requirement for a compatibility statement is set out in section 155(2)(c) of the FSMA.

Compatibility with our regulatory objectives

3.2 Our policy proposal is aimed at contributing to our financial crime and market confidence objectives.

Financial crime

3.3 Our proposals to require recording voice conversations and electronic communications on mobile phones issued by firms and to prohibit relevant conversations on private mobiles should contribute to our financial crime objective in the following ways:

- by improving outcomes in detecting, investigating and deterring insider dealing and market manipulation; and
- by helping to reduce how much regulated persons’ business can be used for purposes connected with financial crime.

Market confidence

3.4 We anticipate the proposals will contribute to our wider effort to promote cleaner markets which should in turn, enhance market confidence.

Principles of good regulation

- 3.5 Our proposals have been framed with regard to the principles of good regulation set out in Section 2(3) of the FSMA.

The need to use our resources in the most efficient and economic way

- 3.6 By closing a loophole in our existing taping regime, this proposal will ensure our resources used in detecting, investigating and deterring insider dealing and market manipulation are more effective in tackling market abuse.

The principle that a burden or restriction which is imposed on a person, or on the carrying out of an activity, should be proportionate to the benefits, considered in general terms, which are expected to result from the imposition of that burden or restriction.

- 3.7 We also considered the principle of proportionality by carrying out a cost benefit analysis. Considering the risk that the loophole for mobiles in the current taping regime causes to our objectives, the cost benefit analysis suggests that the incremental cost of the proposal are proportionate to the benefits of closing this loophole.

The international character of financial services and markets and the desirability of maintaining the competitive position of the United Kingdom.

- 3.8 Removing the exemption and applying a taping obligation to mobile devices should not disproportionately disadvantage UK firms. Several other jurisdictions have, to varying degrees, introduced some form of record keeping/taping requirements that apply to mobile devices. Given the costs involved, we do not expect UK firms to be materially disadvantaged by the proposals, compared to firms operating in countries which have less stringent requirements. Also, by improving the current taping regime's effectiveness, the proposals should reduce scope for market abuse in the UK markets. It should also contribute to improving UK market cleanliness and enhancing the country's competitive position.

The desirability of facilitating competition

- 3.9 As explained in the cost benefit analysis, small firms are more inclined to use private mobiles to make relevant conversations, so they may be more likely to incur some costs associated with the proposal. However, we do not expect these will have an adverse effect on competition between firms.
- 3.10 Finally, this proposal represents the optimal way of achieving our objectives, as it is the most flexible way to close the current loophole in the taping regime. It should be seen to be less intrusive than forbidding relevant communications from taking place on any mobiles altogether.

Europe Economics Report

Consideration of a Mobile Phone Recording Requirement

Final Report by Europe Economics to the
Financial Services Authority

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Appendix 1: Questionnaires

Questionnaire Sent to Authorised Firms

Questionnaire Sent to Suppliers

1 Introduction

- 1.1 This report was commissioned by the Financial Services Authority (FSA) and examines the cost of introducing a mobile recording requirement for certain authorised financial services firms.

Context

- 1.2 One of the FSA's key priorities is to prevent, detect and deter market abuse – insider dealing and market manipulation. Some of the most valuable evidence that can be used in investigating market abuse concerns the point at which transactions are undertaken, in particular taped conversations and records of electronic communications. Indeed, PS08/1 acknowledged the role of telephone recording as means of limiting market abuse.
- 1.3 Accordingly, PS08/1 introduced rules compelling firms to record certain communications and retain these recordings for a specified period of time. These rules apply to all authorised firms that receive client orders and negotiate, agree and arrange transactions across the equity, bond and financial commodity and derivatives markets. Relevant firms must record and retain voice and electronic communications for a period of six months. FSA decided to exempt mobile communications from the recording requirements, with the exception of emails sent from these devices, but noted that this exemption would be reviewed in late 2009.
- 1.4 Given modern technology, there is an obvious regulatory gap in mandating fixed line recording whilst leaving mobile phones exempt, unless doing business on mobile phones is banned (which seems impractical). The exemption creates clear incentives to pursue illicit conversations through mobile phones, and the cost of installing and maintaining the fixed-line-only recording machine is incurred with limited useful effect.

Steps towards a mobile phone recording requirement

- 1.5 Europe Economics' 2008 report to the FSA "*Consideration of a discretionary recording requirement*" assessed the potential for recording communications from mobile telephones and the cost of solutions. Our findings were based on discussions with suppliers and authorised firms and the estimates were formulated on the basis of the experience of the companies concerned.
- 1.6 Regarding the extent of recording of mobile communications at the beginning of 2008 our key findings were:
- Financial institutions generally lacked facilities for recording mobile voice, SMS and IM.
 - Over 90 per cent of firms in the financial sector did not use mobile phone recording solutions which were compliant with the FSA's proposals of CP07/9. However, several authorised firms stated that they had considered introducing mobile recording solutions and were monitoring developments in this field.

- IT departments were looking at mobile call recording systems but were waiting to hear the outcome of the FSA's proposals before committing funds.
- Based on our interviews with suppliers and authorised firms, employees in the financial services sector appeared to be resistant to having all mobile calls recorded as there are conversations they wish to remain private, but did not object to having 'relevant' calls recorded only.

1.7 We identified, at that time, two basic types of solutions available that allowed for calls to be routed via call recording equipment irrespective of the location of a company mobile: routing calls to and from company mobile phones via a Private Automatic Branch Exchange (PABX) and routing calls to and from a call recording server. Both of these solutions are discussed in greater detail below.

1.8 We did not find any solutions that can record calls from personal mobile phones made or received on a company's premises. We noted that it would be possible to do this in theory but that it would require the cooperation of cellular operators and would incur considerable expense for both the operators and enterprises in question. In any case, we noted that this could be seen as a violation of privacy and it was unclear to us whether such an arrangement would be permissible under current communications legislation.

1.9 On the basis of discussions with suppliers, we concluded that prices should not be expected to rise as a result of the FSA making mobile call recording mandatory for financial services firms since suppliers would be able to cope with the increased demand – indeed, it certainly seemed possible at that time that with greater demand economies of scale would mean that unit prices would fall. We also found that it was not clear why a surge in demand should disadvantage small firms in terms of the quality of the service they get from providers of mobile call recording solutions.

1.10 We estimated the one-off cost of recording voice and SMS communications from mobile telephones at £870,000–£1,110,000, assuming that recordings would be retained for 12 months and that 10 per cent of employees of individuals with recorded fixed lines would be affected by the regulations. The ongoing costs were estimated at £1,900,000–£2,380,000 per annum based on the same assumptions. These estimates were not too dissimilar from the cost for recording fixed lines, a somewhat unexpected finding that stood in contrast to the view that had been expressed by authorised firms, in advance of our study, in their initial consultation responses.

1.11 In response to our research, FSA stated in PS08/1:

"Few financial services firms currently record mobile telephones, many firms prohibit their use for taking client orders or dealing and the technology for this is relatively new...[We] have applied an exemption to recording conversations and communications (except emails) on mobile telephones or other handheld electronic communication devices. We will, however, review this in 18 months' time to decide whether it is still appropriate to continue with this exemption."

1.12 The current project forms one component of this review.

Our Task

- 1.13 Broadly speaking the purpose of this study is to conduct a review of the available solutions for recording communications from mobile devices (including voice, instant messaging, SMS and video) and to assess the costs that authorised firms would incur were the FSA to remove the de-exempt mobiles from the taping rules. We also assess the current extent of recording of mobile telephones by authorised firms.
- 1.14 At a high level our tasks can be characterised as:
- Compilation of a list of available mobile phone communications recording solutions;
 - Determining the current extent of recording of mobile communications; and
 - Through desk research and a set of interviews with stakeholders determine the cost of these solutions to authorised firms.

What We Shall Argue

- 1.15 The key findings, based on an assumption that 30 per cent of the 50,400 employees with a recorded fixed line use a mobile device for business purposes, are:
- The range of one-off costs for recording and storing for 6 months voice and SMS communications from mobiles is £2.3m–£3.4m. This is approximately 2.5 times greater than our previous estimates because the assumed number of devices is 2.5 times greater;
 - The range of ongoing costs for recording and storing for 6 months voice and SMS communications from mobiles is £2.3m–£9.5m per annum. This is approximately 2.5 times greater than our previous estimates because the assumed number of devices is 2.5 times greater;
 - The range of one-off costs for recording and storing for 6 months all mobile communications other than email (which is not exempt from current taping rules) is £5.9m–£7.0m;
 - The range of ongoing costs for recording and storing for 6 months all mobile communications other than email (which is not exempt from current taping rules) is £8.7m–£20.9m per annum;
 - Authorised firms would require a period of no less than six months to become compliant with a mobile recording requirement, although a grace period of 12 months would be preferred;
 - Suppliers who voiced concerns that a transition period of six months would be ‘tight’ and a longer period would enable them to smooth demand more effectively;
 - Suppliers do not foresee any difficulty in meeting a significant increase in demand and stated that the service they offer to smaller firms would not be compromised even if they experienced increased demand from larger firms.

Report Structure

1.16 This report sets out Europe Economics' discussion and conclusions, and is structured as follows:

- Section 2 presents our methodology;
- Section 3 discusses our findings;
- Section 4 presents our summary and conclusions;
- Appendix 1 contains the questionnaires sent to suppliers and authorised firms.

2 Methodology

2.1 At a high level the methodology can be summarised as:

- compile a list of contacts (authorised financial services firms and suppliers of recording solutions);
- develop a reference system against which to measure costs;
- construct and distribute mini-questionnaires to suppliers of recording solutions and to authorised firms;
- conduct interviews with suppliers and authorised firms (telephone and face-to-face);
- obtain quotes against the reference system from suppliers (through questionnaires and interviews);
- obtain estimates of compliance costs from authorised firms (through questionnaires and interviews); and
- estimate the incremental cost of recording communications from mobile devices.

2.2 These are discussed in more detail in the following paragraphs.

Compile a List of Contacts

2.3 The first task in the project was to compile a list of contacts with suppliers of communications recording equipment and authorised financial services firms (see Appendix 1 for a list of contacts). Suppliers were contacted regarding the solutions that they offer for firms seeking to record communications from mobile devices and were requested to provide quotations for their solutions with regards to our reference technology. Authorised financial services firms were contacted so as to understand their view of how costly it would be to record mobile communications and their views regarding the compatibility of available solutions with their existing recording technology.

2.4 The FSA provided numerous contacts for both authorised firms (referred by their trade associations) and suppliers. We sought involvement in the study of all companies for whom contact details were provided by the FSA. In the course of our research, the number of supplier contacts increased as word spread through the industry and suppliers contacted either the FSA or Europe Economics requesting permission to participate in the study. We continued to send questionnaires to suppliers that sought involvement until the deadline for responses had passed.

2.5 The communication between Europe Economics and the suppliers was accompanied by a letter from the FSA explaining the purpose of the study and ensuring the confidentiality of the responses. The same reassurances were provided for authorised financial services firms.

- 2.6 In contacting suppliers, Europe Economics explained that we did not require quotes to which the suppliers might be held at a later date, but simply estimates based on their understanding of what is required from the information contained in the questionnaire. It was also explained that there was not an intention to publish the estimates of individual companies.

Questionnaire and Reference Technologies

- 2.7 At the beginning of the project we designed questionnaires (one for suppliers of communications recording equipment and one for authorised financial services firms) requesting information needed for addressing the study's objectives.¹ Among other things, the questionnaire was designed to examine the ability of the market to absorb a significant increase in demand for equipment within a limited time period, without driving up costs and whilst delivering an effective service to all clients. Questionnaires were sent to all suppliers and financial services firms on our contact list and deadlines were set for responses.
- 2.8 The cost of a recording system is likely to differ depending on its sophistication and the size of the purchasing company. For example, depending on the sophistication of the recording solution it may be simple or difficult to search for the requested recordings and the cost of these searches is likely to depend on the level of sophistication.
- 2.9 Given this, the suppliers questionnaire specified in terms of three reference technologies the different set of offerings for which the company should provide us with quotes. The reference technologies specified the minimum capabilities of the recording solutions and would ensure that when determining the additional cost to firms we have the minimal costs of meeting the requirements. The reference technologies presented in the questionnaires are specified below.

Reference technologies

- 2.10 The specification of the recording system is as follows:
- Record and store mobile telephone calls;
 - Store SMS messages;
 - Store MMS messages;
 - Store instant message (IM) conversations;
 - Record and store video communications;
 - Store outgoing and incoming emails;
 - Store pin to pin messages (used in BlackBerry to BlackBerry communication).
- 2.11 The questionnaires specified that quotes were sought for the cases where the above communications are stored for six months and that the solutions should allow retrieval of recordings within one month.
- 2.12 The reference installations are specified in the Tables below:

¹ The questionnaires appear as annex 2

Table 0.1: Reference Installation One – Small Company

Communications Medium	Communications Solution	Cellular Phone Users Requiring Recording	No of Users Already Recorded	Existing Storage Period (Months)
Cellular phones	BlackBerry	1	0	0
Cellular phones	iPhone	1	0	0

Table 0.2: Reference Installation Two – Medium Company

Communications Medium	Communications Solution	Cellular Phone Users Requiring Recording	No of Users Already Recorded	Existing Storage Period (Months)
Cellular phones	BlackBerry	45	0	0
Cellular phones	iPhone	5	0	0

Table 0.3: Reference Installation Three – Large Trader

Communications Medium	Communications Solution	Cellular Phone Users Requiring Recording	No of Users Already Recorded	Existing Storage Period (Months)
Cellular phones	BlackBerry	500	0	0

- 2.13 By explicitly specifying different criteria for small, medium and large authorised firms, the questionnaire tries to capture any cost variation arising from the differences in the size of the firms or, more precisely, the volume of mobile communications.
- 2.14 Suppliers of communications solutions were asked to provide cost estimates of implementing recording and storage for the types of companies and for the media of communications shown above.

Obtaining Cost Quotes

- 2.15 Once the questionnaires were finalised and agreed with the FSA, Europe Economics sent them to the suppliers of solutions and the authorised financial services firms listed in the Appendix. Deadlines for responses were set for each group of companies to ensure compliance with the study's time schedule as defined in the Statement of Requirements. An extension to the deadline for the project and responses to the questionnaires was subsequently given following several authorised firms contacting the FSA stating that it would be impossible for them to respond within the initial timeframe.
- 2.16 At the start of the questionnaire, suppliers were asked to clarify whether their company provides solutions which could meet some or all of the requirements for any of the reference installations. We explained that our definition of 'provides solutions' was that the companies have provided a solution to at least one corporate customer in Europe or North America, and that technology underpinning the solution is stable and mature.

- 2.17 For each of the solutions provided, respondents to the questionnaires were asked to provide the typical price per user of the solution as well as a price range (defined by the minimum and maximum price charged for similar solutions). We further broke down the requested quotes into:
- *initial fees*, which may include design, installation, commissioning, integration, etc.
 - *ongoing fees*, which may include system operation, management, maintenance, usage charges, ongoing licences, upgrades etc.
- 2.18 The questionnaire further stated that the quoted price should include a level of system redundancy and stand-by capability commensurate with the size of the company and which would ensure that the company could continue to be compliant with the recording requirements shown above in the event of a disaster.

Telephone and Face-to-Face Interviews

- 2.19 In addition to requesting responses to Europe Economics' questionnaire, we arranged telephone and face to face interviews with suppliers to build our understanding of the solutions they offer. We also arranged interviews with authorised firms in order to gain insightful views into the difficulty or ease with which they would be able to introduce recording of mobile communications. For these interviews only a subset of the companies listed in the Appendix were contacted – time and budget considerations did not allow us to conduct interviews with all companies.
- 2.20 We ensured that coverage of firms was as broad as possible by taking a stratified sample of the firms for which contact details were provided to the FSA by the trade associations.

Determine the Overall Cost of Recordings

- 2.21 Upon receipt of completed questionnaires and following the completion of interviews with suppliers and authorised firms we estimated the costs to authorised firms of complying with a mobile recording requirement.
- 2.22 We present below results in terms of cost per user for each of the communications methods for which quotes were sought and aggregate these to give an estimate of overall costs to authorised firms.

3 Study Findings

In this Chapter we discuss the following issues:

- current state of play regarding the recording of mobile communications by authorised financial services firms;
- the recording solutions currently available;
- supplier and authorised firm estimates of the incremental cost of meeting a mobile recording requirement; and
- any technical difficulties that firms would expect to encounter when integrating a mobile recording solution to their existing recording technologies.

The Current State of Play

From the sample of firms that responded to our questionnaire and participated in the interview programme, no authorised firm stated that it currently has in place a recording solution which enables the recording of voice, SMS, MMS, IM, video and pin-to-pin communications from mobile telephones. One firm informed us that they already record voice communications from mobiles and some other firms currently record at least one of SMS, MMS or IM. Emails sent from or received on mobile devices are subject to the existing taping rules and hence a number of firms informed us that they currently record and store such communications.

Concurrently with the questionnaire distributed to authorised firms by Europe Economics, FSA distributed a questionnaire with narrower scope but broader coverage. From the responses to this survey, FSA found that the current prevalence of recording mobile communications is very low. Indeed, the practice is so uncommon that on the basis of questionnaire returns FSA suggested that an appropriate assumption to use in our quantitative analysis is that 0 per cent of authorised firms currently record communications from mobile telephones, with the exception of emails.

Feasibility of Recording Mobile Phone Communications

When we last reported on this subject for FSA, we found that the overwhelming majority of firms in the financial services sector did not employ mobile recording solutions. Little has changed in the intervening period, with most firms preferring to wait until the FSA requires recording from mobiles before implementing a solution.

However, several authorised firms and suppliers have indicated that the level of interest in mobile call recording is now much greater than ever before in the financial services sector. Several authorised firms have requested detailed pricing and technical proposals from suppliers and have discussed in detail how mobile recording technology might be integrated with their existing communications and recording solutions. The reasons

given for this high level of interest are that the firms in question anticipate that the FSA will mandate mobile recording and they wish to prepare for this in terms of having technical plans and budgets in place.

The supply side for mobile call recording has also evolved somewhat since we last reported on the issue. In particular, the largest provider of cellular services to City financial firms and the largest provider of managed trading turrets to the financial sector have both signed deals to distribute the same company's mobile recording solution in the UK. Although neither the cellular operator nor the provider of managed turret services has yet signed a deal within the UK financial services sector, both companies appear confident in the reliability and scalability of the underlying technology. They also have confidence in both their own and their partner's ability to integrate the technology with existing solutions.

In addition to this there are a number of other solutions, some of which are suitable for large customers and some for small customers. This is discussed in the following section.

The Available Solutions

There are two fundamental solutions for how and where the actual recording of a mobile phone voice conversation may take place: on the handset itself or on a remote voice recorder.

There are also two fundamental solutions for where the recorded calls may be stored: on a hosted server which is managed by an external third party off the customer's premises or on a server which is managed by the customer and located on the customer's premises. In actual fact, the customer is free to choose the location of this customer-managed server and hence it may be located at a third-party data centre.

The basic landscape of solutions, all of which record both incoming and outgoing calls, is described in Table 0.1.

Table 0.1: Features of available solutions

<p>Solution Type A Calls recorded on handset Recordings stored on hosted server</p>	<p>Solution Type B Calls recorded on handset Recordings stored on customer-managed server</p>
<p>Solution Type C Calls recorded on remote server Recordings stored on hosted server</p>	<p>Solution Type D Calls recorded in remote server Recordings stored on customer-managed server</p>

Solution Types A and B, in which the initial recording of the call occurs on the handset itself, transmit the recordings to the server where they will be stored by using the mobile data capability of the cellular network. This may be 3G data capability where this is available, or it may be via General Packet Radio Service (GPRS – the data capability of 2G GSM networks) where there is no 3G coverage.

Solution Types A and B require software to be downloaded onto the end user's handset. The software manages the recording of the call and the transmission of the recording to the server on which it will be permanently stored.

In the versions of Solution Types A and B that we have seen the end user has the option, at the end of the call, to determine whether or not the recording should be retained or deleted. This capability for the user to decide may be turned on or off, and versions of the handset software are available which ensure that the end user cannot opt to have any recordings deleted from the handset before transmission to the host server.

Solution Types C and D, in which the recordings are made on a remote server, also require software to be downloaded onto the end user's handset. In most of these types of solutions, this software is essentially call treatment software.

For outgoing calls using Solutions C and D, the end user dials a number as they would normally (either by entering the digits or by selecting a name from the address book on the handset), but in most cases all outgoing calls are routed by the handset software via a PABX or call server which may be managed by the customer or hosted by a third party. The PABX or call server then dials the outgoing number requested by the end user and simultaneously allows the outgoing call to be recorded by recording software. At the end of the call the recording is transferred to a server for storage and retrieval. In one solution, the handset software initiates a 3-way conference call using the cellular operator's conferencing calling capability: two of the three lines are occupied by the caller and the called party, and the third line connects a customer-managed or hosted voice recorder to the call.

For incoming calls using Solutions C and D, calls to the end user's handset are automatically diverted to the same PABX or call server used for outgoing calls. Recording of the incoming call is then initiated and a call is placed to the end user's mobile handset. The software on the end user's handset recognises the incoming number from the PABX or call server as being a valid number and accepts the incoming call. Again, in the one exception mentioned in the previous paragraph, an incoming call is placed momentarily on hold while the voice recorder is conferenced-in over the cellular network, and then the call is allowed to proceed.

Solutions A and C, where recordings are stored on a hosted server, are more suitable to small organisations, which may not have sophisticated infrastructure in place for recording of fixed line phone calls. The recordings are typically stored on a secure server which can be accessed over the Internet using a normal browser by entering a username and password.

Solutions B and D, where recordings are stored on a server managed by the customer, are more suitable for larger customers. Typically larger customers already have their own servers for storing fixed line telephone calls, and in many cases, the same server can also be used for storing mobile calls. This is possible because most mobile call recording solutions available, particularly Solution D, are compatible with the market leading call recording and storage devices used for fixed line recording. This makes search and retrieval across both fixed and mobile calls easier, since a single Globally Unique Identifier (GUI) can be used to access both types of recordings.

In Table 0.2 we compare examples of solutions in the A, C and D groups since these, we believe, will be the most likely to be taken up by authorised firms.

Table 0.2: Comparison of solutions^{2,3}

	Solution A Example	Solution C Example	Solution D Example
Target Market	Small Firms	Small Firms	Medium/Large Firms
Handsets Supported	Most Nokia phones	Blackberry, Symbian or Windows Mobile OS	Blackberry, Symbian or Windows Mobile OS
Requires new software on handsets	Yes	Yes	Yes
Is the solution network-independent?	Yes	Yes ²	Yes
Does the solution record SMS messages?	In development – costs provided	Yes	Yes
Does the solution record PIN to PIN messages?	No – Blackberry not supported	No, but client's Blackberry Enterprise Server can store these	
Does the solution record MMS and/or video?	No	No	No
Does solution integrate with existing fixed voice recording platforms?	No	No	Yes, with all major vendors' platforms
Additional call set-up delay experienced by user in making outgoing calls	None	3-5 seconds (a customized announcement or 'false' ring-back tone can be generated to fill this gap) ³	
Additional call set-up delay experienced by callers to the mobile device	None	3-5 seconds (a customized announcement or 'false' ring-back tone can be generated to fill this gap)	
Time taken for recording to be stored centrally following the end of the call	Depends on length of call and availability/speed of mobile data connection. Minimum time is around 10 seconds.	Instantaneous	Instantaneous
Results in additional call costs?	No	Yes in most cases – all outgoing calls are essentially two calls (one from the mobile handset to the call server/PABX, and one from the call server/PABX to the called party. Incoming calls which would have previously had zero cost now attract call diversion costs from the handset to the call server/PABX, plus a call cost from the call server/PABX to the handset.	
Results in additional mobile data costs?	Yes – for transmission of call recordings	Not presently, although a version of the service is under development which would transmit the dialled number for outgoing calls to the call server/PABX via mobile data. This aims to reduce call set-up times. The amount of data transmitted would be small, however.	

² In one variant of Solutions C and D, calls recording is achieved by initiating a cellular network conference call. This capability is not supported by the T-Mobile network in the UK.

³ We are aware that there may be a variant of Solution C, which involves recording calls at the point of the cellular operator's telephone exchange (known as the MSC, or Mobile Switching Centre). This variant does not require call forwarding, and therefore does not incur any call set-up delays.

The example from Solution A has the potential technical disadvantage that, following the end of the call and prior to the establishment of a successful data connection between the end-user's handset and the server, the only place where the recording exists is on the end-user's handset. In most cases, the data connection should be established immediately upon termination of the call but there are certain instances when this may not be the case. For instance the data connection may not be established immediately if:

- The handset is turned off immediately after the call or the battery runs out during the call; or
- The handset is unable to establish a data connection because of poor coverage.

If the handset is then destroyed or its system reconfigured before it is able to communicate with the remote server, any recordings made since the previous download to the server will be permanently lost.

It should be noted that no solutions on offer claimed to be able to support all types of communications from all types of handset. Although all the solutions support voice call recording, and almost all support SMS storage, very few support MMS, IM or video storage.

In subsequent analysis we did not take into account the response of the supplier of the Solution A example presented in Table 0.2 because the solution did not meet the requirements of a recording solution specified in the questionnaire. In particular, the solution records communications only from non-smart phones and hence could not record communications from BlackBerrys or iPhones.

Market Response and Service to Small Firms in Case of Surge in Demand

In general, suppliers do not foresee any major difficulty in absorbing an increase in demand of 100 per cent. A number of suppliers stated that they have developed their solution in anticipation that there might be a substantial increase in demand at some point in the future.

The reasons offered by suppliers for their confidence varied and included the following:

- The solution is designed in segments so, for example, the data centre element can readily be increased by simply increasing the hosted services and data centre bandwidth;
- The systems are built to reside on our customers own premises and are highly scalable by design; and
- Small customers are expected to accept a short term, possibly even long term, hosted solution which can be facilitated relatively easily.

Suppliers did, however, raise a couple of concerns relating to the transition period that FSA would offer to authorised firms to allow installation of recording solutions.

First, suppliers felt that there would be two spikes in the demand for recording solutions: a significant number of firms would look to put solutions in place as soon as possible after any announcement by the FSA that the mobile recording exemption is to be removed whilst others would seek to delay installation until the last possible moment. One supplier stated that because of this, the peak increase in demand might be of the order

of 1000 per cent. Another stated that it could manage this demand by temporarily providing a hosted solution for all new customers and transferring customers to a non-hosted solution, where required, at a later date.

Second, suppliers expressed concern that customer lead times must be realistic where non-hosted solutions are to be installed. Manufacturers would be able to meet a 100 per cent increase in demand but lead times would be months rather than weeks.

Considering the impact a significant increase in demand would have on the cost of solutions, the majority of suppliers believe that prices would be unchanged. One supplier stated that prices would necessarily increase by between 40 and 60 per cent at peak demand because of the additional number of working hours required to deliver solutions. Other suppliers stated that the cost of solutions would fall as the company begins to benefit from economies of scale.

Suppliers were also confident that such an increase in demand would not affect the quality of service offered to small clients, stating that they would offer an identical service quality to all clients, irrespective of size or the particular solution chosen.

Cost of Available Solutions

Typically, suppliers do not market their products solely as recording solutions but also as a means to save money on bills. However, for the purposes of this project our interest lies purely in the recording and storage capabilities of solutions. Therefore, where suppliers offer additional services we requested that any costs that are not associated with call recording be stripped out of the estimates provided in the questionnaire returns.

The majority of suppliers provide recording and storage solutions as packages which cover more than one type of mobile communication for a single price. As a result of this marketing strategy, the majority of responses to our questionnaire did not provide a breakdown of costs by communication type. For the purposes of our analysis this is not ideal as it makes quantification of the cost of recording different types of mobile communication more difficult.

We attempt to overcome this difficulty by taking two separate approaches to quantifying the cost of a mobile recording requirement. First, we utilise the limited data available on the costs of recording individual means of mobile communications. This necessarily excludes data provided by suppliers who provided costs estimates for packages alone and hence, as a second approach, we also conduct an analysis of package costs.

Analysis based on the cost of recording individual means of communications

Cost per user

To estimate the range of per user costs as reported by suppliers of recording solutions, we first calculated the cost of each recording and storage solution over a period of three years. The procedure for selecting the lowest and highest cost solutions

therefore takes into account the fact that solutions which seem attractive because of low one-off costs sometimes have greater ongoing costs and hence over a period of time might be more expensive.

Based on the three-year cost, we selected the lowest and highest cost solutions and utilised the one-off and annual ongoing costs of these solutions in subsequent analysis. The one-off and ongoing cost estimates for the various communication means, assuming that a completely new solution is required, are shown in Table 0.3 and Table 0.4 respectively.

Table 0.3: One-off cost per user

	Small (low) £	Small (high) £	Medium (low) £	Medium (high) £	Large (low) £	Large (high) £
Voice from mobile	95	1094	85	208	170	80
SMS	0	40	0	40	0	40
MMS	65	65	60	60	50	50
IM	65	40	60	60	50	60
Video	95	95	85	85	75	75
Email	65	65	60	60	50	50
Pin to pin	65	65	60	60	50	50

Table 0.4: Ongoing costs per user

	Small (low) £	Small (high) £	Medium (low) £	Medium (high) £	Large (low) £	Large (high) £
Voice from mobile	160	835	150	283	83	383
SMS	60	492	60	235	60	182
MMS	100	100	90	90	80	80
IM	50	442	45	421	45	362
Video	300	300	260	260	240	240
Email	80	80	75	75	75	75
Pin to pin	50	50	45	45	45	45

The number of suppliers of recording solutions differs between communication types. For instance, whilst nine suppliers offer a voice from mobile recording solution priced independently of other communication types, only one provided cost estimates for a video recording solution. It should also be noted that video is a future functionality and hence the costs provided for this solution are estimates and not based on current sales price.

Where more than one company supplies recording and storage equipment, the range of per user costs is reasonably wide. In contrast to the wide range of cost estimates between suppliers, each solution supplier reported that there is no variation in the per user cost of their solution related to factors other than the number of mobile devices.

We attempted to investigate what would be the additional costs to authorised firms to comply with a mobile recording requirement if they already have a mobile recording solution in place with limited capability. However, because very few firms in the financial sector have such recording capabilities suppliers found it difficult to formulate assumptions regarding the likely specification of an existing solution and hence reported costs identical to the cost of deployment from scratch.

As a result, and also because of the fact that our quantitative analysis assumes that 0 per cent of authorised firms currently record mobile communications, we do not present an analysis of the costs of compliance for firms that currently record some, but not all, mobile devices.

Total costs to authorised firms

To estimate the total cost to financial services firms of complying with a mobile recording requirement we made a number of assumptions concerning the number of mobile devices that would be captured by the recording requirement, the proportion of these devices that belong to small, medium and large firms and the proportion of mobile devices that are recorded at present.

The assumptions were agreed with the FSA and are shown in Table 0.5.

Table 0.5: Assumptions

	Small firms	Medium firms	Large firms
Number of mobile devices	4,536	4,536	41,328
Percentage not currently taped	100	100	100

The number of fixed lines was taken to be the ceiling for the number of mobile users and it was assumed that 50,400 mobile devices would fall within the remit of a mobile recording requirement. This is lower than previously reported, partly because some asset managers have since been discounted from the taping rules and partly because the recession has adversely affected employment in the financial services sector. We assumed that the discounting of asset managers from the taping rules reduced the number of fixed lines by 15 per cent and that the recession has reduced the number of lines by a further 5 per cent.

We retained the assumption used in estimating the costs of the proposal contained in CP07/9 that 82 per cent of these devices are accounted for by large authorised firms whilst small and medium-sized firms hold 9 per cent of the devices each. Finally, on the basis of questionnaire responses received by the FSA to a survey which ran in parallel to that distributed by Europe Economics, it was assumed that 0 per cent of authorised firms currently record communications from mobile devices.

Based on the above assumptions, and assuming that all users of fixed lines also use a mobile device for relevant communications, the total cost of a mobile recording requirement to authorised firms is presented in Table 0.7.

Table 0.7: Total cost to authorised firms (100% affected)

	One-off cost (low) £	One-off cost (high) £	Ongoing cost (low) £	Ongoing cost (high) £
Voice from mobile	7,800,000	9,200,000	4,800,000	20,900,000
SMS	0	2,000,000	3,000,000	10,800,000
MMS	2,600,000	2,600,000	4,200,000	4,200,000
IM	2,600,000	2,900,000	2,300,000	18,900,000
Video	3,900,000	3,900,000	12,500,000	12,500,000
Email	2,600,000	2,600,000	3,800,000	3,800,000
Pin to pin	2,600,000	2,600,000	2,300,000	2,300,000
Total	22,300,000	26,000,000	32,900,000	73,300,000
Total excluding email	19,700,000	23,400,000	29,100,000	69,500,000

The range of one-off costs is reasonably narrow – the upper bound is approximately 17 per cent greater than the lower bound – whereas the upper bound of the ongoing cost estimate is more than 120 per cent greater than the lower bound estimate. The magnitude of cost is reasonably similar to that estimated 18 months ago, although it should be noted that the population captured by the taping rules is 20 per cent lower in this study than in our previous study.

In the previous study we found the range of one-off costs for recording voice and SMS communications would be £8.7m–£11.1m based on the assumption that all those subject to fixed line recording regulations would also possess a relevant mobile device. The range of ongoing costs was estimated at between £18.8m and £23.8m based on the same assumptions. The current study has found the range of one-off costs to be £7.8m–£11.2m and the range of ongoing costs to be £7.8m–£31.7m.

The explanation for the fact that we do not observe a significant reduction in cost relative to the findings of the previous study most likely relates to the idea that the sophistication of solutions has increased over time and hence a simple comparison of the cost estimates of the two studies is misleading since quality issues are ignored. Comparing the descriptions of currently available solutions with those available 18 months ago confirms that the sophistication and reliability of solutions has improved over time.

Further evidence of improved quality comes from an analysis of cost data, noting that the assumption of 50,400 fixed lines used in the present study lies close to the mid-point of the range of 55,000–70,000 considered in the previous study. In the absence of any technological improvements and given anticipated deflation in the price of recording solutions it would be expected that the range of solution costs would lie below the range estimated in our previous study. The fact that this is not observed – the current range contains the previous range – probably suggests that there has been an improvement in the quality of solutions.

Amended assumption regarding the number of relevant mobile devices

A number of authorised firms have stated that they would typically not authorise the use of mobile phones for the conduct of business even if robust mobile call recording solutions were available. Further, if a mobile recording requirement were introduced some firms would consider limiting corporate mobiles to senior employees and fund managers so as to avoid recording costs. This could have an implication on corporate practices, but accounting for that is outside the scope of this study which is designed to assess the cost to authorised firms of complying with a mobile recording requirement.

Nonetheless, it would be imprudent not to present results which account to some extent for the fact that many employees whose fixed lines are already recorded may not be affected by a mobile recording requirement. In the absence of detailed information of how many employees will use mobile devices for relevant communications following the introduction of the proposed measures, we assume that 30 per cent of employees will be affected. On that basis, an estimate of the cost of recording communications from mobile devices is shown in Table 0.9.

Table 0.9: Total cost to authorised firms (30% affected)

	One-off cost (low) £	One-off cost (high) £	Ongoing cost (low) £	Ongoing cost (high) £
Voice from mobile	2,340,000	2,760,000	1,440,000	6,270,000
SMS	0	600,000	900,000	3,240,000
MMS	780,000	780,000	1,260,000	1,260,000
IM	780,000	870,000	690,000	5,670,000
Video	1,170,000	1,170,000	3,750,000	3,750,000
Email	780,000	780,000	1,140,000	1,140,000
Pin to pin	780,000	780,000	690,000	690,000
Total	6,690,000	7,800,000	9,870,000	21,990,000
Total excluding email	5,910,000	7,020,000	8,730,000	20,850,000

Analysis based on the cost of packages of solutions

As noted above, many suppliers offer a packaged product, whereby purchasers pay a single price which entitles them to record all types of communications for which the supplier has developed a solution. Respondents to our questionnaire offer various combinations of solutions:

- Voice and SMS;
- Voice, SMS, MMS and pin-to-pin;
- SMS, IM, email and pin-to-pin;
- SMS and pin-to-pin;
- SMS, IM and pin-to-pin.

In addition, two providers offer solutions for the full range of mobile communications covered in this study. However, each of these firms provided a breakdown of prices by type of communication and hence the costs of these solutions were discussed in the previous section.

The purpose of this section of the report is not to find the cheapest and most expensive providers for certain product combinations but to assess the cost of solutions that are available only as a specific package. The next section of the report attempts to draw together the cost estimates of suppliers that offer ‘pick and mix’ solutions and those that offer packaged solutions.

Costs per user

As in the previous section, we selected the lowest cost and highest cost packages on the basis of total cost over a period of three years. The one-off and annual ongoing costs of these solutions in subsequent analysis.⁴ These costs are shown in Table 0.11 and Table 0.13 and, of course, the costs are not additive – firms would not choose to implement both a package of voice plus SMS and a package of voice, SMS, MMS and IM.

Table 0.11: One-off costs per user

	Small (low) £	Small (high) £	Medium (low) £	Medium (high) £	Large (low) £	Large (high) £
Voice and SMS	No package	No package	710	900	160	105
Voice, SMS, MMS and IM	60	60	60	60	60	60
SMS, IM, email and pin-to-pin	0	0	20	20	20	20
SMS and pin-to-pin	250	250	150	150	100	100
SMS, IM and pin-to-pin	192	192	80	80	58	58

Table 0.13: Ongoing costs per user

	Small (low) £	Small (high) £	Medium (low) £	Medium (high) £	Large (low) £	Large (high) £
Voice and SMS	No package	No package	720	716	280	315
Voice, SMS, MMS and IM	180	180	145	145	120	120
SMS, IM, email and pin-to-pin	80	80	168	168	144	144
SMS and pin-to-pin	25	25	15	15	10	10
SMS, IM and pin-to-pin	42	42	20	20	13	13

For all packages other than voice and SMS there is only one supplier of the specific combination of solutions. It is, however, possible to purchase any combination of solutions from the ‘pick and mix’ suppliers discussed above.

⁴ An exception to this rule applied for the highest cost of a voice recording solution for small companies as we excluded from the analysis an outlier whose cost estimate was eight times greater than the next highest quote. This solution is clearly targeted at medium and large authorised firms.

The cost estimates presented in Table 0.11 and Table 0.13 have some curious features. For instance, it is cheaper to purchase a solution which records voice, SMS, MMS and IM than it is to purchase a solution which records voice and SMS alone. The explanation for this curious finding is that former solution is predominantly a hosted solution whereas the latter involves installation of hardware at the customer's premises.

Hosted solutions are typically targeted at small and medium-sized authorised firms whereas large firms typically purchase non-hosted solutions. Indeed, the provider of the voice and SMS solution does not offer a service to small firms because it recognises that small clients would not seek to use an integrated solution.

It might be argued, therefore, that comparing the two is irrelevant because the features of the solutions are so different. However, the purpose of this report is to estimate what would be the lowest cost for financial services firms to comply with a mobile recording requirement and since hosted solutions are available to firms of all sizes it is perfectly reasonable to include such solution in the comparison, even if it is not what firms would themselves choose. Firms would be free to choose a non-hosted solution but need not. The additional cost of a non-hosted solution should not, therefore, be taken into account in estimating the lower bound of compliance costs. Such choices would, of course, be accounted for in the upper bound were the most expensive solution for which costs were provided in questionnaire responses of the non-hosted variety.

The cost estimates for packages of solutions which do not involve the recording and storage of voice communications are also somewhat surprising. In this case, the package with the greatest number of services is the cheapest over three years whilst the package with fewest services is the most expensive.

Again, the explanation for this lies in the details of solution specification. The solution which records only SMS and pin-to-pin messages is integrated and managed by the customer on their own site, as is the solution which records SMS, IM and pin-to-pin. Given the similarity in the features of these solutions it is unsurprising that there is little difference in cost over a period of three years.

The solution which records SMS, IM, email and pin-to-pin is also non-hosted but the costs for this solution assumes that the customer has purchased storage from elsewhere and hence is likely to be an underestimate of the true cost of the solution to an authorised firm.

Comparison of cost of packaged and non-packaged products

It is instructive to compare package costs with the cost of purchasing package components separately from 'pick and mix' providers. Given that high and low cost estimates are the same for the vast majority of packages since there is only one provider, for this purpose we focus on lower bound cost estimates. A comparison of one-off and ongoing costs is presented in Table 0.15 and Table 0.17 respectively.

Table 0.15: Lower bound one-off costs per user

	Small		Medium		Large	
	Pick and mix £	Package £	Pick and mix £	Package £	Pick and mix £	Package £
Voice and SMS	95	No package	85	710	170	160
Voice, SMS, MMS and IM	225	60	205	60	270	60
SMS, IM, email and pin-to-pin	195	0	180	20	150	20
SMS and pin-to-pin	65	250	60	150	50	100
SMS, IM and pin-to-pin	130	192	120	80	100	58

Table 0.17: Lower bound ongoing costs per user

	Small		Medium		Large	
	Pick and mix £	Package £	Pick and mix £	Package £	Pick and mix £	Package £
Voice and SMS	220	No package	210	720	143	280
Voice, SMS, MMS and IM	370	180	345	145	268	120
SMS, IM, email and pin-to-pin	240	80	225	168	225	144
SMS and pin-to-pin	110	25	105	15	105	10
SMS, IM and pin-to-pin	160	42	150	20	150	13

Using the assumptions of Table 0.5 and assuming that all firms were to choose to implement each particular package, the minimum total cost to authorised firms is presented in Table 0.19.

Table 0.19: Lower bound total cost to authorised firms (100% affected)

	One-off cost		Ongoing cost	
	Pick and mix £	Package £	Pick and mix £	Package £
Voice and SMS	7,800,000	9,800,000	7,800,000	14,800,000
Voice, SMS, MMS and IM	13,000,000	3,000,000	14,300,000	6,400,000
SMS, IM, email and pin-to-pin	7,800,000	920,000	11,400,000	7,100,000
SMS and pin-to-pin	2,600,000	5,900,000	5,300,000	590,000
SMS, IM and pin-to-pin	5,200,000	0	7,600,000	890,000

On the basis of the tables above, for authorised firms seeking to record voice and SMS communications it would be cheaper to purchase the recording solutions separately than it would be to purchase a package. A crucial difference exists between the solutions, however, and hence the choice between purchasing separately and purchasing as a

package is not as clear cut as it seems at first glance. The lowest cost solutions priced separately are hosted solutions and hence it is unsurprising that the package, an integrated solution, is more expensive.

The package which includes voice, SMS, MMS, and IM is cheaper than purchasing solutions separately from the cheapest pick and mix suppliers. This is the reverse of the finding for voice and SMS solutions but can again be explained by analysing the details of solution specification. Whereas the package solution for voice and SMS recording was integrated and involved storage on the customer's premises, the packaged solution in this case is of the hosted variety. As has been explained above, hosted solutions are generally significantly cheaper than integrated solutions and hence it is not surprising that the packaged solution is cheaper for recording voice, SMS, MMS and IM than the package for recording voice and SMS.

There is no corresponding specification change in the cheapest combination of solutions offered by pick and mix suppliers – the same voice and SMS solutions are included in both cost estimates. Therefore, the cost of solutions provided by pick and mix suppliers can only increase as a greater number of services are included.

For packages excluding voice recording solutions the total cost of a recording solution over three years is greater if each solution is purchased separately than if a package of solutions is purchased. However, the lowest cost 'pick and mix' recording solutions for MMS, IM, email and pin-to-pin communications are offered by the same supplier. In its questionnaire response, the supplier stated that it had based costs on the assumption that each service is added separately and that if all services were added to the device together, there would be significant cost savings to the user. Depending upon the scale of such a discount, this could mean that the difference in cost of packages and individual purchase for such solutions becomes negligible.

Based on an assumption that 30 per cent of employees use mobile devices for relevant communications, the lower bound of total cost to authorised firm is as shown in Table 0.21.

Table 0.21: Lower bound total cost to authorised firms (30% affected)

	One-off cost		Ongoing cost	
	Pick and mix £	Package £	Pick and mix £	Package £
Voice and SMS	2,340,000	2,940,000	2,340,000	4,440,000
Voice, SMS, MMS and IM	3,900,000	900,000	4,290,000	1,920,000
SMS, IM, email and pin-to-pin	2,340,000	276,000	3,420,000	2,130,000
SMS and pin-to-pin	780,000	1,770,000	1,590,000	177,000
SMS, IM and pin-to-pin	1,560,000	0	2,280,000	267,000

The Views of Authorised Firms

In addition to asking suppliers to estimate the cost of providing certain recording and storage solutions to authorised firms, we asked firms themselves to estimate the cost that would be involved in complying with a mobile recording requirement.

Taking account of firms' estimates of compliance cost is important not only because they are likely to be more aware of potential incompatibility issues with their existing recording installations than are suppliers but also because it might be argued that suppliers have a business incentive to underestimate the costs. Of course, firms might equally have an incentive to overestimate the cost of compliance and hence comparing the two should provide a useful insight into the likely cost of compliance.

One difficulty in assessing the cost estimates of authorised firms is that the data is heavily related to the characteristics of the individual firm, including the specification and sophistication of its existing recording solution, the number of employees and premises and so on. Extrapolating these estimates to the population as a whole would be misleading and hence we present only estimates of per user costs.⁵

Costs for individual means of communication

The one-off and ongoing costs per user, as estimated by authorised firms, are presented in Table 0.23.

Table 0.23: Authorised firm estimates of cost per user

	One-off cost (low) £	One-off cost (high) £	Ongoing cost (low) £	Ongoing cost (high) £
Voice from mobile	160	450	20	1150
SMS	55	450	8	600
MMS	55	55	8	8
IM	55	55	8	8
Video	No independent estimate			
Email	30	30	0	0
Pin to pin	No independent estimate			

No authorised firm provided estimates for the cost of recording all forms of mobile communications and a number of firms provided a joint cost estimate for a number of communication forms and did not break these down by type. Therefore, the information base used to compose Table 0.23 was rather limited. Indeed, whilst four firms estimated the cost of recording voice communications alone and three the cost of SMS alone, only one firm separately estimated the cost of recording MMS and IM whilst no firm provided an independent estimate of the cost of recording video or pin-to-pin communications.

Email communications from mobile devices are covered by the current taping rules and hence firms should already have a recording solution in place. The questionnaire returns confirmed that many firms already have solutions in place and hence no additional costs would be involved with recording and storage of emails. However, one non-interviewed questionnaire respondent firm stated that it would incur a one-off cost of £30 per user to increase storage capacity. It is unclear why this cost would be incurred if emails are

⁵ The estimates of suppliers were less difficult to extrapolate because the system against which quotes were made was specified in the questionnaire. This included the types of phones which should be recorded and the number of users requiring recording.

being recorded and stored already. This firm does not specify additional storage costs for any other means of mobile communication and hence it is likely that the additional cost actually relates to the additional storage required as a result of recording and storing other types of communications rather than email.

For voice and SMS communications, the range of per user cost estimates is reasonably wide. However, in the main the range of costs estimated by authorised firms contains the range of costs estimated by suppliers, or lies below that estimated by suppliers. This suggests that estimates provided by suppliers are realistic and have not been driven by a commercial incentive to underestimate the true cost.

Costs for packages of solutions

As noted, a number of authorised firms did not provide a breakdown of compliance costs between different communication types but instead provided a single cost estimate for a solution which records a number of types of communications from mobiles. This is shown in Table 0.25.

Table 0.25: Authorised firm estimates of cost of packages of solutions

	One-off cost £	Ongoing cost £
Voice and SMS	90	980
Voice, SMS and pin-to-pin	229	1897
Voice, SMS, MMS, IM, Video and email	160	348

Given that the estimates presented above were made by different firms, it is not easy to draw conclusions. In particular, the fact that the lowest three-year cost estimate is for the package with the greatest number of services is probably a reflection of current advanced installation at this firm meaning that minimal upgrading is required and storage is already in place. The higher costs of other packages are likely related to the degree of system upgrading required.

4 Summary and conclusions

- 4.1 The purpose of this report was to estimate the cost to authorised financial services firms of complying with a mobile recording requirement. To this end we compiled a list of available mobile phone communications recording solutions, determined the current extent of recording of mobile communications and, through desk research and a set of interviews with stakeholders, determined the cost of these solutions to authorised firms.
- 4.2 Our preferred estimate of the cost to authorised firms of complying with a mobile recording requirement assumes that 30 per cent of employees with recorded fixed lines would conduct relevant communications on a mobile device. We base the estimate on the quotations of suppliers who provided a breakdown of cost by communication type. We do not have any information upon which we could rely to break down quotes for a package of recording solutions and do not believe it would be wise to split costs on the basis of arbitrary assumptions. The total cost to authorised firms of complying with a mobile recording and storage requirement are shown in Table 0.1.

Table 0.1: Total cost to authorised firms (30% affected)

	One-off cost (low) £	One-off cost (high) £	Ongoing cost (low) £	Ongoing cost (high) £
Voice from mobile	2,340,000	2,760,000	1,440,000	6,270,000
SMS	0	600,000	900,000	3,240,000
MMS	780,000	780,000	1,260,000	1,260,000
IM	780,000	870,000	690,000	5,670,000
Video	1,170,000	1,170,000	3,750,000	3,750,000
Email	780,000	780,000	1,140,000	1,140,000
Pin to pin	780,000	780,000	690,000	690,000
Total	6,690,000	7,800,000	9,870,000	21,990,000
Total excluding email	5,910,000	7,020,000	8,730,000	20,850,000

- 4.3 In terms of cost per mobile device, the current estimate of the cost of recording voice and SMS communications is broadly similar to the costs estimated in a Europe Economics study for the FSA 18 months ago. In that study, we suggested that the cost of mobile recording solutions would probably fall over time as the technology matured and usage became more widespread such that suppliers would begin to benefit from economies of scale. This has not happened and, in part, that might be explained by the fact that technology has matured over time and hence we are not really comparing like with like – a typical recording system today is more sophisticated than a typical recording system 18 months ago.

- 4.4 The cost of recording voice communications is greater than the cost of recording any other means of communication other than video. This is somewhat unsurprising – the volume of ‘data’ to be recorded and stored is greater in video communications than voice which, in turn, is greater than in text-based and still-picture communications.
- 4.5 Email costs have been excluded from the primary total because such communications are already covered by the taping rules introduced in PS08/1. Therefore, the cost of recording email communications would not be an incremental cost resulting from the introduction of a mobile recording requirement.
- 4.6 In summary, based on 30 per cent of those with a recorded fixed line using a mobile device for business purposes, the range of one-off costs resulting from a mobile recording requirement is £5.9m–£8.7m and the range of ongoing costs is £7.0m–£20.9m per annum.
- 4.7 Authorised firms would require a period of no less than six months to become compliant with a mobile recording requirement, although a grace period of 12 months would be preferred. Similar sentiments were expressed by suppliers who voiced concerns that a transition period of six months would be ‘tight’ and a longer period would enable them to smooth demand more effectively. Suppliers do not foresee any difficulty in meeting a significant increase in demand and have stated that the service they offer to smaller firms would not be compromised even if they experienced increased demand from larger firms.

Appendix 1: Questionnaires

Questionnaire Sent to Authorised Firms

Q1: Information About You and Your Firm	
Name of firm/group	
Job title	
Contact telephone number	
email address	
Number of premises in UK	
Number of UK employees	
Number of users for which cellular phone recording would be required	
Turnover in the past financial year (£)	

Reference Technology

We are looking for indicative estimates of the costs that your firm would incur in complying with mobile communications recording regulations. The specification of the system for which we are seeking your costs of compliance is as follows:

- Record and store mobile telephone calls;
- Store SMS messages;
- Store MMS messages
- Store instant message conversations;
- Record and store video communications;
- Store outgoing and incoming emails;
- Store pin to pin messages (used in Blackberry to Blackberry communication).

The above communications should be stored for six months and should be capable of retrieval within one month.

For each of these, we are interested in understanding the typical price per user of the solution. We have broken this down into:

- *initial fees*, which may include design, installation, commissioning, integration, etc
- *ongoing fees*, which may include system operation, management, maintenance, usage charges, ongoing licences, upgrades. etc

Your estimated cost should include a level of system redundancy and stand-by capability which is commensurate with the size of your company, and which would ensure that the company can continue to be compliant with the recording requirements shown above in the event of a disaster.

Q2: Do you believe that the systems you currently have in place comply with the reference criteria as shown above?

Yes	No

Q3: How would your firm respond if the exemption of mobile telephones from the recording rules of PS08/1 were removed? For instance, would you ban the use of mobiles on the trading floor, allow and record relevant voice communications from mobile phones but restrict usage of other functions such as SMS or allow and record the full range of mobile phone functions for relevant communications?

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Q4: Please specify what you would need in addition to what you already have so as to satisfy the criteria of mobile communications recording, storage retrieval etc. as specified above

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Q5: Do you believe that your firm would encounter any technical issues with available mobile recording solutions (e.g. compatibility issues with existing non-mobile recording systems)? If so, please describe these issues.

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Q6: Please complete the following table in respect of one-off costs and on-going costs so as to satisfy the criteria of mobile communications recording, storage retrieval etc. as specified above. If your current systems already satisfy some of the criteria, please specify only the *additional* costs incurred as a result of the recording requirement.

Please complete in respect of the *typical cost per user*

	Design/Install/Commission Per User (£)	Annual Operational Cost per User (£)
Voice from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		

Q7: Please complete the following table in respect of one-off costs and on-going costs so as to satisfy the criteria of mobile communications recording, storage retrieval etc. as specified above. If your current systems already satisfy some of the criteria, please specify only the *additional* costs incurred as a result of the recording requirement.

Please complete the following table in respect of *range of costs per user* (e.g. if per-user costs vary between office locations due to the size of the office)

	Design/Install/Commission Per User (£)	Annual Operational Cost per User (£)
Voice from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
SMS from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
MMS from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
Instant Messaging from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
Video from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
Email from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		

Pin to pin from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
SMS from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
MMS from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
Instant Messaging from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
Video from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
Email from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		
Pin to pin from cellphones		
<i>Recording</i>		
<i>Storage for 6 months & Retrieval</i>		

Q8: In addition to the direct costs of solutions such as purchase, installation etc. your firm may incur additional costs associated with complying with the criteria specified above. We are interested in the magnitude of these costs.

Please complete the following table in respect of the expected *typical costs per user*, where appropriate, and the *typical costs per request*, where appropriate

	Staff training	Retrieval in case of Data Protection Act request	Review of requested recordings by lawyers	Other (please specify)
Voice from cellphones				
<i>Recording</i>				
<i>Storage for 6 months & Retrieval</i>				
SMS from cellphones				
<i>Recording</i>				
<i>Storage for 6 months & Retrieval</i>				

MMS from cellphones				
<i>Recording</i>				
<i>Storage for 6 months & Retrieval</i>				
Instant Messaging from cellphones				
<i>Recording</i>				
<i>Storage for 6 months & Retrieval</i>				
Video from cellphones				
<i>Recording</i>				
<i>Storage for 6 months & Retrieval</i>				
Email from cellphones				
<i>Recording</i>				
<i>Storage for 6 months & Retrieval</i>				
Pin to pin from cellphones				
<i>Recording</i>				
<i>Storage for 6 months & Retrieval</i>				

Q9: How many requests for access to personal fixed-line phone recordings under the Data Protection Act have you received in the last three years as a percentage of the total number of fixed-line phone recordings? Please distinguish between requests from the FSA and requests from other regulators. (We would seek to use this to estimate the number of requests that would be made for access to mobile phone recordings)

A) FSA requests

B) Non-FSA requests

Q10: What is the shortest time period over which you believe it would be possible for your company to comply with the criteria of call recording, storage retrieval etc. as specified above?

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Q11: Could you please estimate the percentage of all relevant communications that take place via a mobile phone?

Q12: Is there anything else you would like to add which you think may help us in clarifying the costs of recording and retrieving mobile communications in the financial services sector?

Questionnaire Sent to Suppliers

Q1: Information About You and Your Firm	
Name of firm/group	
Developer or carrier of recording solution?	
Contact name	
Job title	
Contact telephone number	
email address	

Reference Technologies

We are looking for indicative prices for three reference installations.

The specification of the systems is as follows:

- Record and store telephone calls;
- Store SMS messages;
- Store instant message conversations;
- Record and store video communications;
- Store outgoing and incoming emails;
- Store pin to pin messages.

The above communications should be stored for six months and should be capable of retrieval within one month.

More detail on the reference installations is shown below:

Table 2: Reference Installation One – Small Company

Communications Medium	Communications Solution	Cellular Phone Users Requiring Recording	No of Users Already Recorded	Existing Storage Period (Months)
Cellular phones	BlackBerry	1	0	0
Cellular phones	iPhone	1	0	0

Table 3: Reference Installation Two – Medium Company

Communications Medium	Communications Solution	Cellular Phone Users Requiring Recording	No of Users Already Recorded	Existing Storage Period (Months)
Cellular phones	BlackBerry	45	0	0
Cellular phones	iPhone	5	0	0

Table 4: Reference Installation Three – Large Trader

Communications Medium	Communications Solution	Cellular Phone Users Requiring Recording	No of Users Already Recorded	Existing Storage Period (Months)
Cellular phones	BlackBerry	500	0	0

Note that in some of the reference installations we are assuming that some (but not all) of the required users already have their communications recorded.

We would like to understand the costs of implementing recording and storage for the types of companies shown above, and for the media of communications shown above.

We would like to know whether your company provides solutions which could meet some or all of the requirements for any of the reference installations. By 'provides solutions', we mean that you have provided a solution to at least one corporate customer in Europe or North America, and that technology underpinning the solution is stable and mature.

Q2: Please complete the table below to tell us whether you provide any of the solutions listed. You may add notes to the table for clarification if you wish. Solutions may be based on customer-owned technology, or a managed service provided by you, or a combination of these.				
Cost categories		Small Company (Y/N)	Medium Company (Y/N)	Large Trader (Y/N)
Voice from cellphones				
	<i>Recording</i>			
	<i>Storage & Retrieval</i>			
SMS from cellphones				
	<i>Recording</i>			
	<i>Storage & Retrieval</i>			
MMS from cellphones				
	<i>Recording</i>			
	<i>Storage & Retrieval</i>			
Instant Messaging from cellphones				
	<i>Recording</i>			
	<i>Storage & Retrieval</i>			
Video from cellphones				
	<i>Recording</i>			
	<i>Storage & Retrieval</i>			
Email from cellphones				
	<i>Recording</i>			
	<i>Storage & Retrieval</i>			
Pin to pin from cellphones				
	<i>Recording</i>			
	<i>Storage & Retrieval</i>			

For each of the solutions that you provide, we are interested in understanding the typical price per user of the solution. We have broken this down into:

- *initial fees*, which may include design, installation, commissioning, integration, etc
- *ongoing fees*, which may include system operation, management, maintenance, usage charges, ongoing licences, upgrades. etc

We realise that the cost drivers for such systems may be quite complex, and may encompass many factors other than the number of users. However, we would like to know the typical price of a solution that you would expect a financial company to require.

Your price should include a level of system redundancy and stand-by capability which is commensurate with the size of the company, and which would ensure that the company can continue to be compliant with the recording requirements shown above in the event of a disaster.

Where we have indicated that a company already has some users covered by a recording solution, you should assume that the solution they already have has been provided by you.

Q3: For those cases where your clients would require a completely new recording technology, please complete the following table in respect of one-off costs and on-going costs so as to satisfy the criteria of call recording, storage retrieval etc. as specified above. Please complete the following table in respect of typical price per user

	Small Company		Medium Company		Large Trader	
	Design/ Install/ Commission Per User (£)	Annual Operational Cost per User (£)	Design/ Install/ Commission Per User (£)	Annual Operational Cost per User (£)	Design/ Install/ Commission Per User (£)	Annual Operational Cost per User (£)
Voice from cellphones						
Recording						
Storage for 6 months & Retrieval						
SMS from cellphones						
Recording						
Storage for 6 months & Retrieval						
MMS from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Instant Messaging from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						

Video from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Email from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Pin to pin from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						

Q4: For those cases where your clients would require a completely new recording technology, please complete the following table in respect of one-off costs and on-going costs so as to satisfy the criteria of call recording, storage retrieval etc. as specified above. Please complete in respect of range of additional costs per user

	Small Company		Medium Company		Large Trader	
	Design/ Install/ Commission Per User (£)	Annual Operational Cost per User (£)	Design/ Install/ Commission Per User (£)	Annual Operational Cost per User (£)	Design/ Install/ Commission Per User (£)	Annual Operational Cost per User (£)
Voice from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
SMS from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
MMS from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Instant Messaging from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						

Video from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Email from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Pin to pin from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						

Q5: Please outline how the solutions priced above would be provided, specifically:	
A) When was the recording solution developed? Has it been tested? If so, please specify how.	
B) Is the recording solution carrier dependent? If yes, please specify carriers.	
C) Is the solution managed by you or the customer, or some combination of the two?	
D) How is the software deployed to users? Please specify.	
E) Can the software be integrated into new or existing fixed-line recording systems? Please describe.	
F) Is there any time delay and/or interference in the communication as a result of the recording solution? Please specify.	
G) Does the recording solution impact on the price of a mobile phone communication (e.g. by increasing the cost of a call)? If so, please specify how.	
H) Can the recording solution be switched off at the handset?	Y / N
I) Does the solution continue to operate when an individual 'roams'?	Y / N
J) How and where would the data be stored? Please specify if the data is held by the customer.	
K) Can the data be altered in any manner? If so, please specify how.	
L) Please specify how specific calls and communications can be searched and/or retrieved. Please specify any features such as meta-tags attached, retrieval via date/time slots etc.	
M) What disaster recovery provisions are assumed?	

Q6: For those cases where your clients would require an upgrade of their recording technology, please complete the following table in respect of additional one-off costs and on-going costs so as to satisfy the criteria of call recording, storage retrieval etc. as specified above. Please complete in respect of typical additional costs per user

	Small Company		Medium Company		Large Trader	
	Design/ Install/ Commission Per User (£)	Annual Operational Cost per User (£)	Design/ Install/ Commission Per User (£)	Annual Operational Cost per User (£)	Design/ Install/ Commission Per User (£)	Annual Operational Cost per User (£)
Voice from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
SMS from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
MMS from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Instant Messaging from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Video from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Email from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Pin to pin from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						

Q7: For those cases where your clients would require an upgrade of their recording technology, please complete the following table in respect of additional one-off costs and on-going costs so as to satisfy the criteria of call recording, storage retrieval etc. as specified above. Please complete in respect of range of additional costs per user

	Small Company		Medium Company		Large Trader	
	Design/ Install/ Commission Per User(£)	Annual Operational Cost per User (£)	Design / Install / Commission Per User (£)	Annual Operational Cost per User (£)	Design / Install / Commission Per User (£)	Annual Operational Cost per User (£)
Voice from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
SMS from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
MMS from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Instant Messaging from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Video from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Email from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						
Pin to pin from cellphones						
<i>Recording</i>						
<i>Storage for 6 months & Retrieval</i>						

Q8: Please specify the assumptions you made concerning the characteristics of the existing recording technology to produce the cost estimates of Q6 and Q7.

**Q9: Do you think your company could absorb a 100 per cent increase in the demand for solutions such as the ones described above within a limited time period?
How would this affect your pricing?**

Q10: Assuming the 100 per cent increase in demand as in the previous question how will your company facilitate the needs of your smaller customers whilst dealing with the larger ones?

Q11: Could you please clarify what each of your solutions for mobile phone recording (and storage and retrieval) involves (e.g. route mobile phone calls through a single server, use of mobile phones with built in call recording functionality etc.)?

Are inbound and outbound calls recorded in the same manner?

Q12: Do you have clients that use such solutions? Do these clients include financial services firms? If yes, what percentage of your clients are financial services firms? If no, is the solution suitable for the financial services sector?

Q13: Is there anything else you would like to add which you think may help us in clarifying the costs of recording and retrieving electronic communications in the finance sector?

List of questions

- Q1: Do you agree that mandatory recording of mobile phones should be restricted to devices issued by firms for business purposes only? If not, why not?
- Q2: What justifications are there for allowing 'relevant conversations' to continue to take place on private mobile phones? (We understand that some firms are highly dependent on private mobiles lines for business as well as personal calls.) What circumstances make 'relevant conversations' on private mobile phones essential and diversion/resumption to a fixed line impractical?
- Q3: Do you have any observation on this cost benefit analysis?

Draft Handbook text

**CONDUCT OF BUSINESS SOURCEBOOK (RECORDING OF TELEPHONE
CONVERSATIONS AND ELECTRONIC COMMUNICATIONS) (NO 2)
INSTRUMENT 2010**

Powers exercised

- A. The Financial Services Authority makes this instrument in the exercise of the following powers and related provisions in the Financial Services and Markets Act 2000 (“the Act”):
- (1) section 138 (General rule-making power);
 - (2) section 156 (General supplementary powers); and
 - (3) section 157(1) (Guidance).
- B. The rule-making powers listed above are specified for the purpose of section 153(2) (Rule-making instruments) of the Act.

Commencement

- C. This instrument comes into force on [] 2010.

Amendments to the Handbook

- D. The Conduct of Business sourcebook (COBS) is amended in accordance with the Annex to this instrument.

Citation

- E. This instrument may be cited as the Conduct of Business Sourcebook (Recording of Telephone Conversations and Electronic Communications) (No 2) Instrument 2010.

By order of the Board
[] 2010

Annex

Amendments to the Conduct of Business sourcebook (COBS)

In this Annex, underlining indicates new text and striking through indicates deleted text.

11.8 Recording telephone conversations and electronic communications

...

Recording telephone conversations, etc

11.8.5 R A *firm* must take reasonable steps to record relevant telephone conversations, and keep a copy of relevant electronic communications, made with, sent from or received on equipment:

- (1) provided by the *firm* to an employee or contractor; or
- (2) the use of which by an employee or contractor has been sanctioned or permitted by the *firm*;

to enable that employee or contractor to carry out any of the activities referred to in *COBS* 11.8.1R.

11.8.5A R A *firm* must take reasonable steps to prevent an employee or contractor from making, sending or receiving relevant telephone conversations and electronic communications on privately-owned equipment which the *firm* is unable to record or copy.

11.8.6 R The obligation in *COBS* 11.8.5R and *COBS* 11.8.5AR does not apply to:

- (1) ~~telephone conversations and electronic communications (except emails) made with, sent from or received on a mobile telephone or other mobile handheld electronic communication device; or [deleted]~~

...

...

11.8.8 R For the purposes of *COBS* 11.8.5R and *COBS* 11.8.5AR, a relevant conversation or communication is any one of the following:

...

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