The benefits of a standalone reputational database for premium rate services

A report for Ofcom

David Lewin

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Plum Consulting, 17-19 Bedford Street, Covent Garden, London, WC2E 9HP
T: +44(20) 7868 5340, **www.plumconsulting.co.uk**

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1 Introduction

In its report to Ofcom of June 2007 entitled "*The feasibility of a central registration service for premium rate service providers"*, Indepen considered five options for the development of a centralised registration scheme. These were:

- Option A, in which the existing PRS number checker is extended from the top 500 numbers plus short Codes to all PRS numbers
- Option B, in which a publicly available central registration database, showing the identity and reputations of all premium rate service providers, is developed
- Option C, in which the database of Option B is extended to provide information on the reputations of the directors of premium rate service PRS providers
- Option D, in which the database of Option B. is extended from service providers to include information providers[1]
- Option E, in which, rather than the service providers, the information providers responsible for marketing and providing the content of a PRS are regulated directly through a central registration scheme.

Cost benefit analyses (CBAs) indicated that it was in the public interest to implement Option A and that Option E should be rejected. Whether Option B, C or D should be introduced along side Option A depended upon what view policy makers took on the percentage reduction in PRS Code breaches which each option produced.

As a result of carrying out this analysis the study team also identified a sixth option. To quote from the report:

> *"**Finding 8:** There is another option which Ofcom should consider as an alternative to a central registration scheme in its PRS review. A stand alone reputational database, which provides the same on-line access and search functions for TCPs and service providers as a full central registration scheme, could capture most of the benefits of a central scheme while avoiding a significant proportion of the costs."*

There may be modest economies of scope in implementing this option - Options F - together with Option A. But otherwise the introduction of Option A has no impact on the cost benefit analysis for Option F. In contrast Option F is a potential substitute for Options B to E. This analysis suggests that policymakers should consider the introduction of Option A, and the introduction of one of Options B to F, as separate issues. In this supplementary report we focus on the latter issue.

2 Developments since the Indepen report

The PRS market has changed significantly in the 18 months since the Indepen report was written. In particular there is a shift in where regulatory problems arise. By the end of 2008 90% of complaints to Phonepay Plus were generated by mobile rather than fixed premium rate service - even though these mobile services represented only 50% of the PRS market. Yet mobile PRSs are characterised by a handful of reputable and established service providers/aggregators who provide the platforms from

[1] Typically those responsible for marketing and providing the content of a premium rate service

which many thousands of information providers promote and provide content for PRSs. This suggests that there is a growing need to regulate mobile PRS information providers in some new and more rigorous way.

With these developments in mind Phonepay Plus has started to focus more attention on how best to regulate information providers. It proposes to develop a 12th edition of the PRS Code to reflect these changing needs. Ideas under consideration include:

- Mandating registration of information providers with service providers liable for the fines on information providers if the information provider is not registered
- Requiring information providers to supply directors names as part of registration
- A carrot and stick approach to service providers/aggregators, providing them with a reputational database to use for due diligence, but imposing heavy fines if they do not use it.

A reputational database could play a central role in making the 12th Code effective. For example a database might give the PRS adjudication panel greater confidence when deciding on penalties for those in breach of the Code. The adjudicators could look at the due diligence information available from the reputational database at the time of a contract between a service provider and information provi der to see if the decision to contract was a sensible one. If not it might then impose substantial fines on the service provider. Such a mechanism has two implications for the way the reputational database might work:

- It would be important to focus on the information provider who is next in the value chain to the service provider since that is where the contract is struck (Many premium rate services involve a value chain with two or three information providers)
- The adjudicator would need to view the database at the time that the contract was struck. This means keeping copies of the database for (say) the past five years.

A database which enabled the PRS adjudications panel to act in this way should generate appropriate incentives for mobile service providers/aggregators. At the moment a service provider might terminate its contract with a problem information provider. But the latter simply contracts with a rival service provider who makes money out of the deal. If this rival knows it will be fined heavily for such contracting, when objective information available from the reputational database says it should not, then there is a good chance it will refuse to deal with the rogue information provider, who will then exit the market.

3 Options for a stand alone reputational database

Given the developments set out above there are three obvious options for a standalone reputational database. For simplicity in our descriptions we assume that any database is run by Phonepay Plus. We discuss the validity of this assumption in Section 7.

Option F1: *minor modifications to the existing adjudications database*. For the last year the adjudications database has named information providers as well as a service provider/aggregators involved in any breach of the Code. So the adjudications database itself could, with a suitable due diligence web interface added, form the reputational database. Under this option:

- A terminating communications provider (TCP) or service provider/aggregator could use the due diligence section of the Phonepay Plus web site to check whether an information provider (or service provider) has been associated with breaches of the Code since the beginning of 2008
- This information would provide due diligence information which the TCP or service provider could use in deciding whether or not contract with the information provider under consideration
- To maximise its usefulness the due diligence front-end might provide a clear statement on the limitations of the search together with the ability to search on names in the text of the adjudications as well as the information provider fields present in the database[2].

This variant on the standalone reputational database could be implemented quickly and cheaply. But it does not allow the TCP or service provider to search for the reputations of individuals who are the principals of an information provider with which a contract is being considered. This is a significant drawback. There is a significant number of individuals who have, in the past, been involved in multiple breaches while running different information providers.

Option F2: *a new reputational database which captures the reputations of individuals as well as companies via the Phonepay Plus registration database.* Under this option:

- Phonepay Plus would require information providers as well as service providers to register with it. It is possible that this will be mandatory under the next version of the Code[3]
- The register would record the names and addresses of the information provider's directors, just as the register currently captures the names and addresses of directors of service providers. It would record the information supplied by the information provider, which would not be verified
- Service providers would check that this information was accurate when contracting with an information provider. This is likely to be the most cost-effective form of verification[4]
- Phonepay Plus would require service providers to contract only with information providers who are registered. Service providers who failed to do this would be in breach of the Code
- The adjudications panel would be able to impose fines on information providers in addition to those on service providers
- The adjudications panel would send a breach letter to the service provider and information providers alleged to have breached the Code. In the breach letters it would name the directors recorded on the Phonepay Plus register at the time of the breach and give the information provider/service provider the opportunity to correct these names if necessary
- TCPs and service providers would be able to search on the names of individuals to see whether, and to what extent, they have been involved in companies which have breached the Code while they were directors. There are serious legal concerns raised by naming an individual director in

[2] There are information providers named in the text of a number of adjudications which do not appear in the information provider fields of the adjudication

[3] eg information providers would be required to register in order to offer PRS and would be in breach of the Code if they did not register by a certain date

[4] It is worth noting that this procedure requires the IP registration database to be made public so that the service provider can check that the information within it is correct when contracting with an information provider

an adjudication ruling. Such action could infringe the human rights of those named[5]. But it should be legally acceptable to allow a TCP or service provider to search a database to see if an individually named person was a director of a company at the time of the breach involving the company. This is simply a matter of fact

- The adjudications panel would review the due diligence information available to a service provider to see whether it was reasonable for it to have contracted with an offending information provider when it did. If, in the panel's opinion, a contract was not reasonable, then it might impose a heavy fine on the service provider for not carrying out adequate due diligence.

Option F3: *as Option F2 but without requiring registration of the information providers.* Option F2 offers substantially better reputational information that Option F1. But it is expensive in that it requires all information providers who contract with service providers to register with Phonepay Plus. The main function of this registration is to capture the names of directors of information providers at the time of any possible breach. A cheaper way to do this might be for Phonepay Plus to seek the names of the directors of an information provider alleged to have breached the Code from Companies House[6]. There are a number of potential problems with this alternative approach:

- The information provider may not have provided an up-to-date and/or complete record of its directors to Companies House
- This option would not help in identifying the names of the principals of organisations which are sole traders, partnerships, or overseas registered companies.
- This option might provide perverse incentives for an information provider to register itself in one of these categories to give its principals greater anonymity.

Other options and variants are also possible. For example Phonepay Plus might build a reputational database which is separate from the adjudications database but which does not allow the user to search on the reputations of named individuals. However we can safely exclude this option from our cost benefit analysis on qualitative grounds alone. Such an option generates broadly the same benefits as Option F1 while generating similar costs to the much more expensive Options F2 and F3.

We might also consider a variant on Option F1, F2 or F3 in which a TCP or service provider could search for reputations by specific class of PRS, given that some information providers are excellent at providing one type of service without breach, but consistently breach the Code went running other classes of service. It is important to consider this variant when implementing a reputational database. But we believe it has relatively little impact on a CBA and do not consider it further in this report.

4 The cost benefit analysis

Figure 1 presents the findings of our CBA in which we compare Options F1, F2 and F3 with Option C - the variant of the centralised registration scheme of the original Indepen study which offers the biggest NPV. Annex A provides the full CBAs for Options F1, F2 and F3 and lists the key assumptions made.

[5] In principle it is possible pursue a Code breach case against an individual. But this is rare. It has happened only a handful of times in the last 10 years. It is very difficult to prove that an individual, rather than the company s/he works for, is responsible for a breach.

[6] Which offers a same day e-mail service for a fee of £3 per company

Figure 1: A cost benefit analysis of the new options and Option C (all costs and benefits in £000)

Item	*Total over 5 years (£000)*			
Benefits	*Option C*	*Option F1*	*Option F2*	*Option F3*
% reduction in Code breaches assumed	2.00%	2.00%	2.00%	2.00%
Avoided costs of due diligence (1)	394	0	0	0
Avoided cost of dealing with complaints (2)	25	25	25	25
Avoided costs of investigations (3)	84	84	84	84
Avoided costs of adjudications (3)	75	75	75	75
Reduced consumer harm	2000	2000	2000	2000
Reduced losses to PRS market	3200	3200	3200	3200
Total benefits	5778	5384	5384	5384
Total discounted benefits	**5167**	**4811**	**4811**	**4811**
Costs (to the database operator)				
Design, building, testing and training (4)	182	20	182	182
Maintaining the database (4)	240	0	120	120
Infrastructure costs (4)	100	0	50	50
Adding historic reputational information (4)	16	0	16	16
Initial due diligence on service providers (6)	525	0	0	0
Ongoing due diligence on service providers (6)	315	0	0	0
Maintaining reputational information (4)	0	0	100	100
Initial registration of IPs (5)	0	0	225	0
Ongoing registration of IPs (5)	0	0	300	0
Obtaining names from Companies house	0	0	0	30
Changes to PRS Code (7)	80	0	80	80
Total costs	1458	20	1073	578
Total discounted costs	**1361**	**19**	**1002**	**538**
NPV of discounted benefits less costs	**3806**	**4792**	**3809**	**4273**

(1) To TCPs and service providers
(2) To consumers, industry and Phonepay Plus
(3) To consumers and Phonepay Plus
(4) To reputational database operator
(5) To Phonepay Plus and SPs combined
(6) To Phonepay Plus
(7) To Phonepay Plus and industry combined

In carrying out the new CBAs we use the same five-year project lifetime and 3.5% discount factor as the original Indepen study.

The main assumptions made on ***benefits*** in the CBAs are as follows:

- All of the options compared in Figure 1 lead to a 2% reduction in Code breaches. The Indepen study team chose this level of breach reduction following discussion with stakeholders. It represents a credible but conservative assumption about the likely reduction in breaches. We consider the consequences of varying it in the next section
- The centralised registration scheme of Option C means that TCPs and service providers can avoid some of the due diligence which they currently incur. This leads to the benefits shown in Figure 1
- All of the options of Figure 1 lead to a reduction in levels of complaints, investigations and adjudications, the avoided costs of which are proportionate to the reduction in the number of Code breaches
- The reduced number of breaches leads to benefits in terms of reduced consumer harm and increased confidence in PRS markets. We use the assumption set out in the Indepen study to quantify these benefits. For completeness they are reproduced in Annex B.

The main assumptions on ***costs*** are as follows:

- The cost of designing, building, testing, and training staff to use, a reputational database under Options F2 and F3 are the same as those of Option C. These costs are significantly smaller however for Option F1 - at £20,000. This option simply involves adding a due diligence interface to the existing Phonepay Plus adjudications database
- We assume that the cost of maintaining the reputational database and the hardware and software which it uses are half that of a central registration system. This reflects the smaller scale of the reputational database. The database for the central registration scheme contains information on some 7000 service providers while the reputational database of Option F might contain around 1500 adjudication entries by Year 3 of the project. Under Option F1 these costs are negligible, since this option uses the existing adjudications database
- Under Options F2 and F3 adding historic reputation information costs the same as under Option C. This cost, of £16,000, is reasonable providing that historic information is limited to service providers from January 2006 on and information providers from January 2008 on. Again these cost are negligible under Option F1
- Option C requires Phonepay Plus to carry out initial and ongoing due diligence on service providers. This function is not required with a standalone reputational database. So this cost is zero for all three variants of Option F
- It costs £25,000 each year, or £100,000 over four years, to ensure that the information entered into the reputational database on the names of those involved in breaches are correct
- It costs £25,000 each year to ensure that the information entered into the reputational database on the names of those involved in breaches is correct
- There is a requirement to add information to the reputational database under Options F2 and F3. We estimate this at one full-time equivalent staff member at a cost of £25,000[7]

[7] Given that we expect information on 200 to 250 adjudications, each requiring about a days work, to be added to the reputational database each year

- Option F2 requires registration of information providers as well as service providers on the Phonepay Plus registration database. We assumed that there are 15,000 information providers, each costing £15 for initial registration and £5 per annum for ongoing maintenance. This estimate is designed to cover the costs of both Phonepay Plus and the information providers
- Option F3 requires Phonepay Plus to obtain information on the names of directors from Companies House. We assume the cost is £25 per information provider including a £3 fee to Companies House for 300 information providers per year
- Part of the costs of any Code change required to implement the options should be assigned to the reputational database. We estimate that the move to the 11th Code cost Phonepay Plus and the PRS industry combined around £300,000. We have assigned code change costs of £80,000 to Option C and to each of Option F2 and F3. Option F1 does not require any changes to the existing Code
- Under Options F2 and F3 the adjudications panel would review the information available from the reputational database at the time of the breach to see whether it was reasonable for the service provider involved to have contracted with the information provider and, if not, what fine to impose on the service provider. This is only a small addition to the adjudication process and we assume that the incremental cost of carrying it out is zero.

5 A comparison of the CBAs

Figure 2 compares the four central registration scheme options of the Indepen study with the three variants of Option F for a standalone reputational database. We have compared the options in three ways:

- The first row of Figure 2 specifies the NPV of each option on the assumption that each reduces the level of Code breaches by 2% by providing due diligence information to TCPs and service providers.
- The second row specifies the percentage reduction in Code breaches which is required before each option generates a positive NPV
- The third set of rows specifies the reputational information which each option would provide for due diligence purposes.

Studying Figure 2 suggests that:

- Option F1 is best, followed by Options F2 and F3. These options are superior to any of the centralised registration scheme Options B to E
- Option F1 costs very little, generates significant benefits and can be implemented quickly. It is an obvious option for immediate implementation.

Figure 2: The options compared in terms of NPV

Item	*Option*						
	B	*C*	*D*	*E*	*F1*	*F2*	*F3*
NPV of option (£m) assuming 2% reduction in breaches	3.80	3.81	2.70	-3.10	4.79	3.81	4.27
% reduction in breaches required for +ve NPV	0.42%	0.42%	0.87%	na	0.01%	0.42%	0.22%
Reputational information to TCPs and SPs:							
on SPs	yes	yes	yes	no	yes	yes	yes
on IPs	no	no	yes	yes	yes	yes	yes
on named individuals in SPs	no	no	no	no	no	yes	yes
on named individuals in IPs	no	yes	no	no	no	yes	most

The analysis of Figure 2 does not mean that a stand alone reputational database, like that of Option F2 or F3, is not worth implementing. As Figure 2 shows Option F1 provides only limited due diligence information when compared with Option F2 or F3. But it is not clear from our CBA which of Options F2 and F3 is better:

- On the one hand Option F3 generates significantly lower costs. As a result it is worth implementing providing that it reduces breaches by further 0.2% when compared with Option F1. In contrast Option F2 is worth implementing provided it reduces breaches by a further 0.4% when compared with Option F1.
- On the other hand Option F2 offers a more secure and reliable reputational service in that it ensures that the names of the principals of sole traders, partnerships and overseas registered companies are captured ahead of any breach.

Overall our analysis suggests that:

- Options B to E should be rejected
- Option F1 should be implemented immediately
- Policymakers should also implement one of Options F2 and F3 if they judge that it provides additional reductions in Code breaches in excess of those indicated above.

Policy makers might decide to go ahead immediately with the implementation of Option F2. Alternatively they might implement Option F3 for a 12 month period before deciding on whether or not to move to Option F2. There is very little incremental cost in taking this step wise approach. Under Option F3 Phonepay Plus would build the reputational database which would then be used under Option F2 without modification. However there is a cost in terms of the benefits foregone from a delayed implementation of Option F2 if Option F3 proved ineffective. In the extreme case in which Option F3 did nothing to reduce code breaches whilst Option F2 lead to a 2% reduction, this lost benefit would be around £1.2 million each year

6 The robustness of the analysis

Are the benefits of the CBA overstated? Options B, C, D and F all generate substantial NPVs. This leads us to ask why a commercial body has not stepped in to provide a central registration service or reputational information service to TCPs and service providers. The lack of such entry might suggest that the benefits associated with the introduction of these databases are overstated.

In practice the lack of entry reflects the fact that all the information required to run the database has not been in the public domain:

- Options B, C, D and F all require access to the existing service provider registration database run by Phonepay Plus. Currently this information is held privately by Phonepay Plus
- In addition Options D and F require access to information on information providers associated with adjudications. Until recently this information was held privately by Phonepay Plus.

In addition lack of entry reflects the fact that a viable commercial service, under all options except F1, would require changes to the Code. This is something which is under the control of Ofcom and Phonepay Plus.

7 Who should run a reputational database?

If Option F is implemented there are strong arguments which suggest that Phonepay Plus should run the reputational database required rather than an independent commercial third-party:

- The Indepen study showed “almost universal agreement” amongst the wide range of stakeholders consulted that Phonepay Plus should run any central registration database which was established. It is reasonable to assume that stakeholders would hold the same view on the reputational database
- Phonepay Plus is the body responsible for the conduct of the adjudications from which the reputational information of the database is assembled. Making Phonepay Plus responsible for the database would help maximise the chance that the information on the database is accurate at the lowest operational costs
- Phonepay Plus is independent of industry players but has an in-depth understanding of the industry. A commercial third-party which was independent of the industry would have a steep learning curve to climb before it could run the reputational database efficiently. On the other hand a commercial third-party which was involved in the industry would be unacceptable to many PRS players.

Annex A: Cost benefit analysis of Option F

Option F1 Using the adjudications database for due diligence

Year		0	1	2	3	4	5	Total
Discount factor		1	0.966	0.934	0.902	0.871	0.842	
Benefits								
Avoided cost of receiving complaints (£)			4,980	4,980	4,980	4,980	4,980	24,900
Avoided costs of investigations (1) (£)			16,800	16,800	16,800	16,800	16,800	84,000
Avoided costs of adjudications (1) (£)			15,000	15,000	15,000	15,000	15,000	75,000
Reduced consumer harm (£)			400,000	400,000	400,000	400,000	400,000	2,000,000
Reduced losses to PRS market (£)			0	800,000	800,000	800,000	800,000	3,200,000
Total benefits (£)		0	436,780	1,236,780	1,236,780	1,236,780	1,236,780	5,383,900
Total discounted benefits (£)		0	422,010	1,154,547	1,115,505	1,077,782	1,041,336	4,811,180
Set up costs								
Design, building, testing and training (£)			20,000					20,000
Adding historic reputational information (£)			0					0
Changes to PRS code (£)		0						0
On going costs								
Due diligence process (£)		0	0	0	0	0	0	0
Maintaining the database (£)				0	0	0	0	0
Infrastructure costs (£)			0	0	0	0	0	0
Update of database (£)				0	0	0	0	0
Total costs (£)		0	20,000	0	0	0	0	20,000
Total discounted costs (£)		0	19,324	0	0	0	0	19,324
Net discounted benefits (£)		0	402,686	1,154,547	1,115,505	1,077,782	1,041,336	4,791,856
Assumptions								
Discount rate	3.50%							
Harm reduction	2.00%							
Reduction in code breaches			2%	2%	2%	2%	2%	
Reduction in number of complaints/investigations			2%	2%	2%	2%	2%	
Number of compliants			12000	12000	12000	12000	12000	
Number of investigations			1200	1200	1200	1200	1200	
Time per complaint - PP+ (hours)			0.75	0.75	0.75	0.75	0.75	
Time per complaint - consumer (hours)			0.4	0.4	0.4	0.4	0.4	
Cost per hour - PP+ and industry (£)			25	25	25	25	25	
Cost per hour - consumer (£)			5	5	5	5	5	
Cost per investigation - PP+ (£)			500	500	500	500	500	
Cost per investigation - industry (£)			200	200	200	200	200	
Number of adjudications			250	250	250	250	250	
Cost per adjudication - PP+ (£)			1500	1500	1500	1500	1500	
Cost per adjudication - industry (£)			1500	1500	1500	1500	1500	
Consumer harm from code breaches (£000)			20000	20000	20000	20000	20000	
PRS market increase (£) per £1 reduction in consumer harm			0	2	2	2	2	

(1) To PhonepayPlus and the industry

Option F2 Building a standalone database and registering information providers

Year	0	1	2	3	4	5	Total
Discount factor	1	0.966	0.934	0.902	0.871	0.842	
Benefits							
Avoided cost of receiving complaints (£)		4,980	4,980	4,980	4,980	4,980	24,900
Avoided costs of investigations (1) (£)		16,800	16,800	16,800	16,800	16,800	84,000
Avoided costs of adjudications (1) (£)		15,000	15,000	15,000	15,000	15,000	75,000
Reduced consumer harm (£)		400,000	400,000	400,000	400,000	400,000	2,000,000
Reduced losses to PRS market (£)		0	800,000	800,000	800,000	800,000	3,200,000
Total benefits (£)	0	436,780	1,236,780	1,236,780	1,236,780	1,236,780	5,383,900
Total discounted benefits (£)	0	422,010	1,154,547	1,115,505	1,077,782	1,041,336	4,811,180
Set up costs							
Design, building, testing and training (£)		182,000					182,000
Adding historic reputational information (£)		15,625					15,625
Changes to PRS code (£)	80,000						80,000
Initial registration of IPs (£)	225,000						225,000
On going costs							
Due diligence process (£)	0	0	0	0	0	0	0
Maintaining the database (£)			30,000	30,000	30,000	30,000	120,000
Infrastructure costs (£)		10,000	10,000	10,000	10,000	10,000	50,000
Update of database (£)			25,000	25,000	25,000	25,000	100,000
Maintaining IP registrations (£)			75,000	75,000	75,000	75,000	300,000
Total costs (£)	305,000	207,625	140,000	140,000	140,000	140,000	1,072,625
Total discounted costs (£)	305,000	200,604	130,691	126,272	122,002	117,876	1,002,445
Net discounted benefits (£)	-305,000	221,406	1,023,856	989,233	955,780	923,459	3,808,734
Assumptions							
Discount rate	3.50%						
Harm reduction	2.00%						
Reduction in code breaches		2%	2%	2%	2%	2%	
Reduction in number of complaints/investigations		2%	2%	2%	2%	2%	
Number of compliants		12000	12000	12000	12000	12000	
Number of investigations		1200	1200	1200	1200	1200	
Time per complaint - PP+ (hours)		0.75	0.75	0.75	0.75	0.75	
Time per complaint - consumer (hours)		0.4	0.4	0.4	0.4	0.4	
Cost per hour - PP+ and industry (£)		25	25	25	25	25	
Cost per hour - consumer (£)		5	5	5	5	5	
Cost per investigation - PP+ (£)		500	500	500	500	500	
Cost per investigation - industry (£)		200	200	200	200	200	
Number of adjudications		250	250	250	250	250	
Cost per adjudication - PP+ (£)		1500	1500	1500	1500	1500	
Cost per adjudication - industry (£)		1500	1500	1500	1500	1500	
Consumer harm from code breaches (£000)		20000	20000	20000	20000	20000	
PRS market increase (£) per £1 reduction in consumer harm		0	2	2	2	2	
No. of IPs	15000						
Cost per initial registration (£) (1)	20						
Ongoing cost pa of maintaining registration (£) (1)	5						
Adjudications last 5 years	1250						
Time per adjudication to add to database (hours)	0.5						

(1) To PhonepayPlus and the industry

Option F3 Building a standalone database but leaving information providers unregistered

Year	0	1	2	3	4	5	Total
Discount factor	1	0.966	0.934	0.902	0.871	0.842	
Benefits							
Avoided cost of receiving complaints (£)		4,980	4,980	4,980	4,980	4,980	24,900
Avoided costs of investigations (1) (£)		16,800	16,800	16,800	16,800	16,800	84,000
Avoided costs of adjudications (1) (£)		15,000	15,000	15,000	15,000	15,000	75,000
Reduced consumer harm (£)		400,000	400,000	400,000	400,000	400,000	2,000,000
Reduced losses to PRS market (£)		0	800,000	800,000	800,000	800,000	3,200,000
Total benefits (£)	0	436,780	1,236,780	1,236,780	1,236,780	1,236,780	5,383,900
Total discounted benefits (£)	0	422,010	1,154,547	1,115,505	1,077,782	1,041,336	4,811,180
Set up costs							
Design, building, testing and training (£)		182,000					182,000
Adding historic reputational information (£)		15,625					15,625
Changes to PRS code (£)	80,000						80,000
Initial registration of IPs (£)	0						0
On going costs							
Due diligence process (£)	0	0	0	0	0	0	0
Maintaining the database (£)			30,000	30,000	30,000	30,000	120,000
Infrastructure costs (£)		10,000	10,000	10,000	10,000	10,000	50,000
Update of database (£)			25,000	25,000	25,000	25,000	100,000
Getting directors names from Companies House (£)			7,500	7,500	7,500	7,500	30,000
Total costs (£)	80,000	207,625	72,500	72,500	72,500	72,500	577,625
Total discounted costs (£)	80,000	200,604	67,680	65,391	63,180	61,043	537,897
Net discounted benefits (£)	-80,000	221,406	1,086,868	1,050,114	1,014,603	980,293	4,273,283
Assumptions							
Discount rate	3.50%						
Harm reduction	2.00%						
Reduction in code breaches	0	2%	2%	2%	2%	2%	
Reduction in number of complaints/investigations		2%	2%	2%	2%	2%	
Number of compliants		12000	12000	12000	12000	12000	
Number of investigations		1200	1200	1200	1200	1200	
Time per complaint - PP+ (hours)		0.75	0.75	0.75	0.75	0.75	
Time per complaint - consumer (hours)		0.4	0.4	0.4	0.4	0.4	
Cost per hour - PP+ and industry (£)		25	25	25	25	25	
Cost per hour - consumer (£)		5	5	5	5	5	
Cost per investigation - PP+ (£)		500	500	500	500	500	
Cost per investigation - industry (£)		200	200	200	200	200	
Number of adjudications		250	250	250	250	250	
Cost per adjudication - PP+ (£)		1500	1500	1500	1500	1500	
Cost per adjudication - industry (£)		1500	1500	1500	1500	1500	
Consumer harm from code breaches (£000)		20000	20000	20000	20000	20000	
PRS market increase (£) per £1 reduction in consumer harm		0	2	2	2	2	
No. of IPs	15000						
Cost per initial registration (£) (1)	20						
Ongoing cost pa of maintaining registration (£) (1)	5						
Adjudications last 5 years	1250						
Time per adjudication to add to database (hours)	0.5						

(1) To PhonepayPlus and the industry

Annex B The benefits of reduced code breaches

B1 Introduction

Reducing the number of code breaches leads to two substantial benefits:

- A reduction in consumer harm
- An increase in consumer confidence in the PRS markets which leads to market stimulation and increased consumer welfare.

We provide order of magnitude quantification of the scale of these benefits in this annex. The text is largely taken from the Indepen report.

B2 Reducing consumer harm

The Code is designed to protect PRS consumers from harm. Consumer harm from code breaches covers a range of potential losses and costs. These breaches may include misleading advertising, unsolicited promotions, failure to disclose call costs and inadequate technical quality. The result of the breach may be to defraud consumers or to result in them receiving services of significantly less value than they expected when they entered into the transaction. There are two components:

- Direct losses to consumers which are transferred to fraudster (and which include an amount retained by the OCP/TCP).
- Intangible losses to consumers - distress from loss, reduced trust of other PRS commerce. The OFT report[8] describes the impact on victims and their families as devastating in terms of future peace of mind and health. We do not propose to quantify this benefit, as there is no evidence available on the quantitative level of harm. It should be considered as a non-quantified benefit in addition to other benefits.

We have used three different approaches to estimate the harm currently done to consumers as a result of Code breaches:

- The recent OFT estimates
- The relationship between fines levied by ICSTIS and harm done as a result of the breach which was investigated
- The harm done as a result of major recent breaches.

OFT estimates

The OFT estimated losses from mass market scams in a recent study20. It sought to estimate losses from a range of scams using consumer surveys conducted in early 2006, which included estimates of the annual losses from PRS prize draw scams and PRS rogue diallers. The study estimated that PRS prize scams costs the UK public £80m per annum, with around 1 million victims annually. It estimated

[8] OFT, Research on impact of mass marketed scams, December 2006

that internet dialler scams cost the UK public around £60m per annum, with around 400,000 victims annually. However, it is not clear how the OFT estimated annual losses from the survey data. The survey questions asked victims whether they have been the victim of a scam, rather than whether they have been a victim of a scam in the past year. It is not clear if or how this number was adjusted to estimate the annual number of victims. So the study may overstate the losses and be an inaccurate guide to the scale of current scams.

There is also another problems in using the OFT estimates. The rogue dialler scam was at its height in 2004, these numbers will be reflected in the OFT report. However, this is unlikely to be a good estimate of the expected number of victims in 2006 or 2007, due to stricter ICSTIS regulation and the diminishing number of dial up internet access customers. This means that the OFT estimates are unlikely to be a reliable guide to expected consumer harm from PRS scams over the next 5 years.

ICSTIS fines

A second approach to estimating losses is to consider the evidence from the ICSTIS adjudication process. The adjudication process records the fines levied each year and it is possible to estimate the relationship between consumer harm and the size of the fine by examining the records for selected individual cases. The size of the fine depends on a number of factors including the level of consumer harm and mitigating or aggravating factors. Based on examining the records of 10 cases, we estimated a ratio of £1 of fine for every £2 of consumer harm, with a significant degree of variability between cases. One problem with this measure is that it is limited to breaches of the code which lead to adjudications resulting in fines. Evidence from the OFT study is that many scams are unreported, for example, 2% of respondents with experience of prize scams reported them to BT and 1% to the Police and other agencies. However we note that one complaint may be sufficient for ICSTIS to investigate and take action against a scam which targets many other victims. We also note that scams which affect many people or which take large sums of money are more likely to result in complaints.

ICSTIS imposed fines of £4.7m in 2004/05, £4.5m in 2005/06 and £1.1m in 2006/07. This suggests consumer harm of between £2.2m and £9.4m per annum.

- Recent major code breaches

A third approach is to consider the major Code breaches that have taken place over the last few years and estimate the consumer harm from these breaches. Figure B1 presents a summary for three major types of breaches. In each case the scale of the harm is measured in tens of millions of pounds.

Overall findings

The potential scale of consumer losses is uncertain with estimates ranging from OFT's £140 million per annum to £2m to £9 m per annum based on fine revenues. As fine revenues are likely to understate consumer harm, and in light of the emerging evidence of reported losses from participation TV, an estimate of consumer harm of £20 million per annum appears to be reasonable as a central estimate[9]. There is some indication of a decline in the level of harm in the last 18 months, given the reduction in complaints, adjudications and fines.

[9] With a need for sensitivity analysis to examine the impact on our findings of changing consumer harm to £10 million and £40 million per year

A 2% that reduction in breaches were therefore but generate a benefit of £400,000 a year or £2 million over five years.

Figure B1: The scale of consumer harm from major breaches of the Code

Breach	Loss
The Crazy Frog case	This refers to a ring tone download subscription service. Consumers subscribed to the service by texting a short code. The ICSTIS adjudication panel found that the advertisements for the service were likely to mislead some consumers, as the advertisements did not make clear that the consumers were subscribing to a £5 per week ring tone subscription service rather than purchasing individual ring tones for as little as 30p. The ring tone subscription service was extremely successful, earning £40m in the UK in 2005 and was downloaded 11 million times across Europe[10]. The extent of consumer harm is unclear. As the ICSTIS hearing noted, only some consumers were misled by the advertisement. ICSTIS received 338 complaints about the Crazy Frog service [11]
The Rogue dialer case	The rogue dialer scam involved the installation of dialer software on a consumer's PC without the knowledge of the consumer. The dialer software then made repeated calls to a PRS number at £1.50 per minute. Customers were unaware of what was taking place until they received a phone bill. ICSTIS received up to 80,000 complaints about the rogue dialer scam and estimated losses at £10 million[12] per annum at the height of the scam. In the 2005/06 the number of complaints fell sharply - ICSTIS received 2727 complaints in relation to internet dialers.
Participation Television	Code breaches relating to participation TV relate concerns that TV voting and quiz shows were taking PRS calls after the competition had closed. For example, in one week, the You Say, We Pay (Richard & Judy) show took 32,000 calls when there was no chance of winning the cash prize[13]. The X Factor, an ITV show is alleged to have overcharged viewers £200,000. These shows are still been investigated and the actual extent of consumer harm is not clear. Panorama estimated that GMTV phone in quizzes took £10 million per year for the last 4 years from callers who no chance of winning. Opera Interactive Technology, the service provider concerned has acknowledged errors in procedure in relation to these allegations[14]

B3 Increasing consumer confidence

It is likely that publicity for major breaches in the Code reduces consumer confidence in PRS. This results in:

- The PRS market being smaller than it might otherwise be
- Some services not being sold or services being sold by an alternative mechanism which is more expensive, less convenient, or inferior for some other reason.

This is a potentially significant economic loss, but it is difficult to directly link a reduction in the size of the market with any particular code breach activity. However, the suspension of a number of participation TV PRS in the wake of concerns about Code breaches provides direct evidence that Code breaches can undermine the demand for PRS. For example one PRS provider reported a 20% reduction in business in unrelated PRS sectors in the wake of participation TV scandals. We can use this statistic to make an order of magnitude estimate of the economic impact of loss of consumer confidence as follows. Let us assume that:

[10] The Times, *Crazy Frog makes £40m. That really is very annoying*, 24 December 2005.

[11] ICSTIS 2005/06 Activity Report, page 27.

[12] The Guardian, *Florida twisters dial up a fortune from Brits*, 27 November 2004

[13] NOC E –Newsletter, 22 February 2007

[14] The Times, 25/4/07

- There is one major, well publicised, breach each year
- Each major breach depresses demand by 20% for two months
- PRS generate £1200 million in revenues per year
- All of this lost revenue is lost consumer surplus

Then the economic loss is given by:

- 20% x £1200m x (2/12) months = £40 million per year

It is reasonable to assume that the lost revenue is of the same order of magnitude as the consumer harm itself (estimated at £20 million per year in Section B2). Our estimate passes this sanity check.

In the light of these calculations we assume that the reduction in code breaches increases consumer confidence in PRS and therefore increase the size of the potential market. This effect is likely to be lagged ie consumer spending on PRS rises N months after a cut in Code breaches. We assume an increase in PRS of £2 for every £1 reduction in consumer harm, 12 months after the reduction in Code breaches. So a 2% reduction in code breaches leads to a benefit of £800,000 per year or £3.2 million over a four-year period[15].

[15] Rather than five years given the 12 months lag in benefits