Financial Services Authority

Firm-level Predictors of Consumer Loss Through Poor Financial Advice

Independent research for the FSA by Europe Economics

Europe Economics
Chancery House
53-64 Chancery Lane
London
WC2A 1QU

Tel: +44 (0) 20 7831 4717
Fax: +44 (0) 20 7831 4515
www.europe-economics.com

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This independent report has been prepared for the FSA by Europe Economics (EE). Although the FSA has been given an opportunity to comment on the report, the report contains the findings and recommendations of EE and we do not accept responsibility for anything contained in the report, and the report does not necessarily reflect the FSA's views.

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1 EXECUTIVE SUMMARY

1.1 This document reports the findings of a study commissioned by the Financial Services Authority (FSA), building on its proposals in DP07/4 to investigate the use of risk-based prudential requirements for non-MiFID (Markets in Financial Instruments Directive) personal investment firms (PIFs). The study, conducted between September and December 2007

(a) explores concepts of consumer loss in the context of poor financial advice;

(b) analyses the available data to attempt to identify drivers of consumer loss from poor financial advice by personal investment firms;

(c) conducts a high-level cost-benefit analysis of the use of risk-based prudential requirements.

Context[1]

1.2 A PIF is "a firm for whom the most substantial part of its gross income is derived from a) advising on investments, or arranging deals in investments, in relation to packaged products; and b) managing investments for retail customers".

1.3 PIFs that do not hold client assets and do not manage or deal in investments are known as non-MiFID PIFs because they are exempted from MiFID. The FSA authorises over 5,000 non-MiFID PIFs, which employ approximately 28,000 advisers. A "network" is a PIF which has either five or more appointed representative firms (ARs); or fewer than five who between them have 26 or more advisers.

1.4 Currently, capital adequacy requirements for PIFs are stratified by the number of employed investment advisers: firms with 25 or fewer advisers are required to hold a flat-rate of not less than £10,000. PIFs with more than 25 advisers are subject to Expenditure Based Requirements (EBR). The EBR is four weeks expenditure for firms, or 13 weeks if the firm is a network.

1.5 PIFs that undertake insurance mediation business are subject to the Insurance Mediation Directive (IMD), prescribing professional indemnity insurance (PII) requirements; however, smaller PIFs not subject to IMD are instead required to hold PII insurance at levels set by the FSA. Cover is on a "claims made" basis, and thus covers complaints from any previous period in the firm's operation which arise during the cover period.

1.6 In July 2007 the FSA published a discussion paper, DP07/4[2], on the PIF market. The paper was prompted by recent concerns that the PIF market was not functioning as well

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1 For further details, see Section 3.

2 FSA (2007) "Discussion paper 07/4: Financial Services Authority review of the prudential rules for personal investment firms" http://www.fsa.gov.uk/pages/Library/Policy/DP/2007/07_04.shtml

as it could be; and, specifically, that this was a result of inadequate prudential rules. Therefore, it examined the effectiveness of the current prudential requirements for PIFs in achieving their intended consumer protection outcomes (please see "Role of Prudential Requirements for PIFs" section below for more detail).

1.7 DP07/4 considers that the possibility of making prudential requirements may depend upon those characteristics of firms that might be drivers of increased risk of consumer loss. Thus the paper attempts to reach a conclusion about how new risk-based prudential requirements can stem the frequency of mis-selling, reduce its impact on consumers, and enable firms to wind down in an orderly way.

Consumer Loss Arising from Poor Financial Advice[3]

1.8 The study distinguishes between two concepts of consumer loss:

(a) Structural consumer detriment — consumer welfare loss compared with a well-functioning market outcome.

(b) Ex post consumer detriment — actual consumer losses experienced compared with reasonable expectations.

1.9 We argue that structural consumer detriment is conceptually superior, because

(a) It recognises loss from transactions that would have been advantageous but never take place — which are ignored by approaches that focus on actual outcomes.

(b) It covers the impact on all consumers, and thus automatically recognises that market or regulatory failures typically will not damage all consumers equally, but in fact may work to the advantage of certain people.

(c) Because it is an ex ante concept, it is well-suited to situations in which consumers knowingly take on risk, as it is not dependent on the outcome.

1.10 On the other hand, there are a number of material practical disadvantages. In particular, structural detriment relies on comparing actual market transactions with those that might have arisen in a theoretical situation that by definition has not arisen. This means that it is intrinsically likely to be very difficult to measure with any precision, and estimates are likely to be subject to very wide margins of error and considerable controversy. Moreover, in order to measure consumer detriment, one must already know whether there are market or regulatory failures (the exercise being to quantify their scale), whereas sometimes the point of measuring consumer loss is so as to assess whether such failures exist at all.

1.11 Ex post consumer detriment has two great advantages for our purposes here:

[3] For further details, see Section 4 and Appendix 2.

(a) The counterfactual — what would have happened in the absence of the market or regulatory failure — is much more concrete than that for structural detriment. In the context of mis-selling we might think of it as, for example, the consumer purchasing the product he/she should have (in retrospect) been advised to buy, or as refusing to buy anything and instead investing his/her money in a risk-free bond.

(b) Our data all relate to ex post consumer detriment proxies.

1.12 Further, we argue that in the case of mis-selling, if measures can reduce ex post consumer detriment without creating material additional regulatory cost or competitive distortion, that should have the result of reducing structural consumer detriment also.

Data[4]

1.13 Data were drawn from sources indicated by the FSA, identified by Europe Economics, and proposed by firms during an interview programme[5].

Data on consumer loss

1.14 Data on measures of consumer loss came from the FSA and the Financial Services Compensation Scheme (FSCS).

1.15 The specific consumer loss concepts we construct are:

(a) Pre-abatement[6] losses, which we define quantitatively as the sum of redress paid by firms and pre-FSCS-abatement losses.

(b) The number of upheld complaints. This gives us a measure of the incidence of loss.

1.16 We argue that it would be better to have a measure of truly crystallized loss, that is, losses that are not compensated by or partially compensated by FSCS abatement (these arise because FSA rules impose a £48,000 cap on individual FSCS payouts).[7] However, the data available do not allow us to employ such a variable, in particular because we lack sufficient data on the drivers/predictors of loss (see below) for firms in FSCS default.

Data on drivers/predictors of consumer loss

1.17 This study has considered using a number of possible predictors of consumer loss, drawn from different sources of data on regulatory returns:

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4 For further details, see Section 5.
5 A list of firms interviewed appears in Appendix 1.
6 "Abatement" is the compensation paid out by either firms or the FSCS to compensate consumers for losses.
7 "The maximum level of compensation payable by the FSCS for claims against investment firms has been £48,000 since the Investors Compensation Scheme was set up in 1988 when the Financial Services Act 1986 came into force. The limit comprises 100% of the first £30,000 of the claim and 90% (a feature known as 'co-insurance') of the next £20,000." (FSA (2008) "Review of Compensation Scheme and Ombudsman Service limits and miscellaneous amendments to the Compensation sourcebook" http://www.fsa.gov.uk/pubs/cp/cp05_15.pdf.

(a) TARDIS data (reporting numbers of advisers and trainee advisers), supplied by the FSA,

(b) RMAR returns (self-reported firm characteristics submitted by PIFs), supplied by the FSA,

(c) ELIXIR data (historical files of clawback debts[8]), supplied by the FSA,

(d) FAME data (statutory information from all incorporated firms in Ireland and the UK), supplied by Bureau van Dijk.

1.18 The predictors tested in our models were:

(a) Measures of firm size and growth rate: number of advisers; rate of growth in number of advisers; revenues; rate of growth in revenue

(b) Advisers, their rate of churn (i.e. what proportion of them leave the firm each period), and their training and competence: percentage of advisers on total staff; percentage of advisers who passed exam; percentage of competent advisers[9]

(c) Clawback: value of clawed back commissions; number of clawed back commissions

(d) Financial indicators: own funds; capital and reserves; capital share (of total revenue)

(e) Appointed Representative (AR) oversight measures: number of AR files reviewed; number of AR visited

(f) Corporate structure: whether the ownership structure is individual; corporate; partnership; sole trader.

Assessment of the Data

1.19 The FSA has provided us with a very wide range of data on PIFs and we have added in additional sources. Nonetheless, the data presented above have a number of limitations and the results obtained using them should be interpreted with caution. We believe the following are the most important shortcomings of the data in order of importance.

(a) Firstly, although we have data on when consumer loss has been compensated (i.e. redress paid by firms and payments made by FSCS) or when a consumer realised that, in her opinion, the advice received was of poor quality (i.e. she complains to a PIF), because we have no data on when the poor advice was given issues of causality are very difficult to disentangle.

(b) Causality is made even more problematic to assess by a second, related, issue: the potential predictors we have (apart from a small subset contained in the FAME

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8 "Clawback" occurs when a consumer cancels a policy that would have given rise to a commission for an adviser, and for which the adviser has already been paid by the product provider. The product provider then "claws back" its overpayment. Clawback debts are clawbacks outstanding.

9 Note that "competence" here is as self-defined by firms, rather than on the basis of any assessment by the FSA.

dataset) are not available at dates before the materialisation of the losses. It is therefore difficult to determine what characteristics PIFs had at the time poor advice was given.

Factors (a) and (b) mean that when we later report correlations between losses and firm characteristics, we can claim no statistical basis for assigning causality. All we know is that some characteristic of PIFs is correlated with loss.

(c) Thirdly, 64 per cent of PIFs report that in certain reporting periods there are no complaints received and no redress paid at all, which may suggest that there are some incomplete records. This might potentially bias our results.

(d) Lastly, many of the data are self-reported by firms and not verified by any independent party. Firms may make mistakes in reporting, or sometimes even deliberately mis-report.

Results[10]

1.20 Our models investigated statistical relationships between our two measures of consumer loss and our firm-level candidate predictors of loss.

1.21 Taking the limitations set out in the previous section into account, our key findings were:

(a) Firms with fewer advisers are proportionately a more important source of consumer loss than larger firms. As the number of advisers increases one per cent, consumer loss increases by some 0.3-0.4 per cent. Indeed, we do not find any relationship at all when only firms with fewer than 26 advisers are included in our sample.

(b) The most robust indicator of consumer loss is adviser churn[11]— the higher the churn rate the higher the loss. However, we are unable to determine whether this is because adviser churn leads to consumer loss or poor financial advice (and hence consumer loss) leads to adviser churn.

(c) For larger firms with AR files, the number of AR files reviewed is associated with lower losses, probably indicating that firms use their internal controls to improve the quality of advice they give.

(d) We find no statistical correlation in the data between the qualifications and competence of advisers and consumer losses. Since it seems very like that adviser competence is, in fact, correlated with consumer losses, we interpret this statistical result as an indication of the weakness of our data.[12]

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[10] For further details, see Section 6 and Appendices 3 and 4.

[11] By this we mean the proportion of advisers that leave firms each year.

[12] In addition to the more general weaknesses of the data discussed above, in the context of competence there is the specific issue that adviser competence is defined by firms themselves, in their RMAR returns, and they have wide discretion over what "competence" means in this context.

(e) We find no statistical relationship between firm size (defined in terms of number of advisers) and the likelihood of FSCS default.

(f) We find no statistical relationship between consumer loss and corporate structure.

High-Level Costs and Benefits of Risk-Based Prudential Requirements[13]

1.22 Risk-based prudential requirements would be requirements for which the amount of capital to be held depended on characteristics of the firm that gave rise to risks of creating consumer loss or failing to provide adequate compensation once loss had occurred.

1.23 Broadly speaking, potential costs of risk-based prudential requirements upon non-MiFID PIFs include:

(a) Costs of complying with the regulation;

(b) Behavioural and competitive distortions — because regulatory requirements can only ever imperfectly reflect risks of consumer loss, prudential requirements targeted at risk reduction may have unintended adverse impacts on firm and/or adviser incentives;

(c) Complexity costs for the regulator, particularly in designing and enforcing these more complicated requirements.

1.24 Potential benefits[14] include:

(a) Increased incentive to manage the risk of mis-selling, and hence a reduction in mis-selling;

(b) A reduced burden on the FSCS, since firms more likely to mis-sell would more often have capital available to pay claims.

(c) Enhanced understanding for the FSA in how to employ risk-based prudential requirements in other areas where risk-dependent regulations are used or might be used more.

1.25 However, there are many risks — including in particular the risks that apparent indicators of consumer loss would cease to be so if used in regulation and the risk of distorting behaviour in ways that create more market imperfections than they correct — that would have to be mitigated in the precise design of the regulations and choice of options.

1.26 The (not mutually exclusive) options considered[15] included:

(a) Status quo: Use of a minimum threshold below which the requirement is a constant and above which the requirement is proportional to expenditure.

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[13] For further details, see Section 7.

[14] We note that this is a list of *potential* benefits to be considered, rather than a list of benefits we claim will actually be realised in practice.

(b) Use of components (the categories below are not mutually exclusive) based on

- turnover or expenditure
- the number of advisers
- the adviser churn (i.e. what proportion of advisers leave the firm each periods)
- measures of adviser competence
- features of the PIF's internal systems and controls
- the remuneration model of the PIF
- indicators of the PIF's financial robustness.

1.27 For a number of these options, the available data did not allow quantitative analysis. Our analysis allowed us to offer quantitative analysis only of the use of components based on company turnover, on the number of advisers, and on adviser churn.

1.28 Despite the statistical relationship found between adviser churn and consumer loss, we do not recommend the FSA base capital requirements on adviser churn — noting particularly the risk of deterring firms from dismissing advisers that were mis-selling, but also because we are unable to determine the direction of causality. However, the relationship between adviser churn and consumer loss might still inform policy in other ways — e.g. by affecting when supervisory visits are triggered.

Conclusions and Recommendations

1.29 Overall, we conclude that, on the basis of the limited and otherwise imperfect data available for this study our analysis does not find robust evidence to justify, without further investigation, the introduction of prudential requirements other than those tied to the size of the PIF. In our view the risks of mis-design are considerable, and there are clear potential costs, whilst without firmer evidence that certain firm characteristics are associated with consumer loss, the benefits of making prudential requirements depend on such characteristics is highly uncertain.

1.30 We have, however, identified a number of variables which we were unable to investigate due to lack of data and on which further research might be justified.

1.31 In light of the analysis, our recommendations are as follows:

(a) **Maintain an expenditure-based requirement to apply to firms of above a certain size (e.g. with 26 or more advisers)** — We have found no predictors which explain variations in consumer loss among PIFs with 25 or fewer advisers, and hence no evidence to justify a move away from a flat-rate requirement for small PIFs — and we

[15] We note that many of these options are rejected by our analysis.

have argued below that use of some small-firm threshold is likely to be appropriate (though we have not established whether 25 is the ideal such threshold). For larger firms, a natural way to interpret our results is by saying that prudential requirements that rise proportionately with expenditure are, already, roughly risk-based requirements.

(b) **Examine carefully the possibility of including an adviser-number-based prudential requirement** — Our results suggest that, as well as maintaining a proportionate expenditure-based requirement, there might be a case for having another requirement, dependent upon the number of advisers, which increases by around 0.3-0.4 per cent for each one per cent increase in the number of advisers. We recommend that this possibility be examined in further detail.

(c) **The FSA should seek to gather data on other predictive variables**, so as to undertake analysis of whether these variables might form robust predictors of consumer loss. For instance, it might be useful to explore data on product mix, firm remuneration structure, and adviser remuneration structure.

1.32 We would emphasise that our analysis had addressed only the question of the *structure* of prudential requirements — that is, how they vary across PIFs with different levels of turnover and numbers of advisers. We are unable to advise on the wider question of whether the average level of prudential requirements in the PIF sector is set at too high or too low a level. This latter question would require deeper analysis of the incentive effects of prudential requirements and their impact on overall market outcomes.

2 TERMS OF REFERENCE

2.1 The following is drawn from the document “Statement of Requirements for Consultancy Services for a project on firm-level predictors of consumer loss through poor financial advice”, sent to Europe Economics on 2 August 2007.

> The consultants' report must assess what firm-specific variables predict the amount of loss consumers experience in episodes where they have received negligent or otherwise poor financial advice from a financial adviser employed by a non-MiFID personal investment firm (PIF). We are interested in variables that differ across firms, rather than variables common to all firms that vary over time. The study should consider the predictive power both of firm size and of other variables controlling for firm size.
>
> We are interested in predictive variables that the FSA could monitor and plausibly base 'risk-based' regulatory requirements upon. Thus, the consultants' report should consider, at a high level only, the likely costs and benefits of basing capital or other regulatory requirements such as professional indemnity insurance (PII) on any variables identified as being predictors of consumer loss. We do not expect the consultants to collect survey data on the costs and benefits of specific policy options, however.
>
> This cost-benefit analysis should enable the consultants' report to contribute significantly to ongoing debate, for example in response to DP 07/1 and DP 07/4, on whether the FSA should introduce new 'risk-based' capital requirements for non-MiFID PIFs, or new 'risk-based' regulation of other sorts.
>
> The report should test not only what variables predict consumer loss, but also at what horizon they predict it. Thus, they should test whether a variable helps predict loss 1 month in the future, or 6 or 12 months in the future. The high-level cost-benefit analysis should consider the policy consequences of basing a risk-based prudential regime on variables that predict consumer loss at different horizons.

3 OVERVIEW OF INDUSTRY AND REGULATION

Overview of Industry

3.1 A PIF is defined by the FSA as "a firm for whom the most substantial part of its gross income is derived from a) advising on investments, or arranging deals in investments, in relation to packaged products; and b) managing investments for retail customers".[16] PIFs that do not hold client assets and do not manage or deal in investments are known as non-MiFID PIFs because they are exempted from the Markets in Financial Instruments Directive (MiFID). The FSA authorises over 5,000 non-MiFID PIFs (hereinafter referred to simply as "PIFs"), which employ approximately 28,000 advisers.

3.2 Under the Financial Services and Markets Act 2000, PIFs, which partake in activities named in the Regulated Activities Order, must be authorised. Authorisation requires the firm to meet certain threshold conditions, namely honesty, competence, and resource requirements. Currently, capital resource requirements are stratified by the number of employed investment advisers: firms with 25 or fewer advisers are required to hold a flat-rate of not less than £10,000.[17] PIFs with more than 25 advisers are subject to Expenditure Based Requirements (EBR). The EBR ranges from four to thirteen weeks, depending on the nature of the firm (e.g. it is thirteen weeks if the firm is a network).

3.3 PIFs that undertake insurance mediation business are subject to the Insurance Mediation Directive (IMD), prescribing professional indemnity insurance (PII) requirements; however, PIFs not subject to IMD are also required to hold PII insurance at (varying) levels set by the FSA. Cover is on a "claims made" basis, and thus covers complaints from any previous period in the firm's operation which arise during the cover period.

3.4 All PIFs advise retail consumers on packaged products distributed from life insurance companies and other providers. Most PIFs also advise on general insurance (76 per cent) and/or mortgage products (57 per cent). A "network" is a PIF which has either five or more appointed representative firms (ARs); or fewer than five who between them have 26 or more advisers. ARs are separate legal entities which might be limited companies, sole traders or partnerships. Networks are responsible for large volumes of business, and approximately 8,700 ARs — which are not required to be directly authorised by the FSA — operate through networks.

3.5 Most PIFs are small, and 83 per cent employ fewer than five advisers. Figure 3.1 shows the spread of PIFs in 2005/6 by number of advisers: "small" firms are those with ten or fewer, "medium" have between 11 and 100, "large" have between 101 and 1,000, and "very large" above one thousand.

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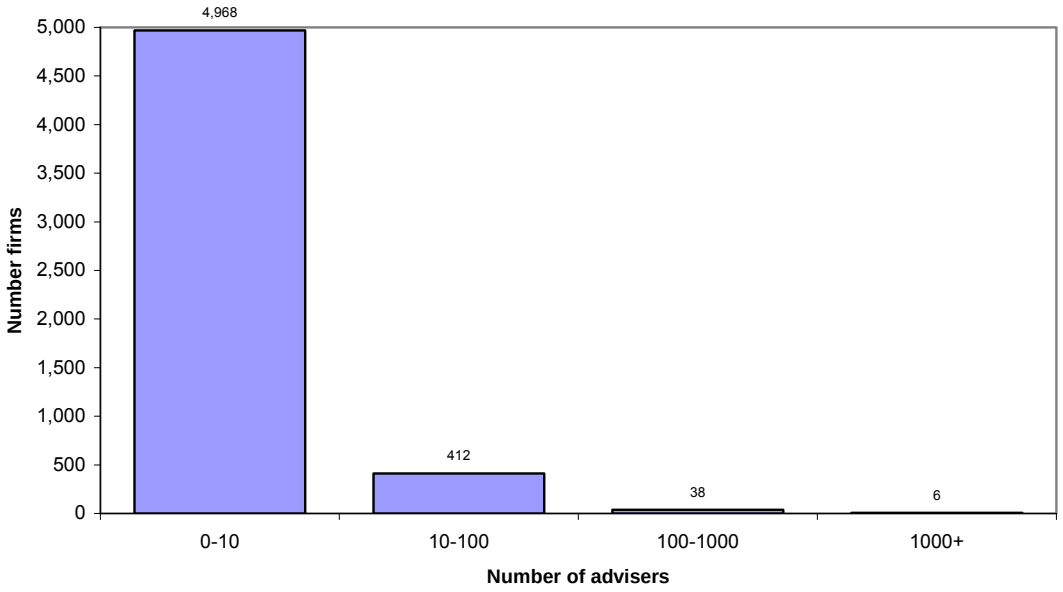
[16] FSA (2007) "Discussion paper 07/4: Financial Services Authority review of the prudential rules for personal investment firms" http://www.fsa.gov.uk/pages/Library/Policy/DP/2007/07_04.shtml

[17] This refers to own funds. Unincorporated firms lacking insufficient business assets may use their surplus personal assets to meet this requirement.

Figure 3.1: Number of PIFs by size (2005/6)



Source: FSA, FSCS, and RMAR, 2005-06

3.6 In recent years, the UK retail climate shifted as a result of the new depolarisation regime. Depolarisation gave industry firms the ability to be more flexible in providing advice to their customers and to offer a wider range of products. Previously advisers were "independent" — i.e. advised on products from the whole of the market — or "tied" — i.e. advised on the products of only one provider. Following the new rules advisers can also offer "multi-tied advice" using a panel of providers. Two important benefits of depolarisation are that consumers should find it easier to shop around for investment products and to assess whether their adviser is providing value for money; and that greater competition will be facilitated between different business models for producing financial advice.

3.7 There has also been significant consolidation over the last few years. For example, a group of large networks merged in 2003 to form Sesame Ltd. However, apart from such large networks, the average movement has been towards smaller firm sizes.[18]

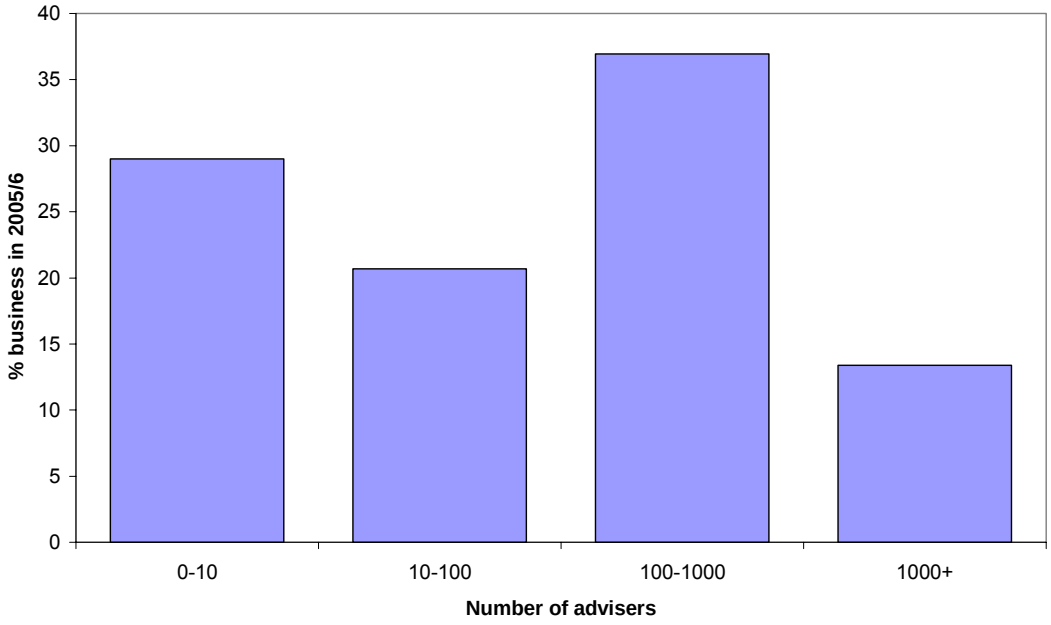
3.8 Figure 3.2 shows the breakdown of firms by aggregate market volume of business.

3.9 In the near future, there may be significant further developments. According to the Retail Distribution Review (RDR), government-led initiatives such as a Generic Advice service and Personal Accounts are intended to enable people to make better provision for their

[18] FSA (2008) Revision commentary.

future, and are likely to lead to a growing number of people that need and want advice on their financial affairs. One idea offered in the RDR is known as Customer Agreed Remuneration (CAR) whereby charges for products and advice would be identified and agreed separately (though potentially paid at the same time). Technology is also advancing, with potential impacts on the way people will manage their portfolios (e.g. through "platforms" and "wraps"[19]).

Figure 3.2: Breakdown of firms by aggregate share of turnover (2005/6)



Source: Europe Economics calculations on FSA and RMAR data, 2005-06

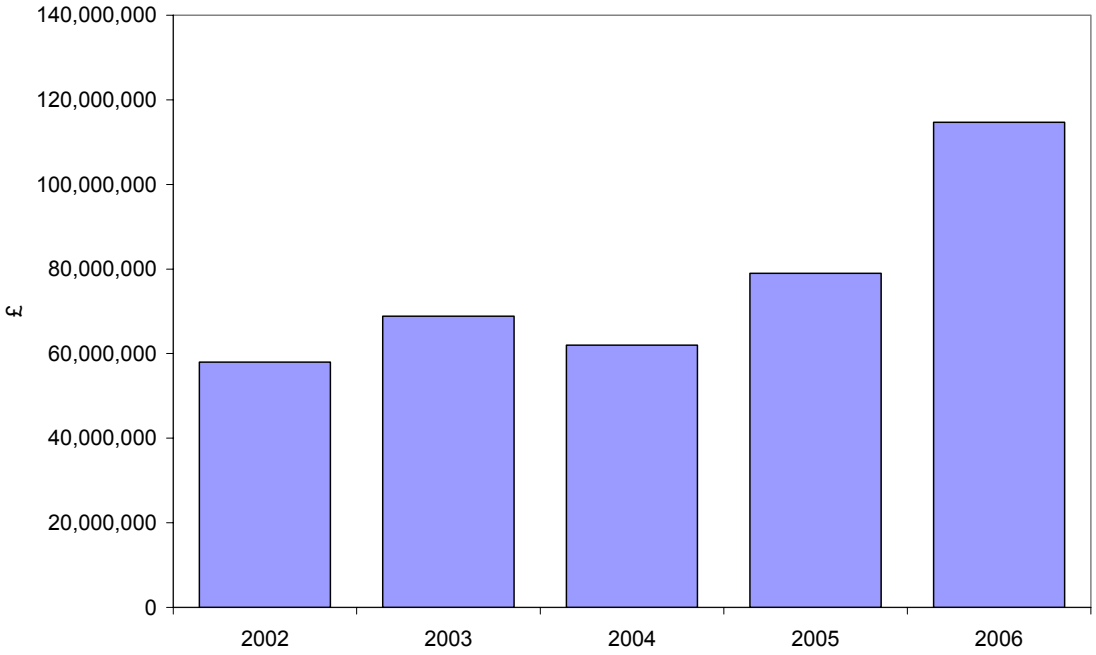
Recent Data on Complaints and Payouts

3.10 In 2005/6, PIFs received a total of approximately 80,000 complaints, and paid out £100 million in redress.[20] In the same year, 84 per cent of firms made no redress payments and 90 per cent paid less than £2,500, whilst PIF firms declared in default by the FSCS were responsible for 40 per cent of compensation the FSCS paid out to consumers.

[19] "Platforms are online services, used by intermediaries (and sometimes consumers directly) to view and administer their investment portfolios. As well as providing facilities for investments to be bought and sold, platforms are often used to aggregate, and arrange custody for, customers' assets...The terms 'wrap' and 'platform' are often used interchangeably but, as the market has developed, 'wrap' has come to be more commonly used to describe a specific type of platform. Wraps tend to offer access to a range of asset types, while terms such as 'fund supermarket' tend to describe platforms that have a narrower focus." — FSA (2007) "DP07/2, Platforms: the role of wraps and fund supermarkets" (http://www.fsa.gov.uk/pubs/discussion/dp07_02.pdf).

[20] Since 2005, the FSA has required authorised firms to submit returns describing complaints they received from consumers and small businesses.

Figure 3.3: Volume of FSCS Redress Paid in Investment Subscheme Over Time (2002-2006)



Source: FSA and FSCS

3.11 The volume of redress paid by FSCS in investment sub-schemes has nearly doubled over the period from 2002 to 2006. At this stage it remains unclear whether this trend will be carried through into later years. Nonetheless, such a rapid rise in levels of default naturally raises the concern that something about the regulatory regime is encouraging or has previously lead to increases in PIF defaults, and a closer examination seems timely.

DP07/4

3.12 In July 2007 the FSA published a discussion paper, DP07/4[21], on the PIF market. The paper was prompted by recent concerns that the PIF market was not functioning as well as it could be; and, specifically, that this was a result of inadequate prudential rules. Therefore, it examined the effectiveness of the current prudential requirements for PIFs in achieving their intended consumer protection outcomes (please see "Role of Prudential Requirements for PIFs" section below for more detail).

[21] FSA (2007) "Discussion paper 07/4: Financial Services Authority review of the prudential rules for personal investment firms" http://www.fsa.gov.uk/pages/Library/Policy/DP/2007/07_04.shtml

3.13 The paper draws from first principles to discuss specific market failures to which the PIF industry is vulnerable (it mentions information asymmetry and the principal-agent problem). It argues that given the "significant volume"[22] of consumer complaints and firms declared to be in default, these failures are seemingly unresolved. Therefore, the paper proposes (based on an original proposal from the Retail Distribution Review/DP07/1) risk-based prudential requirements to replace the current rules. These rules would be based upon the following principles:

(a) Simplicity;

(b) Using risk-based minimum requirements to avoid a "one-size-fits-all" approach;

(c) The use of specific parameters for setting requirements (e.g. turnover, number advisers, etc.);

(d) And a regulatory dividend for good compliance.

3.14 It also cites the RDR's mandate for higher professional standards of advice in general.

3.15 The paper concludes based on theoretical reasoning that while prudential requirements can reduce the impact of mis-selling, the costs they impose upon firms must justify the benefits derived from them. It seems that currently these costs make the current prudential rules ineffective: unintended impacts include loss of capital resources for small firms, potentially inappropriate levels of capital for larger firms, rejected PII claims, and high PII excess levels. Thus the paper attempts to reach a conclusion about how new risk-based prudential requirements can stem the frequency of mis-selling, reduce its impact on consumers, and enable firms to wind down in an orderly way.

Rationale for Regulation

3.16 Potential areas of market failure commonly analysed in financial services markets include:

(a) The problem that firms may know more about the value of their products than consumers. Firms (or their salesmen) may have incentives to exploit their informational advantages to the detriment of consumers. Markets may have mechanisms to address these problems. However, market punishment mechanisms are not always effective, and (even where they are effective) may operate over a sufficiently long-run timescale that failures can arise. For example, in the long-term companies that do not exploit their customers may gain a good reputation. But a company that already has a good reputation may exploit that reputation in the short-term, and while in the long-term that will lead to its losing its reputation, in the short-term its customers may suffer.

[22] *ibid*, paragraph 3.17, p17.

(b) Many financial products are highly complex, and their value cannot easily be observed by consumers. This gives rise to problems concerning the value of information — it can be very difficult to form a useful view of precisely how much information is worth until one knows what it is. This may mean that proper markets for information are difficult to sustain. Hence instead of direct information consumers may rely on the reputation of a financial firm, in general, for the quality of its products. However, some financial service products are experienced only once (e.g. pensions), sometimes long after purchase (and even then consumers may rely on experts to tell them how much products are worth — such products are known as "credence" goods). Hence reputational disciplining mechanisms may be weak.

(c) Externalities: failure of one firm might harm not only its own customers, but also other firms by affecting the confidence of consumers more widely. Similarly, mis-selling generates externalities: that mis-selling occurs at one firm — or a group of firms — can lead to a lack of consumer confidence in the market as a whole.

3.17 Some of these potential market failures have motivated financial regulation, but not all financial services markets are the same. Capital markets involve many highly informed agents, often operating in a highly competitive and transparent environment that is usually considered to approximate closely to perfect competition. Retail investment, by contrast, is thought to involve many relatively ill-informed consumers, facing firms and sales staff with incentives not well aligned with those of consumers, depending on expert opinion to work out the value of products even after they have been experienced (but unwilling to pay enough for such information).

Role of Prudential Requirements for PIFs

3.18 Prudential requirements are not the primary means of regulating the quality of financial advice from PIFs.[23] Other regulatory instruments the FSA uses to influence firms' behaviour include Conduct of Business rules (as laid out in the FSA handbook) and Training and Competence requirements. Training and Competence requirements set minimum standards of professionalism and technical competence. Prudential requirements for PIFs include capital adequacy requirements and specified levels of PII. The requirements date back to 1994, when they were originally introduced by the Personal Investment Authority (PIA), which preceded the FSA.[24]

3.19 DP07/4 considers multiple potential roles for prudential requirements:

(a) The first-choice outcome is that they might reduce the frequency of mis-selling;

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[23] FSA (2007) "Discussion paper 07/4: Financial Services Authority review of the prudential rules for personal investment firms" http://www.fsa.gov.uk/pages/Library/Policy/DP/2007/07_04.shtml

[24] The PIA rules are largely based on the rules of FIMBRA (1988), PIA's predecessor.

(b) The second choice outcomes is that they might reduce the impact of mis-selling when it occurs — both from firms that mis-sold in the past and are still going concerns and from firms that are now gone concerns; and

(c) Finally, they might enable firms to wind down in an orderly manner.

3.20 That the current requirements sufficiently achieve these objectives is not to be taken for granted; for example, currently only larger firms are required to have EBR to enable them to wind down in an orderly manner.

3.21 Currently, required levels for both minimum capital levels and PII cover are differentiated by firm size.[25] Nonetheless, the flat-rate requirements suggest that there is still scope for a closer relationship between size, or indeed other firm-specific parameters, and prudential requirements. According to the DP07/4, "To be effective as a financial incentive for a firm to improve its behaviour, so that less mis-selling occurs, [risk-based capital resources requirements] would need to be based on a good predictor of mis-selling."

[25] The current capital adequacy requirements are described in paragraph 3.2. PII requirements require all firms subject to the IMD to hold €1million of PII cover for a single claim in the current year and €1.5 million in the aggregate. Firms with income above £6 million are required to hold higher levels of cover.
The prescribed excess level by the FSA is £5,000 for a single claim, but can be larger for firms with higher levels of capital resources. Firms not subject to the IMD with income of £3m or below are required to hold £500,000 of cover in the aggregate (and for a single claim). Larger PIFs must hold £650,000 for a single claim and £1 million in the aggregate.

4 CONSUMER DETRIMENT

Issues for Consideration

4.1 It is important to have a clear definition of consumer detriment in order to be able to understand its relationship with firm-level predictors. In arriving at a definition of consumer loss in the context of this report, there are a number of questions to consider such as:

(a) Should any weight be given to consumer losses resulting from advice which, despite being ex ante competent and compliant with regulation and best practice, can be seen ex post to have had theoretical scope to be of higher quality (say, if delivered by a more expert/more experienced — and hence presumably more expensive — adviser)?[26] Ideally it would seem natural to say not, but in practice it may prove difficult to construct a definition that excludes this category robustly.

(b) What is the counterfactual against which consumer losses should be assessed? Is it, perhaps, the returns on the product that best practice suggests the consumer should have been advised to purchase? Or is it, perhaps, the expected returns on that product? But what if both the product actually sold and the product that should have been recommended both lost value? Mightn't the consumer have turned down the product that should have been recommended and instead invested in a risk-free product? Perhaps the natural counterfactual is the greater of the returns on the next best product and those on a risk-free bond?

(c) Is the focus purely on financial consumer losses, or are we also interested in other aspects of consumer loss (e.g. the time and inconvenience of resolving problems)?

(d) How do we distinguish between genuine examples of poor financial advice and negative consumer outcomes which simply represent a downside risk materialising ex post (even though ex ante the advice given may have been appropriate)?

4.2 It may be possible to avoid engaging directly with certain of these issues if we have data that allow us to use payouts made or complaints upheld by the firms themselves or other competent authorities (such as the Financial Services Compensation Scheme), because in these cases those with more detailed knowledge of the cases involved have made their own determination of the justice of the complaint and the relevant counterfactual.

[26] No regulatory environment could eliminate all scope for advice to vary in quality unless it specified precisely what advice should be offered in all circumstances. Hence there will always be consumers that received regulatorily compliant advice that was nonetheless not of the highest theoretically possible quality.

Two More Precise Concepts

4.3 There is no single agreed definition of consumer loss (or consumer detriment) in the literature.[27] However, approaches to consumer loss can generally be placed into two broad categories, structural consumer loss and ex post consumer loss.

Structural consumer loss

4.4 One approach focuses on lost "gains from trade". When people enter freely into a commercial transaction, each party expects to gain (otherwise they wouldn't agree to the transaction). [28]

4.5 The gains that consumers, as a whole, expect to make from all their transactions in a market are referred to as "consumer surplus". If a market does not work as well as it should — say, if there is a market or regulatory failure such as an unaddressed problem of advisers misleading consumers — then these expected gains from trade are reduced.

4.6 If we focus on the consumer gains from trade, then one concept of consumer loss from market or regulatory failures is the loss in expected consumer gains from trade (lost "consumer surplus") caused by those failures.

4.7 We refer to this concept as structural consumer loss (since it captures loss of consumer surplus arising from structural problems with the market).

Ex post consumer loss

4.8 A second approach focuses on instances in which consumers experience negative outcomes (relative to their expectations or reasonable expectations) following a transaction.

4.9 Such negative outcomes may take various forms, including financial loss, loss of time, and negative psychological effects. Thus this concept focuses on the "losers", in contrast to the structural concept which aggregates together outcomes for all consumers — losers and gainers alike. Also, unlike the first approach, according to this concept we focus on what actually happens after the transaction ("ex post") as opposed to the structural consumer loss concept which focuses on what is expected to happen at the time of the

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[27] Sources consulted include but are not limited to the following key publications:
Ottaviani, Marco, (2000), "The Economics of Advice," working paper;
Van Dijk, Machiell, Bijlsma Michiel & Pomp, Marc (2006), "The price of free advice," CPB Discussion Papers 66, CPB Netherlands Bureau for Economic Policy Analysis;
Bruggert, F., N. Van der Lijn and A. Meijer (2004), "Marktwerking op de markt voor hypothecaisre kredietverlening", ECORYS-NEI;
Gravelle, Hugh (1994), "Remunerating Information Providers: Commissions versus Fees in Life Insurance," Journal of Risk and Insurance, 61(3), 425—457; and
Roman Inderst, Marco Ottaviani (2007), "(Mis-) selling through Agents", Preliminary Draft.

[28] Their belief that they will gain may, of course, be mistaken — as we shall discuss further below — but it must be there nonetheless.

transaction ("ex ante") and thus (unlike ex post consumer loss) includes the fact that some valuable transactions may not occur at all.

4.10 Intuitively it is perhaps easier to understand why ex post losses for the losers should be thought of as "consumer loss" than is the case for the ex-ante-losses-for-all structural consumer loss concept. We shall refer to this concept as ex post consumer loss (or sometimes just "ex post loss" or "ex post detriment").

4.11 As mentioned, these two approaches are conceptually very different. These differences are explored in more detail in Appendix 2.

Preferred Measure

4.12 Structural consumer loss, if it could be estimated, would have considerable advantages for regulatory purposes. By contrast, ex post detriment has a number of disadvantages, including:

(a) It only measures outcomes for a subset of consumers (i.e. those who experience negative outcomes). It may be the case that the firms or products associated with large negative outcomes for some consumers are also associated with large positive outcomes for others. An exclusive focus on ex post consumer loss would take account of the former but would ignore the latter.

(b) It is difficult to apply in the context of transactions involving risk. Many transactions in the financial services sector involve products with an element of risk. This makes it difficult to distinguish (in measurement) between cases in which consumers have suffered a financial loss simply due to a downside risk (of any type — not just of poor advice) materialising and instances in which consumers were genuinely given poor advice. (For example, the volume of ex post loss will be much greater in downturns in financial markets, even when mis-selling is invariant. But in precisely those cases there will also be many individuals registering complaints who were simply unlucky, rather than mis-sold to, and many individuals who were mis-sold to but who fail to complain, and it might be very difficult in practice to identify either of these (mis-)cases in aggregate data.)

4.13 Nonetheless, not only is structural consumer loss extremely difficult to measure (particularly because of the highly theoretical nature of the thought experiment involved — a market equilibrium that would have been but for the market or regulatory failures identified), but all of the dependent variables which are available for our analysis relate to ex post consumer loss. In particular, the number of complaints, compensation payouts by firms and FSCS payouts all relate to instances in which individual consumers have experienced negative outcomes following a transaction.

4.14 Moreover, assessments of consumer loss might often be intended to inform an assessment of whether there is market or regulatory failure. But in order to measure structural consumer detriment, we must *already know* whether there is market or regulatory failure — hence its usefulness in this context would mainly take forms such as

quantifying the scale of market and/or regulatory failures that are already agreed to exist, rather than assessing whether there are such failures in the first place.

4.15 Furthermore, despite its limitations, personal loss does still represent a useful measure of consumer loss. In particular ex post detriment seems particularly relevant when analysing cases in which ex ante expectations were, by definition, errant — such as mis-selling. The concept allows us to focus on the specific consequence of mis-selling (as opposed to their wider market functioning consequences) and so to focus on the consumer as a person, rather than as just a piece of market data.

4.16 Hence, for the purpose of this project we focus on the ex post detriment approach, the measure of particular relevance to the case at hand — unsuitable advice — and for which there are data available.

5 AVAILABLE DATA SOURCES

5.1 This study has had access to and has attempted to use a number of different datasets in order to analyse the firm level predictors of consumer loss. Some of these datasets are internal to the FSA, some come from external organisations such as the Financial Services Compensation Scheme (FSCS) and others have been obtained from external sources.

5.2 In this section we describe the different data sources starting with the data that might be used to proxy for consumer loss — the potential measures of loss — and then move on to discuss the data on what appear to be plausible potential drivers of consumer loss — the candidate predictors of loss.

5.3 When discussing the data we also present some of their basic features. We report summary statistics for the variables we constructed as well as a correlation matrix for both the likely measures of consumer loss and the predictor variables.

Potential Measures of Loss

5.4 The study has considered using four different data series to proxy for consumer loss:

(a) number of complaints made and upheld (and redress paid since 2005);[29]

(b) the amount of compensation paid by the Financial Services Compensation Scheme (FSCS); if an authorised financial services firm is unable, or likely to be unable, to pay claims against it

(c) pensions mis-selling data;[30] and

(d) data on clawback debt.[31]

FSA complaints data

5.5 The FSA provided us with four (bi-annual) observations per company starting 31/12/2005 and finishing 30/06/2007 for which the data available are the total number of complaints received, upheld and referred to the Financial Ombudsman Service (FOS)[32] by each company in the period as well as the amount of redress paid in the period. We note that some complaints upheld during a period may have been received in an earlier period, and of course relate to mis-selling behaviour from potentially well before that. No data on the

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29 Supplied by the FSA

30 Supplied by the FSA

31 From the Elixir dataset. "Clawback" occurs when a consumer cancels a policy that would have given rise to a commission for an adviser, and for which the adviser has already been paid by the product provider. The product provider then "claws back" its overpayment. Clawback debts are clawbacks outstanding.

32 Also known as "the Ombudsman", the FOS is the UK's independent service for settling disputes between businesses providing financial services and their customers

amount of redress paid are available before 2005, but are available on other variables back to 2002.

5.6 The dataset contains a number of companies reporting zero complaints in at least one period — 64 per cent of firms report at least one "nil" observation. The straightforward interpretation of this is (a) that only a third of firms receive complaints fairly continuously. Another possibility is (b) that, despite the FSA complaints reporting requirements, there is widespread material under-reporting of complaints in at least some periods. And a third possibility is (c) that although many more firms do receive complaints in all periods, the number is nugatory (say, only three or four per period) and so considered not sufficiently material to report at above zero. We have not investigated this issue any further for the purposes of the current study, but if the FSA wishes to make use of this data in other studies it might find it productive to establish which of (a) to (c) best characterises these data.[33]

FSCS data

5.7 The Financial Services Compensation Scheme (FSCS) is the UK's statutory fund of last resort for customers of authorised financial services firms. The FSCS pays compensation where an authorised firm is unable, or likely to be unable, to pay claims against it.

5.8 For companies in this situation, data are available on: the date of default, the number of claims "closed" and the number of claims still pending and the amount paid in compensation. The data are available both at the company level and at the level of the individual claim paid. However there are missing values on the pre-abatement loss suffered in 2.7 per cent of the sample.

5.9 An issue in this dataset is that in certain cases it appears that companies defaulted before we have any data on the number of complaints received and/or before we have any data on the explanatory factors we later use in our modelling. While TARDIS data (see description below) was available for companies ruled in default by the FSCS between 1 December 2002 and 1 April 2005, the more comprehensive RMAR data containing indispensable statistics was lacking.

5.10 Table 5.1 reports summary statistics for the individual payment data made through the FSCS process, including both FSCS payments and payments achieved through the surrender value of pensions, as well as information on the data by company. Table 5.1(A) is the data used in the study. The vast majority of payments listed as 'Through the FSCS process' are payments by the FSCS funded by levy payers.

[33] For completeness, we note one other theoretically possible bias in the data: the risk that one or more large financial services groups have mistakenly reported complaints received from the entire group as having been received by the PIF subsidiary. We have no evidence that this has actually occurred.

Table 5.1: Summary statistics of individual data on payments through the FSCS process

(A) All observations used in the analysis

Variable	Obs	Mean	Median	Min	Max
Pre-abatement loss	28,167	£8,935	£2,504	£0	£2,371,265
Payment received through FSCS process*	28,831	£8,550	£2,612	£0.01	£101,021[34]
Post-abatement loss	28,295	£1,318	£0	£0	£2,323,265
Share of instances where losses remain	28,831	9.1%			

Source: Europe Economics calculations using FSCS data

*Notes: * This would be made up of FSCS payments and the surrender values of pensions*

(B) Only common observations since 2001

Variable	Obs	Mean	Median	Min	Max
Pre-abatement loss	28,166	£8,935	£2,504	£0.01	£2,371,265
Payment received through FSCS process*	28,166	£7,610	£2,504	£0.01	£101,021
Post-abatement loss	28,166	£1,325	£0	£0	£2,323,265
Share of instances where losses remain	28,166	7.4%			

Source: Europe Economics calculations using FSCS data

*Notes: * This would be made up of FSCS payment and the surrender values of pensions*

5.11 We quote Table 5.1(B), also, containing only observations for which data for all rows in the table are present ("common" observations), simply for ease of explanation. Among common observations, the average loss of consumers of PIFs that defaulted is £8,935 and the average payment made by the FSCS is £7,610. Subtracting the latter amount from the former means that the average *post-abatement* loss is £1,325.

5.12 Pre-abatement loss[35] varies more than payments through the FSCS process,[36] because FSA rules require that FSCS payments are capped at £48,000 per person[37] — so in some cases pre-abatement loss is much larger than the payment. Indeed, as reported in the third line of the tables, the highest post-abatement loss is more than £2m.

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[34] The maximum compensation payment FSCS can make for an investment claim is £48,000 per investor. The payment shown relates to a pension review claim and is made up of £48,000 compensation and £53,021 surrender value of a personal pension. The payment was not made to the investor but directly to the Occupational Pension Scheme to reinstate the member.

[35] i.e. loss *before* abatement by compensation — defined in more detail in Section 6.

[36] The standard deviation of pre-abatement losses is £23,016 (for common observations, £25,851), compared to just £13,212 (£11,612 on common observations) for payments through the FSCS process.

[37] FSA rules dictate the amount that the FSCS pays in compensation for any claim, once the FSCS has verified the amount lost. In the FSCS's Investment Subscheme, these rules imply that for a single claim, the FSCS pays 100 per cent of the first £30,000 lost, and 90 per cent of the next £20,000 lost. Thus, FSA rules cap the maximum payment within the Investment Subscheme at £48,000. These rules are exactly the same as those that operated in the predecessor Investor Compensation Scheme, which was merged into the FSCS at the creation of the latter in December 2001.

Table 5.2: Summary statistics of FSCS data by company (observations since 2001)

Variable	Obs	Mean	Median	Min	Max
Compensation paid	1,913	£128,908	£27,003	£35.11	£27,100,000
Claims in progress	1,913	2.78	0	0	2,007
Prospective claims	1,913	4.34	0	0	4,230

Source: Europe Economics calculations

5.13 It is important to note that although it would have been possible, in principle, to limit the definition of payments through the FSCS process to only those payments actually made by the FSCS itself (i.e. limited to £48,000 per individual) what we are interested in estimating is the total compensation paid out through all sources — by companies themselves on their own initiative, through the surrender of pensions as part of the FSCS process, and through FSCS compensation payments. All these data serve to identify the total abatement made.

5.14 Moving to the data by company reported in Table 5.2, compensation payments made through the FSCS process averaged £128,908 per firm in default within the Investment Subscheme. It should be noted that the distribution is very skewed — with the maximum payment being £27m — and there is enormous variation.[38] This is reflected in the median loss (which is less sensitive to extreme values) being just £27,003, i.e. less than a quarter of the mean value. The data on claims in progress and the number of prospective claims are likewise highly skewed — the median value is zero in both cases implying that it is a very small number of companies that is responsible for the majority of outstanding complaints.

Pension mis-selling review data

5.15 These data refer to the pension mis-selling review completed in March 2004. They are very similar in nature to the FSA complaints data but are static as they provide a snapshot of the situation in March 2004. In addition, compensation paid in this series was not necessarily the result of a customer complaining. Available variables are the number of cases identified (per company), the number of cases where redress was due, offered and accepted and the total amount of redress paid.

5.16 The review covered cases in which personal pensions (transfers and opt-outs from company schemes) were mis-sold to consumers between 1988 and 1994. Firms were instructed to redress consumers that had suffered a loss due to the firm's advice.

5.17 We have not been able to use these data extensively for a number of reasons. The most significant drawback is that they relate to pensions that were mis-sold before we have any

[38] The standard deviation is more than £7m.

data available on the characteristics of the firms from either RMAR returns or the FAME dataset.

Elixir data

5.18 The relevant Elixir data are historical files of clawback debts (of greater than 90 days duration) that providers have logged on their system.[39] The data report the original amount of debt as well as the highest amount recorded. A drawback is that it is impossible to match these amounts to a precise date.

Candidate Predictors of Consumer Loss

5.19 This study has considered using a number of possible predictors of consumer loss. We relied on four different data sources:

(a) TARDIS data, supplied by the FSA,

(b) RMAR returns, supplied by the FSA,

(c) Elixir data, supplied by the FSA, and

(d) FAME data, supplied by Bureau van Dijk.

TARDIS data

5.20 TARDIS data include information on the number of advisers and the number of trainee advisers from 2002 to 2007. In addition we have been supplied with data regarding the type of firm (Limited, Limited Liability Partnership, PLC etc.) as well as the type of ownership (individual or firm) as of April 2005.

RMAR data

5.21 PIFs are required to submit returns to the FSA (usually every six months) describing various characteristics of the company. These characteristics relate to assets, capital and reserves, commissions, fees and other sources of income, expenditure, staff, the number and the value of clawback commissions, the number of appointed representatives visited (for networks) and others.

5.22 Our dataset covers just two years: 2005 and 2006 (the data begin at 1 April 2005). Over this period 507 companies submitted a single return, 776 companies submitted two returns, 3,309 companies three returns, 881 companies four returns and 2 companies five returns.

5.23 The majority of the companies reported at intervals of six months.

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[39] Clawback and clawback debts are defined above in footnote 25.

FAME data

5.24 The FAME database is supplied by Bureau van Dijk (DvB). It contains data on all incorporated firms in the UK and Ireland, and is based on data from statutory accounts submitted to Companies House and the Irish Companies Registration Office. The dataset includes information on firm names, registration numbers, balance sheet, profit and loss accounts, cash flow, and the financial position for the most recent 10 years that a firm is in business.

5.25 Using registration numbers to cross check firms on the FAME database with the full list of PIFs provided by the FSA, 47 per cent of all PIFs were identified as being registered on FAME. Cross checking the FSA reference numbers for these firms with the reference numbers in the RMAR dataset, and bearing in mind that RMAR data only refers to 2005 or thereafter, 39 per cent of all PIFs were identified as being on FAME and included in the RMAR sample (this is probably mainly due to the fact that for its own reasons, the FSA contains Companies House registration numbers for around 40 per cent of firms, rather than because the others are not incorporated).

5.26 We discuss some basic characteristics of the data on possible predictors in Section 6, where we also discuss the modelling approach followed.

Assessment of the Data

5.27 The FSA has provided us with a very wide range of data on PIFs and we have added in additional sources. Nonetheless, the data presented above have a number of limitations and the results obtained using them should be interpreted with caution. We believe the following are the most important shortcomings of the data in order of importance.

(a) Firstly, although we have data on when consumer loss has been compensated (i.e. redress paid by firms and payments made by FSCS) or when a consumer realised that, in her opinion, the advice received was of poor quality (i.e. she complains to a PIF), we have no data on when the poor advice was given. This makes it impossible to determine the average time lag between poor advice being given and our observed consumer losses materialising. This makes issues of causality very difficult to disentangle.

(b) Causality is made even more problematic to assess by a second, related, issue: the potential predictors we have (apart from a small subset contained in the FAME dataset) are not available at dates before the materialisation of the losses. It is therefore difficult to determine what characteristics PIFs had at the time poor advice was given.

Factors (a) and (b) mean that when we later report correlations between losses and firm characteristics, we can claim no statistical basis for assigning causality. All we know is that some characteristic of PIFs is correlated with loss. But that does not tell us whether that characteristic (i) causes the consumer loss; (ii) is caused by the fact

that there was consumer loss; or (iii) was caused by the same thing that caused the consumer loss.

(c) Thirdly, 64 per cent of PIFs report that in certain periods there are no complaints received and no redress paid at all, which may suggest that some claims are incomplete, or go unreported. This might potentially bias our results.

(d) Lastly, many of the data are self-reported by firms and not verified by any independent party. Firms may make mistakes in reporting, or sometimes even deliberately mis-report. This may mean that there is a degree of firm-specific bias in the data. For instance, some financial services groups may report complaints from the entire group as having been received by the PIF subsidiary. There is also the concern mentioned above that the majority of non-MiFID PIFs that report no complaints in certain periods may imply that there is under-reporting. And we are advised by the FSA that our data on "competence", as well as being self-reported, is (within a wide range of discretion) self-defined by firms.

6 ANALYTICAL APPROACH AND RESULTS

6.1 Having established the basic concept of consumer detriment and the scope of the available data, this section sets out an overview of the methodology adopted for the study and the main results. A more detailed explanation of the methodology is available in the Appendix 3, and further details of the analysis appear in Appendix 4.

Methodology

6.2 The methodology consisted of three key steps:

(a) an econometric study of the relationships between firm characteristics and consumer loss;

(b) an interview programme, to gain feedback on the potential causes and types of consumer loss, prudential requirements, and the PIF industry more broadly; and

(c) the synthesis of the results into a high-level cost-benefit analysis of risk-based prudential requirements

6.3 This section will focus primarily on the first two steps of the methodology, while the cost benefit analysis will be addressed in section 7.

Analytical Approach

6.4 The most appropriate approach to examine the relationship between firm characteristics and consumer loss would be to examine the various firm-level characteristics at the time the advice is actually provided. However, the data limitations meant that we were forced to adopt a "second best" approach, i.e. examining the firm characteristics at the point the actual loss occurs, which could be some time after the initial advice was given.

6.5 Under this "second best" approach there are two main concepts for consumer loss:[40]

(a) Pre-abatement loss — relating to the total losses created by poor financial advice *before* those losses are abated by compensation; and

(b) Post-abatement loss — relating to residual losses even *after* abatement

6.6 In our view post-abatement loss is of most interest, as it is only once the process of abatement is finished that losses are fully realised. A consumer who has been fully compensated for any loss (including the costs of pursuing a claim) no longer experiences a loss, and it is unclear whether a consumer that might yet be compensated will ultimately

[40] These two concepts also fit well with the FSA view set out in DP 07/4 that the "first best" outcome of a well functioning market is that consumer loss does not arise in the first place, while a second best outcome would be that consumer are compensated for the loss they suffer.

have lost anything. That said, pre-abatement loss is also of interest in so far as any reduction in pre-abatement loss reduces the amount people have to claim (and hence the resources society wastes in having to process claims versus mis-selling not occurring in the first place) and may also tend to reduce the amount of post-abatement loss.[41]

6.7 Once again, however, the availability of data is an important factor in deciding which measure to use. The RMAR is one of our main sources of information for the potential predictors of consumer loss. However, there are very few firms that both submitted RMAR returns since 2005 and defaulted, causing the FSCS to need to cover any claims against those firms; most of the data on payments through the FSCS process relate to firms that left FSA authorisation before April 2005, and thus never submitted any RMAR returns. As a consequence, there is insufficient data for us to be able to model any concept of post-abatement loss.

6.8 In addition, it is worth noting that both the pre and post-abatement measures are measures of the *amount* of loss only, they provide no indication of the number of claims (which we hereafter term the *incidence*) — for a given total amount (X), pre-abatement and post-abatement measures would give the same "consumer loss" regardless of whether these losses were one huge loss to one person or tiny individual losses spread over millions of people.

6.9 To take account of the interest in both amount and number of claims, we use a pre-abatement measure of consumer loss, made up of the sum of any firm payments in the FSA dataset and any pre-abatement losses in the FSCS dataset, as well as an additional concept, in the form of upheld complaints, to address the incidence of any loss.

6.10 Our interpretation is that a larger incidence of losses implies a higher consumer detriment. Of course, it is possible to imagine some extreme situations where the opposite is true: if, for instance, a financial adviser was deliberately mis-selling in order to achieve a personal profit of, say £100,000 then it may be argued that imposing a £100 loss to 1,000 people would be preferable than imposing a £100,000 to a single person. However this is very unlikely to be the case for the majority of complaints received. Furthermore, it is perhaps likely that a large number of observed small claims is just a subsample of all potential such claims — perhaps a number of people with £100 would not bother to claim. In contrast, although it is possible that someone aware of the potential to make a £100,000 claim might nonetheless never register the complaint, it seems less likely. For this reason a given value of observed claims spread over a larger number of people might perhaps seem to imply a higher total value of losses than if spread over a smaller number of people.

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[41] Note, however, that this does not necessarily mean that it would be efficient to have no pre-abatement loss, as the regulatory burden associated with achieving this may increase structural consumer loss.

6.11 Regardless of whether one is convinced that a greater incidence does in fact imply a greater amount of loss, it seems to us that the incidence is a variable of interest in and of itself, and to provide a useful additional test. If we find drivers of loss that are predictors of both amount of post-abatement loss and of the incidence of loss, we can be more confident of the significance of our results.

Econometric Analysis

6.12 A more detailed description of the techniques adopted is available in the Appendix 3. The aim here is simply to provide a general overview of our approach. There were four main elements to the econometric analysis:

(a) Control for firm size — our stakeholder consultation and the discussions with the FSA confirmed the intuitive idea that aggregate consumer losses should increase, the larger the PIF. As a result our first step was to estimate the relationship between firm size, measured both by number of advisers and revenues, and consumer loss. In this way we were then able to control for a potential relationship in subsequent analysis.

Note, however, that, even if losses increase with size, that does not mean that larger firms are a more important source of loss than small firms — a large firm that is double the size of a small firm does not necessarily generate double the losses of a small firm. As a result smaller firms could be, collectively, a more important source of loss even though the individual losses imposed by larger firms could be greater. We test this below.

(b) Effects of individual predictors — the next stage was to estimate the individual relationships between consumer loss and the individual predictors, controlling for firm size. This allowed us to examine which predictors were the most relevant.

(c) General model — we used the predictors found to be significant[42] in the individual predictor analysis in the previous stage to estimate the relationship between consumer loss and the most appropriate predictors simultaneously. This allowed us to examine any interactions between the variables.

(d) Likelihood of defaulting — when a firm defaults the claims are left to be addressed by the FSCS, so it is potentially important to understand which firms are most likely to go into default. We, therefore, examined whether there is any relationship between the size of firms and the likelihood of going into FSCS default.

6.13 The potential predictors of consumer loss, identified on the basis of stakeholders' views, discussions with staff at the FSA, our judgement and the results of a literature review, are summarized in Table 6.1 below. The table also highlights whether or not we have a

[42] By significant here we mean statistically significant, that is we can be 95 per cent certain that the estimated value is not equal to zero.

candidate variable to measure the predictors and provides some comments of the quality of the data available. Although we do have variables that can measure some of the identified predictors, there are clear gaps in the data that we would need in order to test all of them.

Table 6.1: Available predictors with source of data

Predictor	Proxy available?	Source	Comments
Firm size	Number of advisers or staff, turnover	TARDIS, RMAR, FAME	Good availability and quality of the data
File checking reports	Number of AR visited, number of AR files reviewed	RMAR	Data available relates only to large (network) firms checking their appointed representatives. Not the entire population of firms
Profitability and capital resources	Share of income to turnover, Profit rate, Capital and reserves, Own funds	RMAR, FAME	Data are generally available and of sufficient quality
Firm remuneration structure	Share of fees over total revenues	RMAR	Fees are a very small share of revenues, thus it is unlikely that a relationship may be estimated
Adviser training and competence	Share of advisers who passed the required examination, Share of "competent" advisers	RMAR	Data are generally available and of sufficient quality
Number of complaints	Number of complaints	FSA Complaints data	Likely to be highly contemporaneous to losses and therefore not a good predictor: if complaints start to rise it is an indication of losses arising more than the fact that losses will arise
Risk based monitoring score		FSA	Data available only for larger companies
FOS data	N/A		
Premium size	N/A		
Productivity and experience	Share of income to turnover, Profit rate	RMAR, FAME	Data are generally available and of sufficient quality
Number of products sold	N/A		
Clawed back commissions	Number and value of clawed back commission	RMAR	Data are generally available and of sufficient quality
PI risk assessment factors	N/A		
Staff turnover	Advisers who left since last reporting period	RMAR	
Rapid change in firm size	Number of advisers or staff, turnover over various years	TARDIS, RMAR, FAME	Data are generally available but not always for many years
Type of relationship with client	N/A		
Type of firm	Type of firm	TARDIS	Data are generally available and of sufficient quality
Ownership of firm	Ownership of firm	TARDIS	Data are generally available and of sufficient quality

PIF and PII Interviews

6.14 We conducted eight industry interviews for this study, and attended one PII forum. By speaking to PIFs and PII firms directly, we aimed to give them an opportunity to express their views, to enhance our understanding about consumer loss by talking with those with inside knowledge, and to balance the overall opinions we received. Two of our interviews were held with the PII industry (one firm and one broker), which provided some insight into certain issues related to PIF underwriting.

6.15 The interviews allowed us to collect qualitative information that the FSA data could not provide. In order to obtain feedback from firms with a variety of experiences, we interviewed PIFs from each of four different size categories (fewer than 10 advisers, 11-100, 101-1000, and more than 1000 advisers). In addition to our interview programme, two members of our project team attended a PII industry forum at the FSA designed to help the FSA better understand whether prudential rules could reduce the incidence of PIF product mis-selling from poor financial advice.

6.16 We used these interviews to assist in developing our list of potential drivers of loss, and to enhance our wider understanding of the industry and of the issues. We are grateful for the high level of cooperation and response which we received from all parties.

Key Findings

6.17 Given the high number of datasets available and the wide range of variables present in each of them we focus the presentation here on our most robust results and on those predictors that seem likely to be the more useful in setting prudential requirements.

6.18 Our key findings are:

(a) **Finding 1**: Firms with fewer advisers are, in general, proportionately a more important source of consumer loss than larger firms. Indeed, we find no relationship at all when only firms with fewer than 26 advisers are included in our sample.

(b) **Finding 2**: The most robust indicator of consumer loss is adviser churn — the higher the churn the higher the loss. However, we are unable to determine whether this is because adviser churn leads to consumer loss or poor financial advice (and hence consumer loss) leads to adviser churn.

(c) **Finding 3**: For larger firms the number of AR files reviewed is associated with lower losses, probably indicating that firms use their internal controls to improve the quality of advice they give

(d) **Finding 4**: We find no statistically significant correlation between consumer losses and either the qualifications of advisers or their competence, indicating the weakness of our data

(e) **Finding 5**: We find no relationship between firm size (defined in terms of number of advisers) and the likelihood of FSCS default

(f) **Finding 6**: We find no relationship between consumer loss and either the type of firm (i.e. partnership, corporate and sole trader) or the type of ownership (individual or other firm)

6.19 We now discuss each of these findings in turn.

Finding 1: Firms with fewer advisers are proportionately a more important source of consumer loss than larger firms

6.20 We examined the relationship between our two measures of consumer loss, total compensation paid and total complaints, and two different measures of firm size, namely the number of advisers of a PIF and its total revenues.[43] In this way we can establish by how much (in percentage terms) losses are increased by a 1 per cent increase in firm size for those PIFs that incur at least some loss.

6.21 We estimated this relationship for both the full sample of PIFs and for subsamples that include only those PIFs and that have 25 or fewer advisers and only those PIFs and that have 26 or more advisers. In all cases we have used all the observations available. Table 6.2 summarizes the results obtained using total compensation paid as the measure for consumer loss.

[43] To do this we calculate the elasticity of consumer loss with respect to firm size. The elasticity of Y with respect to X is defined as the percentage change in Y given a 1 per cent change in X.

Table 6.2: Percentage rise in consumer loss for each one per cent rise in firm size

Measure of loss	Sample size	Measure of firm size	
		Number of advisers	Revenues
Total compensation paid (amount of loss)	Full sample of firms	0.44*	1.24*
		(No)	(Yes)
	PIFs with 25 or fewer advisers	0.24	0.1
		(No)	(No)
	PIFs with more than 25 advisers	0.34*	1.6*
		(No)	(Yes)
Number of upheld complaints (incidence of loss)	Full sample of firms	0.38*	1.7*
		(No)	(Yes)
	PIFs with 25 or fewer advisers	-0.15	0.19
		(Yes)	(Yes)
	PIFs with more than 25 advisers	0.21*	1.8*
		(No)	(Yes)

** indicates that estimate is statistically different from 0 at 5 per cent level, standard errors are heteroscedasticity robust. In parenthesis we report the answer to the question "Might the elasticity actually be 1?" — i.e. for each one per cent rise in firm size, do our statistics allow us to conclude that the rise in consumer loss might, likewise, be precisely one per cent. Source: Europe Economics calculations*

6.22 To understand how to read the Table 6.2, consider the first number in the first row, 0.44. What this says is that as the number of advisers rises one per cent, the amount of loss rises by 0.44 percent. Similarly, if the number of advisers were to double — rise 100 per cent — then consumer loss would rise by 44 per cent. The next row, "(No)", says our tests tell us that it is very unlikely that this 0.44 is just a statistical anomaly and the actual figure precisely 1. So, if there are more advisors then the amount of loss does increase, but at a rate less than one-for-one.

6.23 This illustrates that the effect of both measures of firm size on consumer loss is statistically significant when using the full sample. None of the relationships appear significant when using the subsample of just small firms (i.e. firms with 25 or fewer advisers). This suggests that the relationship between firm size and consumer loss that applies for medium-sized to large firms but breaks down for small firms. This result reinforces our finding that losses increase less than proportionately with firm size as a firm with, say one adviser is likely to cause the same consumer loss as a firm with 25

advisers. The same result as in the full sample can be observed when we test the relationship on just the sample of PIFs with more than 25 advisers.[44]

6.24 When the full sample is taken into account consumer loss increases less than proportionately with firm size if size is measured by the number of advisers, so a one per cent increase in the number of advisers results in a less than one per cent increase in consumer loss. Although on the face of it consumer loss appears to increase more than proportionately if size is measured by overall revenues, we could not find conclusive evidence that the actual relationship was not directly proportionate, that is a one per cent increase in revenues is associated with a one per cent increase in loss. (Note that these results hold for both of our measures of consumer loss.)[45]

6.25 So our result indicates that, losses increase less than proportionately with firm size when firm size is defined in terms of number of advisers, while losses are closer to proportionality when size is defined by revenue. From this one may infer that those PIFs with relatively few advisers but high revenues are those most likely to impose losses. Indeed estimating the impact of both these measures simultaneously, revenues has a positive effect and the number of advisers a negative one.[46]

6.26 It is important to note that our choice here of 25 advisers as the "break point" is dictated purely by current regulations, rather than by anything within the data that suggests 25 as a natural threshold. We have not identified any such natural threshold within the data. However, that the relationship disappears for the smaller firms does indicate that some such break point must exist. There are also good theoretical reasons for believing that it may not be right to think of very small firms as simply scaled-down variants of larger firms. For example, it is probably more likely that very small firms have only recently come into existence. Thus it is intuitively likely that scale-related relationships may eventually break down as size reduces. Thus, though we emphasize again that we have not established that 25 is the *right* small-firm threshold, it nonetheless seems to us that there is likely to be one.

6.27 So, to summarize, we find that:

(a) For firms of above a threshold size, loss rises with firm size.

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[44] Of course, since the relationship is statistically significant for the whole sample, and not for the small firms, it is highly unsurprising that the relationship holds when we restrict the sample to just the larger firms. Nonetheless we report the result for just this sub-sample for completeness. Notice also that changing the sample as such also yields slightly differing co-efficients. When reading this result one should keep in mind that only those estimates taken using the full sample will apply to all PIFs — and likewise for the other sample estimates.

[45] In the first instance we tested the statistical significance of the estimator, i.e. whether the estimated result is significantly different form zero or not. We then tested whether the estimator, which in this case is the elasticity, was statistically different from 1, more specifically whether a 1 per cent rise in size would lead to a 1 per cent rise in consumer loss.

[46] However, it should be noted that the latter result is not robust to controlling for heteroscedasticity.

- For firms of above that threshold, loss rises one-for-one with revenues — 10 small firms with the same total revenues as one larger firm would impose *the same amount* of consumer loss.

- For firms of above that threshold, loss rises less than one-for-one with the number of advisors. So ten firms each with 30 advisers would impose *more* consumer loss than one firm with 300 advisers.

(b) When only small firms are considered, loss does not rise with firm size at all, regardless of whether firm size is measured in terms of revenues or in terms of number of advisers, hence small firms are an even more important source of loss when they are small. For example, ten firms each with two advisers impose *ten times* as much loss as one firm with 20 advisers.

Finding 2: The most robust indicator of consumer loss is adviser churn — the higher the churn the higher the loss. However, we are unable to determine whether this is because adviser churn leads to consumer loss or poor financial advice (and hence consumer loss) leads to adviser churn

6.28 The RMAR data report the number of advisers who left the PIF in the reporting period. *Adviser churn* is defined here as the ratio between the advisers who left and the total number of advisers. (It is important to note here that this definition includes firms that are shrinking, firms growing, and firms staying the same size in terms of number of advisers.[47]) Note that, unlike previous tables, Table 6.3 illustrates the relationship between adviser churn and both the *amount* and the *incidence* of consumer loss is.

6.29 As illustrated in Table 6.3 this predictor is statistically significant in most specifications (six) and even where it is not statistically significant it only just fails to be so. Furthermore, it is possible to adopt a different estimation approach under which adviser churn is statistically significant in all specifications.[48] The results imply that, for example, a one percentage point increase in adviser churn (e.g. from 15 per cent to 16 per cent) increases the amount of loss by £1,630 and the incidence of loss by 0.74 upheld complaints in the full sample. The other coefficients can be read along the same lines.

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[47] For example, under our definition a firm that starts with 30 advisers and reduces to 10 advisers would have the same adviser churn as firm that started with 10 advisers and turned over its entire adviser staff twice. We note that we found no consistently robust relationship between consumer loss and whether firms are shrinking, growing, or staying the same size – for more detail see tables A4.2 and A4.3.

[48] We proved that if a tobit model with robust standard errors is estimated, rather than the standard OLS model, then the turnover of advisers is significant in all specifications.

Table 6.3: Relationship between adviser churn and consumer loss, controlling for firm size

		Adviser churn	
Control Variable	**Sample size**	**Amount of loss (£)**	**Incidence of loss (No. of upheld complaints)**
Number of Advisers	Full sample of firms	Associated with more consumer loss (£1,630) (Statistically weak relationship)	Associated with more consumer loss (0.74) (Statistically weak relationship)
	PIFs with 25 or fewer advisers	Associated with more consumer loss (£368) (Statistically strong relationship)	Associated with more consumer loss (0.09) (Statistically strong relationship)
Revenues	Full sample of firms	No relationship found	No relationship found
	PIFs with 25 or fewer advisers	Associated with more consumer loss (£465) (Statistically strong relationship)	Associated with more consumer loss (0.01) (Statistically strong relationship)

Notes: "Statistically weak relationship" = significant at 10 per cent level; "Statistically strong relationship" = significant at 5 per cent level, all regressions have robust standard errors
Given that this statistical relationship is fairly robust of this variable we report the value of the estimated coefficients as well as the sign. In the "Amount of loss" column, numbers refer to the additional loss, per six month period, for each percentage point increase in adviser churn. In the "Incidence of loss" column, numbers refer to the number of additional upheld complaints, per six month period, for each percentage point increase in adviser churn.
Source: Europe Economics calculations

6.30 There would appear to be two main classes of possible explanation for the positive relationship between adviser churn and consumer loss:

(a) First, when adviser churn is high, advisers may more often be still in the process of becoming familiar with the firm's products and procedures and hence more likely to make errors. (So in this case consumer loss would be a consequence of adviser churn.)

(b) Second, when advisers or the firm become aware that poor financial advice has been given, the adviser may be encouraged to move on. (So in this case adviser churn would be a consequence of consumer loss.)

6.31 In order to determine which is more likely to be correct, we would need data that allowed us to consider the time dimension (i.e. whether consumer losses follow advisers leaving firms or advisers leave firms after imposing consumer losses). Unfortunately our data are not adequate for this, so although we can determine a positive relationship between adviser churn and consumer loss, it remains unclear whether the adviser churn is driving the loss or vice versa.

Finding 3: For larger firms the number of AR files reviewed is associated with lower losses, probably indicating that firms use their internal controls to improve the quality of advice they give

6.32 As illustrated in Table 6.4 and Table 6.5, the number of appointed representatives (AR) visited and the number of AR files reviewed is associated with a reduction in losses indicating that the control measures implemented by PIFs are working (Table 6.4 reports the amount of losses, whilst Table 6.5 reports the incidence). However, the lack of robustness of this particular predictor to controlling for the number of advisers is difficult to explain.

Table 6.4: Relationship between appointed representative predictors and the *amount* of losses accounting for firm size

		Predictors	
Control Variable	**Sample size**	**Number of AR files reviewed**	**Number of AR visited**
Number of Advisers	**Full sample of firms with at least 1 AR**	No relationship found	No relationship found
Revenues	**Full sample of firms with at least 1 AR**	Associated with less consumer loss (Statistically strong relationship)	Associated with less consumer loss (Statistically weak relationship)

Notes: "Statistically weak relationship" = significant at 10 per cent level; "Statistically weak relationship" = significant at 5 per cent level, all regressions have robust standard errors
Source: Europe Economics calculations

Table 6.5: Relationship between appointed representative predictors and the *incidence* of losses accounting for firm size

		Predictors	
Control Variable	**Sample size**	**Number of AR files reviewed**	**Number of AR visited**
Number of Advisers	**Full sample of firms with at least 1 AR**	No relationship found	No relationship found
Revenues	**Full sample of firms with at least 1 AR**	Associated with less consumer loss (Statistically strong relationship)	Associated with more consumer loss (Ambiguous relationship)

Notes: "Statistically weak relationship" = significant at 10 per cent level; "Statistically weak relationship" = significant at 5 per cent level, "Ambiguous relationship" means that the sign of the effect (more/less consumer loss) varied depending on how the test was specified. All regressions have robust standard errors
Source: Europe Economics calculations

Finding 4: We find no statistically significant correlation between consumer losses and either the qualifications of advisers or their competence, which may indicate a weakness of our data

6.33 The results from the estimates of the individual effects, accounting for firm size, of each of the staff competence predictors on consumer loss tell us that in our data there is no statistical relationship between the share of advisers who passed the qualification exam or the share of competent advisers and either the amount or the incidence of consumer loss attributable to the PIF. None of these variables is statistically significant in any of our estimations.

6.34 Of course, our not being able to identify a statistical relationship between adviser competence and consumer loss in this study does not mean that no such relationship exists. Indeed, the very fact that we have not found such a relationship when it seems so clear that one might be expected to exist is perhaps best understood as a measure of the weakness of these data for our purposes. In addition to the more general weaknesses discussed above, there is also the issue that, for the purposes of the RMAR, firms are allowed to define "competency" in their own way; and therefore this variable may not have a very consistent definition across firms.

Finding 5: We find no relationship between firm size and the likelihood of FSCS default

6.35 We tested whether there is any relationship between the size of firms, as measured by the number of advisers, and the likelihood of defaulting. We adopted two different

approaches to estimate the relationship[49], and used data from TARDIS on the number of advisers between 2002 and 2007.

6.36 We found no relationship between firm size and likelihood of defaulting, under either approach, apart from in 2006 when larger firms were more likely to default. It is interesting to note that 2006 was the year with the highest number of FSCS defaults ever recorded (603) — more than 10 per cent of the entire population of PIFs in existence at the time went into FSCS default.

Finding 6: We find no relationship between consumer loss and either the type of firm (i.e. partnership, corporate and sole trader) or the type of ownership (individual or other firm)

6.37 The estimates associated with PIF ownership and the type of PIF (Corporate, partnership or sole trader)[50] are rarely significant and change sign in the various specifications, as shown in Table 6.6 and Table 6.7 below. This suggests that there is no straightforward relationship between these firm characteristics and consumer losses.

[49] We have estimated two types of models: the first one is a limited dependent variable model where the dependent variable is a dummy that has the value of one if a PIF was declared to be in FSCS default and zero otherwise; the second is a so-called "proportional hazard model". (A proportional hazard model estimates the effects of a predictor on the hazard function, i.e. the proportion of individuals (PIFs in our case) that would die (go into FSCS default) from among those that have survived up to time t.)

[50] Note that these are dummy variables in the regression estimation.

Table 6.6: Relationship between corporate structure predictors and the *amount* of losses accounting for firm size

Control Variable	Sample size	Predictors: Owner: firm	Owner: individual	Corporate	Partnership	Sole Trader
Number of Advisers	Full sample of firms with losses reported	No relationship found	Associated with less consumer loss (Statistically weak relationship)	No relationship found	Associated with less consumer loss (Statistically weak relationship)	No relationship found
	PIFs with 25 or fewer advisers	Associated with more consumer loss (Statistically weak relationship)	Associated with less consumer loss (Statistically weak relationship)	No relationship found	Associated with less consumer loss (Statistically weak relationship)	No relationship found
Revenues	Full sample of firms with losses reported	No relationship found	No relationship found	Associated with less consumer loss (Statistically weak relationship)	No relationship found	No relationship found
	PIFs with 25 or fewer advisers	No relationship found	Associated with less consumer loss (Statistically weak relationship)	No relationship found	Associated with less consumer loss (Statistically weak relationship)	Associated with less consumer loss (Statistically strong relationship)

Notes: "Statistically weak relationship" = significant at 10 per cent level; "Statistically weak relationship" = significant at 5 per cent level, all regressions have robust standard errors
Source: Europe Economics calculations

Table 6.7: Relationship between corporate structure predictors and the *incidence* of losses accounting for firm size

Control Variable	Sample size	Predictors				
		Owner: firm	Owner: individual	Corporate	Partnership	Sole Trader
Number of Advisers	**Full sample of firms with losses reported**	No relationship found	No relationship found	No relationship found	No relationship found	No relationship found
Revenues	**Full sample of firms with losses reported**	Associated with less consumer loss (Statistically strong relationship)	Associated with more consumer loss (Statistically weak relationship)	No relationship found	Associated with more consumer loss (Statistically weak relationship)	Associated with more consumer loss (Statistically weak relationship)

Notes: "Statistically weak relationship" = significant at 10 per cent level; "Statistically weak relationship" = significant at 5 per cent level, all regressions have robust standard errors

Source: Europe Economics calculations

6.38 For those regressions analysing the relationship between corporate structure predictors and the incidence of losses, when the full sample of firms with losses reported is used in the regressions accounting for adviser number, no relationships are found with any corporate structure predictors. Likewise, when the sample include PIFs with 25 or fewer advisers, controlling for revenues, no apparent relationships are found between loss incidence and any corporate structure predictor.

Other, Weaker Results

6.39 There were two further results that were statistically significant when controlling for size defined by revenues, but not when controlling for size defined by the number of advisers.

6.40 First, we found that when capital and reserves are greater, both the amount and incidence of loss are less. This might seem intuitive, in that companies with greater reserves may have a generally more conservative/prudent business approach, which might be reflected in tighter controls over mis-selling. Note that this would be a "common cause" explanation, rather than a claim that having greater reserves provides incentives to mis-sell less. An alternative possibility might be that when firms have greater reserves, they have less to lose by mis-selling or are less likely to be under financial pressures that might drive them to cut corners in an attempt to provide additional sales to sustain the business. This would be an explanation in which the greater reserves are the cause of less mis-selling.

6.41 For either of these explanations there are two key problems:

(a) Our data do not allow us to say when the mis-selling occurred — presumably it is the capital at the time of the mis-selling that would provide the incentive effect, rather than the capital some time (potentially years) later when the claims arrive.

(b) It is unclear why, on these accounts, the result would not hold when controlling for firm size defined by the number of advisers. There may be the concern that capital and reserves are in some way connected to revenues (e.g. indicate that revenues were high last period), and so that the statistical result just captures some of the effect of previously high revenues.

6.42 Second, the greater the number of clawed back commissions, the greater the *amount* of consumer loss (but the incidence is unaffected). With the data available, we were unable to establish conclusively that this result is not a purely statistical artefact: the result was not robust and changed considerably within the different specifications. For example, if the number of clawed back commissions were closely related to the churn in advisers, then since the churn in advisers is a significant driver of consumer loss, with poor data the number of clawed back commissions might appear statistically significant, even though it is actually just "proxying" for adviser churn. We did not find high correlation between adviser churn and the number of clawed back commissions in our dataset, but nonetheless this possibility remains a concern.

7 HIGH-LEVEL COMMENTS ON COSTS AND BENEFITS OF RISK-BASED PRUDENTIAL REQUIREMENTS

Rationale

7.1 The rationale for some form of regulation was set out in Section 3, briefly that

(a) the interaction of asymmetric information problems in respect of firm's dealings with consumers,

(b) the lag between mis-selling and claims and subsequent redress, and

(c) company law concerning limited liability

mean that there may be scope for welfare-improving regulation both of incentives to mis-sell and of the capital firms have available to pay redress. In particular prudential requirements impose on firms certain restrictions to ensure that in the event of any mis-selling they have sufficient capital to compensate customers.

7.2 The main aims of prudential requirements, set out in DP07/4, are therefore to:

(a) reduce the frequency of mis-selling;

(b) reduce the impact of mis-selling when it occurs; and

(c) enable firms to wind down in an orderly manner.

7.3 Risk-based prudential requirements for non-MiFID PIFs, by targeting incentives more directly, might help in achieving these goals. Specifically, the idea of risk based requirements would be to enhance incentives not to mis-sell by making the level of prudential requirements dependent on the extent to which the firm exhibited features that made it relatively more likely to give rise to consumer loss.

General Costs and Benefits of Risk Based Prudential Requirements

7.4 Before examining the costs and benefits of specific options for different forms of risk based prudential requirements, it is worth considering general issues that arise from such policies.

Potential Benefits

7.5 Potential benefits might include:

(a) Reduced incentives to mis-sell, and hence a reduction in mis-selling;

(b) A reduced burden on the FSCS, since firms more likely to mis-sell would more often have capital available to pay claims.

(c) Enhanced understanding for the FSA in how to employ risk-based prudential requirements in other areas where risk-dependent regulations are used or might be used more.[51]

7.6 To realise such benefits, one would need to identify characteristics of firms that gave rise to (or, at least, were appropriately associated with) the relevant forms of risk (in this case, consumer loss from mis-selling), so that the risk-based requirements could depend on the presence/absence of these risk creating/reducing features of firms and their conduct.

Potential Costs

7.7 Risk-based prudential requirements could potentially give rise to a number of costs:

(a) For those firms assessed as more risky than average, prudential requirements would be greater than in the absence of a risk basis. Thus these firms would have greater idle capital than would be the case in the absence of the regulation.

(b) Insofar as the risk-based prudential requirement were only imperfectly related to consumer loss (which is all-but-inevitable), it might create behavioural and competitive distortions.

(c) There would be costs of calculating the precise requirement which, since the requirement would be more complicated than that at present, would constitute an additional cost for the FSA and hence higher FSA fees for firms.

(d) A more complicated requirement would be more costly to police and may well lead to lower compliance.

(It should be noted that with an appropriately constructed rule costs in categories (c) and (d) might be small relative to those in (a) and (b).)

Risks

7.8 Attempting to make prudential requirements dependent on risk creates a number of risks of its own, namely:

(a) The relationships between consumer loss and the drivers used in the prudential requirement may break down once they become the basis of a regulation.

(b) Since the measure of risk is very likely to be imperfect, there is the danger that the negative distortions to behaviour induced by this imperfection outweigh the improvements to behaviour induced through less mis-selling.

(c) In practice it may be very difficult to devise a measure that does not relate to the firm's past, and hence may give rise to incentives to "phoenix" by closing down the firm and

[51] We note that this should not be taken as implying that those considering how to employ risk-based regulations in the PIFs sector would not equally (or perhaps even more so) learn from the experience of using risk-dependent regulations in other sectors.

opening a new firm engaging in the same practices that give rise to mis-selling, but without a legacy.

(d) There may be the risk of distorting competition, particularly if the burden on small firms is increased.

(e) There is the danger that compliance will fall, since the measures may be difficult to police.

(f) Firms may also reduce their compliance in other areas such as reporting requirements or "treating customers fairly" in respect of dealing with complaints, if these are seen to affect the assessment of risk for prudential purposes.

(g) If increased compliance costs force too many firms out of the industry or raise barriers to entry or to firm growth, then the losses to competition might outweigh gains through reduced mis-selling.

(h) There is the danger that prudential requirements over-respond to developments in the macroeconomic cycle or to particular mis-selling scandals, with the result that the risk-based prudential requirements come to be seen as unsustainable, there is pressure for regulatory forbearance, and the credibility of the FSA is damaged.

(i) There is the risk that, in the absence of further measures concerning PII, incentives to acquire PII that mitigates risk might be reduced — in this case, for example, a reduced burden on the FSCS induced by the prudential requirements might be offset by an increased burden on the FSCS because of less appropriate PII.

(j) There is the risk of creating a distortion between MiFID and non-MIFID firms, with the result of impairing the functioning of the Single Market and/or placing UK firms at a competitive disadvantage and/or providing firms with artificial incentives to acquire MiFID passporting status.

7.9 These risks would presumably be mitigated significantly by the specific design of the regulation.

Options

7.10 Turning to specific policy options, it is worth considering a number of fairly broad types of risk based prudential requirements in the cost benefit analysis. The options mentioned below are not mutually exclusive:

(a) Status quo: Use of a minimum threshold below which the requirement is a constant and above which the requirement is proportional to expenditure.

(b) Use of component based on turnover (revenue) or expenditure

(c) Use of a component based on the number of advisers

(d) Use of a component based on the churn in advisers

(e) Use of a component based on measures of adviser competence

(f) Use of a component based on features of the PIF's internal systems and controls

(g) Use of a component based on the remuneration model of the PIF

(h) Use of a component base on indicators of the PIF's financial robustness

Qualitative commentary on options

7.11 Our econometric study provided robust evidence of only three drivers of consumer loss:

(a) Turnover (revenue): consumer loss increased with turnover, on at least a one-for one basis. That is to say, as turnover increases one per cent, consumer loss induced increases by at least one per cent. This result applied only for firms above 25 advisers.

(b) Number of advisers: consumer loss increased with the number of advisers, but less than proportionately. That is to say, as the number of advisers increases one per cent (say from 100 to 101) consumer loss increases by less than one per cent.

(c) Adviser churn: firms where a higher proportion of advisers leave the firm each period tend to induce more loss. The strongest relationship found was for PIFs with 25 advisers or fewer. For each percentage point increase in adviser churn, the amount of loss increased by between £360 and £465, and the incidence of loss by between .01 and .09 upheld complaints. For firms with 26 or more advisers, a statistically weaker relationship was found, but only when controlling for number of advisers.

7.12 This means that we have no basis from the empirical results of this study for using risk-based indicators with components for measures of adviser competence, robustness of internal systems and controls, remuneration models, or financial robustness indicators. Nonetheless, it is our view that each of these is potentially material for affecting consumer loss, and it would be appropriate to consider how to employ them in risk-based prudential requirements. Unfortunately the results of this study do not offer an evidential basis on which to construct requirements of this sort.

Turnover/Revenue

7.13 Since expenditure and turnover are presumably highly correlated, our finding in respect of turnover is basically an endorsement of the current rules. Our finding would imply the use of a requirement proportional to turnover (and hence to expenditure) that has a minimum size level, with a constant requirement below that minimum size.

7.14 We note that we did not find that growth or shrinkage in turnover was a significant predictor of consumer loss, and hence have no basis for suggesting its use as a risk-based indicator.

Number of Advisers

7.15 Our finding for adviser numbers would imply the use of an amount of capital required for firms below 26 advisers, then from 26 up the requirement would increase at 0.3-0.4 times the increased percentage of advisers. So, for example, increasing from 25-26 advisers is

an increase of 4 per cent. This would imply that the amount of capital required in respect of the adviser component would increase by 1.2-1.6 per cent.[52]

7.16 The precise design of a component based on adviser numbers would have to avoid creating perverse incentives. For example, if a firm split into two sister firms each of which had advisers that worked for it half of the time, there would be more advisers per unit of turnover, and hence potentially a lower prudential requirement. But it is difficult to see this as a beneficial incentive to create.

7.17 It is worth noting that neither an expenditure-based requirement nor a number-of-advisers-based requirement is likely to give rise to incentives to limit mis-selling. Our findings relate firm size to the amount of consumer loss it is likely to have given rise to in the past. Thus prudential requirements based on size measures are unlikely to limit mis-selling in the future.

Adviser churn

7.18 Although we did find that adviser churn is correlated with firm loss, there are a number of reasons why we recommend not employing it in a risk-based prudential requirement:

(a) While we currently have a reasonably robust correlation between adviser churn and consumer loss, we are unable to specify either causality or the order of events. Our results would be as compatible with mis-selling leading to increased staff turnover as they would with high staff turnover rates leading to mis-selling.

(b) Having prudential requirements increase with staff turnover rates would give firms the incentive not to dismiss and replace staff that were incompetent and mis-sold to customers. This incentive would run flat contrary to the objectives of the requirements. (This is a variant of the risk identified earlier that an attempt to control the relationship might lead to its breaking down.)

(c) Having prudential requirements increase with staff churn would strengthen the bargaining position of insiders, since moving to another firm would result not only in the loss of a useful staff member but also in an increase in required capital. Employees could leverage off this to secure higher salaries, increasing costs and ultimately increasing consumer prices.

7.19 Although we recommend against using adviser churn in prudential requirements, it may be possible to employ it in other ways. For example, it may be that adviser churn exceeding some threshold should trigger a supervisory visit. If churn is likely to limit consumer loss (e.g. because advisers fired were incompetent), the firm can explain this without the automatic cost that a prudential requirement would imply.

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[52] 30% x 4% = 1.2% whilst 40% x 4% = 1.6%

Conclusions and Recommendations

7.20 Overall, we conclude that, on the basis of the limited and otherwise imperfect data available for this study, our analysis does not find robust evidence to justify the introduction of prudential requirements other than those tied to the size of the PIF. In our view the risks of mis-design are considerable, and there are clear potential costs, whilst without firmer evidence that certain firm characteristics are associated with consumer loss (other than adviser churn, which is unsuitable for the purpose), the benefits of making prudential requirements depend on such characteristics is highly uncertain.

7.21 We have, however, identified a number of variables which we were unable to investigate due to lack of data and on which further research might be justified.

7.22 As stated earlier, our econometric analysis found robust evidence of only three drivers of consumer loss — revenues, number of advisers and churn in advisers. We have identified above reasons why we do not recommend using churn in advisers for the purpose of prudential requirements.

7.23 This leaves only two variables to consider — turnover (i.e. company revenues) and number of advisers. These are the variables currently used in determining prudential requirements for PIFs.[53] Clearly, if current prudential requirements can be changed so as to vary more appropriately in line with these two variables, then such a policy change may be worth considering. In the light of this, the relevant question becomes: does our analysis justify a change to the way in which prudential requirements currently vary with turnover and number of advisers?

7.24 We would emphasise that our analysis can only address the question of the *structure* of prudential requirements — that is, how they vary across PIFs with different levels of turnover and different numbers of advisers. We are unable to advise on the wider question of whether the average level of prudential requirements in the PIF sector is set at too high or too low a level. This latter question would require deeper analysis of the incentive effects of prudential requirements and their impact on overall market outcomes.

7.25 Focusing on the narrower question of the structure (rather than the average level) of prudential requirements, we have found evidence to support only one form of move away from the current regime. Taking as given the current threshold of 25 advisers used to divide smaller from larger PIFs[54]:

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[53] As described earlier, capital adequacy requirements for PIFs are currently stratified by the number of employed investment advisers: firms with 25 or fewer advisers are required to hold a flat-rate of not less than £10,000, whereas PIFs with more than 25 advisers are subject to an Expenditure Based Requirements (EBR) equal to four weeks expenditure for firms, or 13 weeks if the firm is a network.

[54] We note that although our evidence and reasoning suggests that it is likely that the relationship between consumer loss and size breaks down for firms below some threshold size, we have not established that 25 is that point.

(a) We have found no predictors which explain variations in consumer loss among PIFs with 25 or fewer advisers other than the number of advisers itself, and hence no evidence to justify a move away from a flat-rate requirement for these PIFs;

(b) We have been unable to reject the hypothesis that for PIFs with 26 or more advisers, consumer losses increase proportionately with company turnover. Hence, there is no evidence to justify a move away from an expenditure-based requirement. To express matters differently, we might say that our results imply that a requirement that increases proportionately with expenditure is already a risk-based requirement.

(c) However, we have found that, for firms of 26 or more advisers, consumer loss increases less-than-proportionately as the number of advisers increases. This suggests the possibility of introducing, in addition to the expenditure-based requirements of the current form, an additional requirement that depends on the number of advisers. As discussed in paragraph 7.15, the adviser-number-based requirement would increase by 0.3-0.4 per cent for each one per cent increase in the number of advisers. We recommend that this possibility be examined in further detail.

7.26 A major limitation of our research is that we did not have the data available to investigate a number of variables which intuitively one might expect to behave as possible predictors of consumer loss. For instance, we had no data on:

(a) *Products mix* — how the advice given by a PIF breaks down between products with a low risk of consumer loss (e.g. insurance?) and products with a high risk of consumer loss (e.g. endowment mortgages?).

(b) *Firm remuneration structure* — i.e. how firm turnover breaks down between commissions and fee-based payments.

(c) *Adviser remuneration structure* — i.e. how adviser remuneration breaks down between a basic salary and commissions/bonuses/other incentive payments.

7.27 Given this, there may be value in the FSA undertaking further research to gather data on these variables and to analyse their predictive power. For example, a robust understanding of the relationship between firm remuneration structure and consumer loss would provide a valuable input into the FSA's wider Retail Distribution Review.

7.28 In the light of these considerations, our recommendations are to:

(a) Maintain an expenditure-based requirement to apply to firms with above some low threshold number of advisers (e.g. 25);

(b) Examine carefully the possibility of including an adviser-number-based prudential requirement;

(c) The FSA should seek to gather data on other predictive variables (particularly product mix, firm remuneration structure and adviser remuneration structure), so as to

undertake analysis of whether these variables might form robust predictors of consumer loss.

APPENDIX 1: FIRMS INTERVIEWED

PIFs Interviewed

(a) Sesame Limited (2,235 advisers)

(b) Openwork Limited (1,103 advisers)

(c) Bates Investment Services/Money Portal Group (609 advisers)

(d) Interdependence Limited/Tenet Group (470 advisers)

(e) Baigrie Davies & Co. Limited (14 advisers)

(f) Fee Based Solutions (3 advisers)

PII Interviewed

(g) Magian Underwriting/Royal & SunAlliance

PII Broker Interviewed

(h) PYV Limited

APPENDIX 2: CONCEPTS OF CONSUMER LOSS

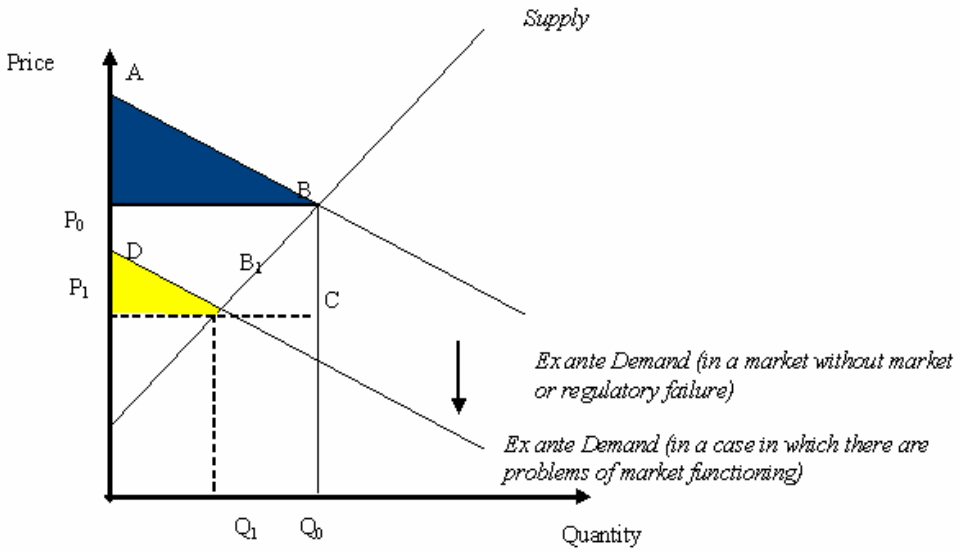
Structural Consumer Loss

A2.1 Structural detriment is the loss in expected consumer welfare as a result of market inefficiencies. In the limiting case in which market or regulatory failures are so extreme that the market is eliminated altogether, structural detriment might be very large — all the consumer surplus there would be in a well-functioning market.

A2.2 Consider Figure A1.1, and let us assume that the market inefficiency is an unresolved ability of advisers to mis-sell to customers. This causes demand for advice to fall, as consumers take account of the risk of receiving bad advice.[55] As a result, both the price consumers are willing to pay and the amount of advice 'consumed' decline. The expected gains to consumers from trade (their "consumer surplus") in the absence of market inefficiency is given by the area of the triangle ABP_0 — apart from the "marginal" consumer who would not have been willing to pay a penny more than P_0, all the other consumers would have been willing to pay more than P_0 for their products but are required only to pay that much. But when they face a chance of being mis-sold products, they reduce their willingness-to-pay to reflect that risk. So demand in this case is lower, and consumer surplus is only the triangle DB_1P_1. The blue area denotes the welfare loss to consumers as a result of the inefficiency. The yellow area is the loss suffered by producers.

[55] In Figure , the curves marked "Demand" are to be understood as conditioned on expectations of market outcomes, and so already embody the attitudes of consumers to risk. As in all standard analyses of the economics of uncertainty, we understood consumers as expected utility maximizers, whilst Supply is conditioned on expected profits (or expected shareholder returns). Clearly ex post outcomes might differ from those expected by consumers and firms for many reasons — e.g. brute economic shocks relating to the weather might cause returns to be lower than expected. This does not prevent us from having a well-specified concept of ex ante equilibrium and hence of consumer surplus in this equilibrium.

Figure A1.1: Structural Detriment



Source: Europe Economics

A2.3 There are a number of significant advantages of the structural detriment approach:

(a) It recognises loss from transactions that would have been advantageous but never take place — which are ignored by approaches that focus on actual outcomes.

(b) It covers the impact on all consumers, and thus automatically recognises that market or regulatory failures typically will not damage all consumers equally, but in fact may work to the advantage of certain people.

(c) Because it is an ex ante concept, it is well-suited to situations in which consumers knowingly take on risk, as it is not dependent on the outcome.

A2.4 On the other hand, there are a number of material disadvantages. In particular, structural detriment relies on comparing actual market transactions with those that might have arisen in a theoretical situation that by definition has not arisen. This means that it is intrinsically likely to be very difficult to measure with any precision, and estimates are likely to be subject to very wide margins of error and considerable controversy.

A2.5 Furthermore, assessments of consumer loss might often be intended to inform an assessment of whether there is market or regulatory failure. But in order to measure structural consumer detriment, we must *already know* whether there is market or regulatory failure —hence its usefulness in this context would mainly take forms such as quantifying the scale of market and/or regulatory failures that are already agreed to exist, rather than assessing whether there are such failures in the first place.

Ex Post Consumer Loss

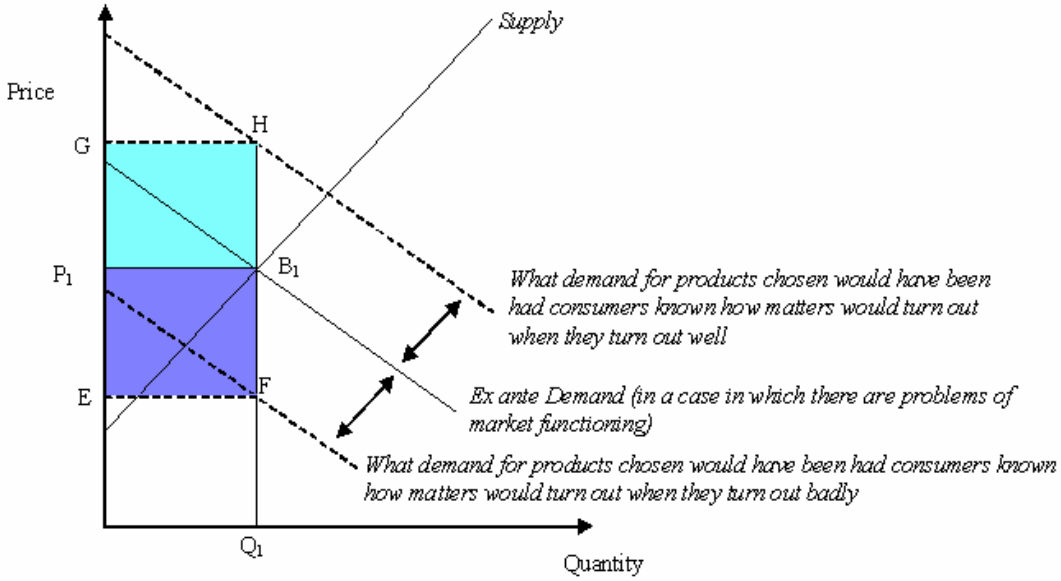
A2.6 Ex post detriment is experienced after having engaged in a transaction, and arises because market or regulatory failures may drive outcomes in which certain consumers lose compared with their reasonable expectations.

A2.7 Consider A1.2. Let us assume that the demand curve marked "Actual ex ante Demand (in a case in which there are problems of market functioning)" is the same (reduced) demand as in A1.1, so the market price is still P1 and quantity traded is still Q1. But now let us assume that all consumers were mis-sold in the sense that they were recommended products that were riskier than those appropriate for them, and focus on what then transpires. Consider a case in which these excessively-risky products do badly. If they had understood properly what they were buying, consumers would have been willing to pay less. This reduced demand is given by the demand curve marked "What demand for products chosen would have been had consumers known how matters would turn out when they turn out badly". The ex post consumer loss is then represented by the rectangle P_1B_1FE. [56]

A2.8 It is worth noting, however, that, as the diagram indicates, even when consumers have been poorly advised, they might still benefit from the purchase. In this case, had matters turned out well, consumers would have gained ex post welfare represented by the rectangle P_1B_1HG. The ex post consumer loss concept takes no account of this feature — consumers that happen to do well out of bad advice do not appear in the aggregate calculation as "compensation".

[56] Note that H is the correct point since the thought experiment here relates to quantities that were actually traded and are now fixed. The point at which "What demand for products chosen would have been had consumers known how matters would turn out when they turn out badly" crosses "Supply" is of no significance.

Figure A1.2: Ex Post Detriment (Aggregated Across Individuals)



Source: Europe Economics

A2.9 Thus in the case illustrated in Figure A1.2 the ex post consumer loss is, in some sense, additional to the structural consumer loss already embodied in the ex ante demand curve.

A2.10 It should now be clear that ex post consumer loss and structural consumer loss are fundamentally different concepts — neither is a subset of the other. However, in the case of mis-selling, we can see that the ex post concept can be seen as broadly capturing the risks that lead to the market distortion measured in the structural concept (though without correctly measuring the size of those market distortions). Thus we might expect that measures that limit the ex post loss caused by mis-selling without imposing too significant regulatory constraints on the market might reasonably be expected to reduce structural detriment, also.

The counterfactual

A2.11 Given the ex post nature of this measure, a key element of the ex post detriment approach is the "counterfactual" against which any loss will be judged — that is to say, the "what would have happened otherwise" alternative against which to measure the size of the consumer loss. Though there might be debate over precisely which counterfactual is best, as discussed above, the options are all fairly concrete — things like the actual performance of the next-best product or the actual returns on a risk-free bond — as opposed to the ephemeral quality of the counterfactual for structural detriment — "ex ante equilibrium in a (never-to-be-witnessed) ideally-functioning market." And for ex post detriment a measurement approach that employs data on actual payments to consumers can avoid certain of the detail relating to the counterfactual, again as mentioned above.

A2.12 We have seen that consumer loss concepts raise issues of the distribution of losses as well as their amount. One simple measure of distribution would be the number of losers or losses (as opposed to the aggregate value of such losses) — for example, perhaps the total number of complaints or of upheld complaints.

A2.13 However, it is very important to be careful here. For it is most unlikely that, in a market in which there are fundamental features that lead to market failure (at least over the relevant timescale), that regulation could eliminate all ex post consumer loss without at the same time creating significant additional structural losses — e.g. by eliminating the market altogether.

A2.14 Similarly, it may well be inefficient for firms, in practice, to have such robust systems that no unscrupulous or incompetent individual could take advantage of them in a way that leads to mis-selling. Such all-encompassing systems might well be so expensive that willingness-to-supply would fall — creating a separate source of significant structural detriment.

A2.15 Thus it may well be that the ideal levels of upheld complaints, redress, and other such measures of ex post loss are not zero.

A2.16 One way to approach this issue, for our purposes here, would be to focus on measures that compared firms with each other, and/or across time, so as to focus on differences or changes in (ex post) consumer loss, rather than attempting to estimate (ex post) consumer loss per se.

APPENDIX 3: DETAILS OF ECONOMETRIC ANALYSIS

Methodology

A3.1 The methodology consisted of three key steps:

(a) Econometric analysis;

(b) Interview programme; and

(c) Synthesis of results into a high-level cost-benefit analysis of risk-based prudential requirements.

A3.2 Below we discuss the first two steps. Our results from the final step are presented in Section 8 of the main report. It should be remarked that this was essentially a data analysis project, so that the considerable bulk of the effort of the study was devoted to the first step.

Econometric Analysis

Preliminary remarks on modelling approach

A3.3 Before attempting to use the data to identify significant predictors of consumer loss it was necessary to develop a modelling framework. In devising such a framework, two main factors are involved: a) a theoretical view of what form the final model should be expected to take; and b) understanding what is possible to obtain in practice with the available data.

A3.4 Arguably, the best approach to identify firm-level predictors of future consumer loss would be that of estimating a model of the form $Y_{it} = \beta X_{it-k} + \alpha_i + \varepsilon_{it}$ where X is a vector of predictors, Y a measure of consumer loss, α a company specific effect, and ε the usual random error term. Ideally the vector of possible predictors should contain variables that refer to the moment in which the poor advice was given and not to the moment in which the loss has arisen. In this way, by knowing what the characteristics of the firm were at the time of advice we would be able to match them, under reasonable assumptions, to the characteristics of the current PIFs to predict future losses.

A3.5 For the above strategy to be feasible it is necessary to have access to a dataset that covers a significant time period as well as an estimate of the average time after which consumer loss arises since the day poor advice is given. We would therefore need to have observations available for the various PIFs authorised at any point in time for a number of years prior to that point in time. However, as we reported in Section 5, no such data are available at present.

A3.6 Therefore we were forced to use a "second best" approach, in which we tried to extract as much information as possible from the available data.

Basic modelling approach

A3.7 Given the lack of historical data on PIFs our efforts have mainly been concentrated on the estimation of cross-sectional models such as $Y_i = \beta X_i + \varepsilon_{it}$, where all symbols have the same meaning as above. In these models the measure of consumer loss is related to a number of firms characteristics that are contemporaneous to the loss emerged.[57] It is impossible for a purely cross sectional model to give accurate predictions about the dynamic effects of changes in the characteristics of the PIFs, because all data is from one grand aggregate time period.

A3.8 The datasets available to this study are used, either by the FSA or by external entities for a number of different purposes and need to be adapted for use in the current context. In the following section we describe how we constructed the various measures of consumer loss used in our analysis as well as how we obtained a single variable to be used as a possible predictor starting from the various sources that we have available.

Data preparation

Measures of consumer loss

A3.9 Building on the considerations presented in Section 4, we have constructed two different measures of consumer loss.

A3.10 If adequate data were available, perhaps the two most natural candidates for consumer loss would appear to be the following:

- One relating to the total losses created by poor financial advice *before* those losses are abated by compensation;
- One relating to residual losses even *after* abatement.

A3.11 These might seem naturally to flow from the discussion in DP 07/4, in which the FSA set out its view that the "first best" outcome of a well functioning market is that consumer loss does not arise in the first place, while a second best outcome would be that consumer are compensated for the loss they suffer.

A3.12 In our view, it is strictly correct to say that consumer losses have arisen, overall, only in those cases in which it has been crystallized — until losses have finally been "crystallized" we are not, in some sense, full *ex post*. Whilst firms exist there should remain the potential to make claims against them. And even when firms are gone concerns there is the possibility of accessing the FSCS. To the extent that you might still be compensated, there is a sense in which you have not strictly yet made final losses. In this context, the

[57] However we have also attempted to estimate models where losses at time *t* were related to the characteristics of the PIFs at time *t-k* as we describe below.

only truly crystallized losses are those arising after FSCS payouts have been made, as a result of the cap on FSCS compensation.[58]

A3.13 The danger of focusing only on pre-abatement losses is that one appears to ignore the role that the existence of the FSCS and of other redress procedures plays in reducing structural detriment. Redress procedures provide consumers with greater confidence that in the event they are mis-sold a product, that they will receive compensation. Consequently consumers that would otherwise not have participated in the market without such procedures now do, thus increasing demand and increasing consumer surplus. The better the redress procedures are (i.e. the more efficient, the better at identifying just complaints, the quicker the process, the more appropriate the payouts, etc.) the lower structural detriment will be - even for a given amount of pre-abatement losses - one therefore cannot focus solely on this indicator.

A3.14 On the other hand, in the context of constructing predictors of consumer loss that might feature in risk-based prudential rules, insofar as it is the function of these rules to incentivise firms not to mis-sell in the first place (as opposed to the other functions of these rules — set out in bullets (b) and (c) of paragraph 3.19), it would seem equally remiss not to consider pre-abatement losses. Thus (a) and (b) might appear to be the natural pairing.

A3.15 However, two factors speak against employing this pair as they stand: First, we do not have sufficient data on (b) for our modelling purposes — very few firms that submitted RMAR returns since 2005 and that had claims against them have gone into default and have been paid by the FSCS, thus although we do have data on crystallised losses after FSCS abatement, we do not, for these cases, have sufficient data on the candidate *predictors* of loss. Second, although (a) and (b) are measures of the *amount* of loss, they give us no indication as to its *incidence* — for a given total amount (X), measures (a) and (b) would give the same "consumer loss" regardless of whether these losses were one huge loss to one person or tiny individual losses spread over millions of people.

A3.16 Thus we are unable to employ a measure of type (b) (though as will be seen we do attempt to draw in a broader picture using an index — with limited statistical success) but also add in an additional concept, the number of upheld complaints.

Pre-abatement loss

A3.17 Our pre-abatement measure of consumer loss is made up of the sum of any firm payments in the FSA dataset and any pre-abatement losses in the FSCS dataset.

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[58] FSA rules dictate the amount that the FSCS pays in compensation for any claim, once the FSCS has verified the amount lost. In the FSCS's Investment Subscheme, these rules imply that for a single claim, the FSCS pays 100 per cent of the first £30,000 lost, and 90 per cent of the next £20,000 lost. Thus, FSA rules cap the maximum payment within the Investment Subscheme at £48,000. These rules are exactly the same as those that operated in the predecessor Investor Compensation Scheme, which was merged into the FSCS at the creation of the latter in December 2001.

A3.18 In practice, there is only a very small overlap in the data between firms who made payments to consumers and firms associated with FSCS payouts, so in most cases the pre-abatement losses for any given firm will be sourced from only one of the two datasets. This is because very few firms that submitted RMAR returns since 2005 that had claims against them have gone into default and have had the claims paid by the FSCS.

A3.19 A beneficial side-effect of merging the two datasets in this way is that the dependent variable is available for a larger sample of PIFs, since the number of firms which appear in either one or other of the datasets is greater than the number of firms appearing in any single dataset.

A broader measure of loss, and a measure of its breadth (incidence)

A3.20 The most natural candidate for post-abatement consumer loss is the difference between the pre-abatement losses and the compensation paid recorded in the FSCS data. Unfortunately it is not feasible to estimate models on this variable only as, when combined with the possible predictors, very few observations are available.

A3.21 Furthermore, all the other variables that represent a proxy of consumer loss may contain information that is additional and useful. We therefore conducted some provisional investigations using an index that incorporated as much information as possible of the various proxies of consumer loss that are available. Details on how the index was derived from the data can be found in an annex to this report, but for our purposes here it should be noted that the result was an index made up of three variables: the total redress paid by firms, the total number of complaints received and the total number of complaints upheld by firms.

A3.22 Among these three variables the last (total upheld complaints) has independent intuitive appeal as providing information on the *incidence* of mis-behaviour. A high amount of redress paid might have been caused by a limited number of complaints made by customers that each lost considerable sums. On the other hand, a high number of upheld complaints would indicate that many consumers are each suffering smaller losses.

A3.23 Hence, our later investigations abandoned the index and instead focused on employing an estimate of upheld complaints as a secondary consumer loss measure of incidence.

Further issues

A3.24 For both our pre-abatement and our incidence measures we have constructed a "total variable by company". For pre-abatement losses this is defined as the sum of all redress paid by a firm from 2005 to 2007 (from FSA data) plus the amount paid by the FSCS to cover the losses left by defaulted firms. The incidence measure was made up from the total number of complaints, an estimated number of complaints derived from the amount of redress paid in the overall period, and the number of complaints upheld in the entire reporting period.

A3.25 In addition to the two measures described above we can also estimate the likelihood of a company defaulting either by constructing a dummy variable that takes the value of one if a company went into default and zero otherwise or by estimating a so called survival model that predicts when (and if) a company is going into default.

A3.26 This is important since firms that go into FSCS default are arguably causing additional consumer loss by forcing consumers to wait longer on average for their compensation to be paid and to deal with a different organisation than the PIF.

Potential predictors

A3.27 The potential predictors coming from the TARDIS, RMAR and FAME need to be manipulated in order to be in a form appropriate for models as the one described above to be estimated. We briefly describe below how we transformed the various datasets available to be included in our analysis.

A3.28 The data from the RMAR have been averaged in order to obtain a single observation per company. We have only taken into account the number of returns that each company submitted so that if, e.g. a company submitted four returns all four observations are taken into account but if a company submitted only two returns the average only takes into account two observations.

A3.29 The data from TARDIS, Elixir, and FAME do not require to be modified as we mainly used them to check the results obtained using RMAR returns and their main role is that of providing potential predictors that pre-date the day when the loss materialised.

A3.30 However with regards to FAME dataset we need to stress that it contains data only on incorporated firms in the UK and therefore it may give rise to biased estimates.

A3.31 We carried out a number of diagnostic tests on the data to examine any areas of bias in the distributions between all the firms included in the RMAR sample and the subset of firms also on FAME (using RMAR data).

A3.32 Total revenue, total fixed assets, and total current assets are on average significantly lower in the FAME PIFs. Overall, there appears to be a statistically significant difference in the distributions of all the characteristics examined, at any level of significance. The likely biases in the FAME sample must be borne in mind when using these data.

A3.33 Nonetheless, for those PIFs covered by FAME data, the database could provide useful information on how explanatory variables have evolved historically. This could be useful in testing different lags between explanatory variables and consumer loss.

Type of regressions run

A3.34 In our modelling effort we have run four different types of regressions:

- First, we ran univariate regressions to estimate the effects of firm size. These were of the form $Loss = \alpha + \beta\ firmsize + \varepsilon$ where firm size was proxied either by total revenues or by number of staff.
- Secondly, we ran bivariate regressions to estimate the effects of other potential predictors, but controlling for firm size. These regressions therefore took the form: $Loss = \alpha + \beta\ firmsize + \chi\ predictor + \varepsilon$.
- Thirdly, we attempted general to specific regressions using the predictors that had proven significant in the bivariate regressions described in (b). A general to specific approach entails estimating a model that contains a large number of potentially important predictors (in our case all that were significant in the bivariate regressions) and then excluding non-significant regressors. Then it is necessary to test for the inclusions of previously insignificant regressors in the following models so to arrive to the simplest model (i.e. the one that contains the smallest number of regressors) that explains the losses.
- Finally, we ran regressions to estimate the likelihood of defaulting. We estimated both limited dependent variables models (where the dependent variable is a dummy that takes the value of one for defaulted firms and zero for non defaulted) and a hazard model that estimates the effect of an explanatory variable on the risk defaulting.

A3.35 The models in (a) to (c) above aimed to identify factors that have a statistically significant correlation with our measures of consumer loss. The models in (d) are an attempt to understand whether there are characteristics of the firms that are associated with a higher likelihood of going into FSCS default.

Factors for which to control, and other technical issues

A3.36 Firm size is the single most important factor for which to control when attempting to explain overall consumer loss. The volume of business and the numbers of people involved in it seem intuitively very likely to be an important predictor of loss — whether because more business leads to more occasions of innocently mistaken advice or because more business means more opportunities for exploitation. We always include a proxy for firm size in every regression that we estimate.

A3.37 Given the nature of the data (in particular, the fact that the size of the PIFs in our dataset varies greatly) it is important to control for heteroscedasticity. Heteroscedasticity is a technical term that indicates that a random variable does not have constant variance. This seems intuitively likely to be an issue in our case since larger firms may well show a higher dispersion in attributed losses than smaller firms. Although heteroscedasticity does not cause the estimated coefficient to be biased it reduces estimated error terms. This means that there is a danger of concluding that there is a statistically significant relationship between the predictors and the losses when it is not so.

A3.38 Next, given that many of the available returns on the number of complaints received and/or the amount of compensation paid by either the firms themselves or the FSCS (in case of defaulted firms) are zero the data are likely to be mis-reported. However, in our case we do not know whether the data are really censored or not as it may be argued that a nil return is the correct representation of the data and not simply an expression of censoring. We believe that estimating tobit models may likely be introducing some spurious accuracy to models that do not have a solid theoretical base. In addition estimating tobit models with heteroscedasticity-robust standard errors is not straightforward. Thus we present some tobit results only as a confirmation of the sign of the estimated OLS model.

A3.39 Based on stakeholders' views, discussions with staff at the FSA, our informed judgement, and the results of a literature review, we have identified a number of possible predictors of consume loss.

A3.40 We summarize in Table A3.1 the possible predictors, whether or not we have a candidate variable to measure the predictors and some comments of the quality of the data available. The table shows that although we do have variable that can measure at some of the identified predictors there are clear gaps in the data necessary to test all of them.

A3.41 Nonetheless we believe that an attempt to analyse these data is useful in order to understand what they can and what they cannot be used for as well as to test whether any robust relationship is present between some of the identified predictors and consumer loss.

Table A3.1: Available predictors with source of data

Predictor	Proxy available?	Source	Comments
Firm size	Number of advisers or staff, company turnover	TARDIS, RMAR, FAME	Good availability and quality of the data
File checking reports	Number of AR visited, number of AR files reviewed	RMAR	Data available relates only to large (network) firms checking their appointed representatives. Not the entire population of firms
Profitability and capital resources	Share of income to turnover, Profit rate, Capital and reserves, Own funds	RMAR, FAME	Data are generally available and of sufficient quality
Firm remuneration structure	Share of fees over total revenues	RMAR	Fees are a very small share of revenues, thus it is unlikely that a relationship may be estimated
Adviser training and competence	Share of advisers who passed the required examination, Share of "competent" advisers	RMAR	Data are generally available and of sufficient quality
Number of complaints	Number of complaints	FSA Complaints data	Likely to be highly contemporaneous to losses and therefore not a good predictor: if complaints start to rise it is an indication of losses arising more than the fact that losses will arise
Risk based monitoring score		FSA	Data available only for larger companies
FOS data	N/A		
Premium size	N/A		
Productivity and experience	Share of income to turnover, Profit rate	RMAR, FAME	Data are generally available and of sufficient quality
Number of products sold	N/A		
Clawed back commissions	Number and value of clawed back commission	RMAR	Data are generally available and of sufficient quality
PI risk assessment factors	N/A		
Staff churn	Advisers who left since last reporting period	RMAR	
Rapid change in firm size	Number of advisers or staff, change in company turnover over various years	TARDIS, RMAR, FAME	Data are generally available but not always for a many years
Type of relationship with client	N/A		
Type of firm	Type of firm	TARDIS	Data are generally available and of sufficient quality
Ownership of firm	Ownership of firm	TARDIS	Data are generally available and of sufficient quality

Weaknesses to the Approach

A3.42 Both the approach described above and the data employed are far from ideal for the purpose of estimating the impact of firm-level characteristics. Ideally one would rely on a dataset that collates information on the characteristics of PIFs that dates back to when the advice from which the losses that are presently being measured was given. Then one would relate the losses from the last few years to the characteristics that pre-date these losses in order to obtain an average length for the period of time that passes between the period of poor advice and the materialisation of the loss, as well as what are the most important characteristics that predict these losses.

A3.43 Given the data available this is not possible. We attempt to control for the time lag between poor advice and losses by using lagged variables to check the robustness of the results obtained when these variables are available either from the TARDIS or the FAME datasets. However, this approach is clearly far from ideal.

A3.44 Furthermore, even our measure of pre-abatement loss, i.e. the sum of redress paid by firms and the losses suffered by customers of firms that went into FSCS default, has a number of shortcomings: firms may have differing attitudes towards systems for compensating customers, firms may be serving different types of customers that are more (or less) likely to complain, firms may pay a complaint even if a complaint is unreasonable if they think this would be less costly than litigation, and so on.

A3.45 Perhaps even more significantly, our preferred measures exclude losses suffered by consumers that do not complain and from potential customers that are deterred from participating in the market altogether. If the tendency to complain varies significantly between consumers served by different PIFs (e.g. because some PIFs serve more educated, affluent consumers who are more likely to complain), then this has the potential to bias cross-sectional analysis based on this dependent variable.

A3.46 A weakness that is common for the entire RMAR dataset and for the FSA complaints data is that they are based on reports submitted by firms. This implies that there may be some firm-specific bias introduced in the data. For instance there is a concern that some financial services groups may report complaints from the entire group as having been received by the PIF subsidiary. There is also a concern about under-reporting by the majority of non-MiFID PIFs who submit “nil returns” reporting no complaints.

PIF and PII Industry Interviews

A3.47 We conducted eight industry interviews for this study, and attended one PII forum. By speaking to PIFs and PII firms directly, we aimed to give them an opportunity to express their views, to enhance our understanding about consumer loss by talking with those with inside knowledge, and to balance the overall opinions we received. Two of our interviews were held with the PII industry (one firm and one broker), which provided some insight into certain issues related to PIF underwriting.

A3.48 We used the interviews to collect qualitative information that the FSA data could not provide. The main issues we focused on during the interviews were:

- Defining "consumer loss" in the context of poor financial advice;
- Measuring consumer loss;
- Understanding the types of firms most at risk of creating consumer loss through poor financial advice;
- Locating data for measuring consumer loss; and
- Discussing the main advantages and disadvantages of risk-based prudential requirements.

A3.49 The questions were tailored slightly differently depending upon the firm being interviewed; for example, we also asked the PII firm interviewed detailed questions about premium pricing and risk-assessments.

A3.50 A list of all the firms we interviewed is included in Appendix 2. All interviews were attended by at least two members of our team, one senior staff member and one junior staff. Most of the interviews were conducted with London-based firms, though interviews were conducted outside London. In order to obtain feedback from firms with a variety of experiences, we interviewed PIFs from each different size category.[59] The firm types we interviewed include:

- Two "very large" PIFs;
- Two "large" PIFs;
- One "medium" sized PIF;
- One "small" PIF;
- One PII firm; and
- One PII broker.

A3.51 In addition to our interview programme, two members of our project team attended a PII industry forum at the FSA on 23 October, 2007. The workshop was designed to help the FSA better understand whether prudential rules could reduce the incidence of PIF product mis-selling from poor financial advice. It was divided into exploring three parts of the PI industry:

- Risk assessment;
- Excesses, notification requirements and terms and conditions; and

[59] Size categories are defined in paragraph 3.5.

Run-off cover.

A3.52 As well as providing us with an overall picture of the PII side of the industry, the workshop enabled our team to achieve a deeper understanding of links between PI premiums and risk assessments to poor financial advice.

A3.53 We are grateful for the high level of cooperation and response which we received from all parties.

APPENDIX 4: RESULTS

A4.1 In this section we summarize the results obtained in our statistical and econometric analysis of the data. Given the high number of datasets available and the wide range of variables present in each of them we focus the presentation here on the most robust results and on those predictors that seem likely to be the more useful in setting prudential requirements.

Summary of Key Findings

A4.2 Below we set out in some detail how we arrive at our results. However, it is perhaps useful to begin by stating what we shall find, namely:

- Once they have more than 25 advisers, firms with fewer advisers are proportionately a more important source of consumer loss than larger firms
- We find no relationship between firm size and the likelihood of FSCS default
- We find no statistically significant correlation between consumer losses and either the qualifications of advisers or their competence, indicating the weakness of our data
- For larger firms the number of AR files reviewed is associated with lower losses, probably indicating that firms use their internal controls to improve the quality of advice they give
- We find no relationship between consumer loss and either the type of firm (i.e. partnership, corporate and sole trader) or the type of ownership (individual or other firm)
- The most robust indicator of consumer loss is adviser churn — the higher the churn rate the higher the loss. However, we are unable to determine whether this is because adviser churn leads to consumer loss or poor financial advice (and hence consumer loss) leads to adviser churn.

Relationship Between Detriment and Size of Firms

A4.3 We first examined the relationship between consumer loss and firm size. Our stakeholder consultation and the discussions with the FSA confirmed the intuitive idea that aggregate consumer losses should increase, the larger a PIF is. Note, however, that even if losses increase with size, that does not mean that larger firms are a more important source of loss than small firms — a large firm that is double the size of a small firm does not necessarily generate double the losses of a small firm . As a result smaller firms could be,

collectively, a more important source of loss even though the individual losses imposed by larger firms could be greater.

A4.4 Thus, what is really of interest is whether losses increase more or less proportionately with firm size.[60] To account for this we examined the relationship between our two measures of consumer loss and two different measures of firm size, namely the number of advisers of a PIF and its total revenues. In this way we can establish by how much (in percentage terms) losses are increased by a one per cent increase in firm size for those PIFs that impose at least some loss. We have estimated this relationship for both the full sample of PIFs that have reported losses and for a subsample that includes only those PIFs that have reported losses and that have 25 or fewer advisers. Table A4.1 summarizes the results obtained.[61]

A4.5 The effect of firm size on consumer loss is statistically significant for both combinations of consumer loss and firm size when using the full sample.[62] None of the relationships appear significant when using the subsample of just small firms. This suggests that the relationship between firm size and consumer loss that applies for medium-sized to large firms breaks down for small firms.

[60] To do this we calculate the elasticity of consumer loss with respect to firm size. The elasticity of Y with respect to X is defined as the percentage change in Y given a 1 per cent change in X.

[61] We estimated, at the mean, the elasticity of each of the dependent and the independent variables. Note that in calculating these means we have excluded all those PIFs that report no loss at all.

[62] By statistically significant we mean that we can be 95 per cent certain that the estimated value is not equal to zero.

Table A4.1: Percentage rise in consumer loss for each one per cent rise in firm size

Measure of loss	Sample size	Measure of firm size	
		Number of advisers	Revenues
Total compensation paid (amount of loss)	Full sample of firms with reported losses	0.44*	1.24*
		(No)	(Yes)
	PIFs with 25 or fewer advisers	0.24	0.1
		(No)	(No)
	PIFs with more than 25 advisers	0.34*	1.6*
		(No)	(Yes)
Number of upheld complaints (incidence of loss)	Full sample of firms with reported losses	0.38*	1.7*
		(No)	(Yes)
	PIFs with 25 or fewer advisers	-0.15	0.19
		(Yes)	(Yes)
	PIFs with more than 25 advisers	0.21*	1.8*
		(No)	(Yes)

** indicates that estimate is statistically significant at 5 per cent level, standard errors are heteroscedasticity robust.*
In parenthesis we report the outcome of testing the hypothesis "elasticity=1" — i.e. for each one per cent rise in firm size, do our statistics allow us to conclude that the rise in consumer loss might, likewise, be precisely one per cent.
Source: Europe Economics calculations

A4.6 When the full sample is taken into account two main results emerge. The first is that consumer loss increases less than proportionately with firm size if size is measured by the number of advisers, so a one per cent increase in the number of advisers results in a less than one per cent increase in consumer loss. Although on the face of it consumer loss appears to increase more than proportionately if size is measured by overall revenues, we could not find conclusive evidence that the actual relationship was not directly proportionate, that is a one per cent increase in revenues is associated with a one per cent increase in loss. (Note that these results hold for both of our measures of consumer loss.)[63]

[63] In the first instance we tested the statistical significance of the estimator, i.e. whether the estimated result is significantly different form zero or not. We then tested whether the estimator, which in this case is the elasticity, was statistically different from 1, more specifically whether a 1 per cent rise in size would lead to a 1 per cent rise in consumer loss.

A4.7 The second result is that when only firms with 25 or fewer advisers are used there is no evidence of any relationship between firm size and consumer loss.

A4.8 So the first result indicates that for those PIFs that actually cause losses, losses increase less than proportionately with firm size when firm size is defined in terms of number of advisers, while losses are closer to proportionality when size is defined by revenue. From this one may infer that those PIFs with few advisers but a large amount of revenues are those most likely to impose losses. Indeed estimating the impact of both these measures simultaneously, revenues has a positive effect and the number of advisers a negative one.[64]

A4.9 On the other hand, if the means are calculated including all observations, i.e. including firms that report no consumer losses, losses increase more than proportionately with the number of advisers because a large number of small PIFs report no losses at all. However, given the uncertainty of interpretation over self-reported results when numbers concerned are very low (as discussed in paragraph 5.6), and other difficulties of interpretation in moving from zero complaints to any complaints, we prefer the analysis focusing on those firms that do impose losses.

A4.10 To summarize, we find that once firms are above a certain threshold size firms with fewer advisers are collectively a more significant driver of consumer loss than those with more advisers.

Firm size and likelihood of defaulting

A4.11 One important source of consumer loss is firms defaulting and leaving complaints to be addressed by the FSCS. Therefore, it is potentially important to understand which firms are most likely to go into default.

A4.12 We tested whether there is any relationship between the size of firms, as measured by the number of advisers, and the likelihood of defaulting. We adopted two different approaches to estimate the relationship[65], and used data from TARDIS on the number of advisers between 2002 and 2007. We found no relationship between firm size and likelihood of defaulting, under either approach, apart from in 2006 when larger firms were more likely to default. Even for 2006, the result may simply reflect special features of that year, for 2006 had the highest number of FSCS defaults ever recorded (603) — more

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[64] However, it should be noted that the latter result is not robust to controlling for heteroscedasticity.

[65] We have estimated two types of models: the first one is a limited dependent variable model where the dependent variable is a dummy that has the value of one if a PIF was declared to be in FSCS default and zero otherwise; the second is a so-called "proportional hazard model". (A proportional hazard model estimates the effects of a predictor on the hazard function, i.e. the proportion of individuals (PIFs in our case) that would die (go into FSCS default) from among those that have survived up to time t.)

than 10 per cent of the entire population of PIFs in existence at the time went into FSCS default.[66]

Organisational Drivers of Detriment

A4.13 We then estimated, accounting for firm size, the relationships between consumer loss and the variables selected as possible predictors of loss. Firstly the individual relationships between consumer loss and the possible predictor were estimated, any predictors found to be significant were then included in a more general estimation to allow us to examine any interactions between the variables. This subsection describes the results of this analysis, and the results are summarized in Tables A4.2 to A4.5. [67]

A4.14 A positive (negative) sign indicates that the predictors is positively (negatively) related to either the amount or the incidence of losses[68]. A zero indicates that the variable is not statistically significant in the regression, that is there is no evidence of any relationship with consumer loss.

A4.15 Surprisingly, we find no relationship between the share of advisers who passed the qualification exam or the share of competent advisers and either the amount or the incidence of consumer loss attributable to the PIF. None of these variables is statistically significant in any of our estimations. This implies that we cannot find a relationship between adviser competence and consumer loss, though given the data limitations this can in no way be construed as conclusive evidence that such a relationship does not exist — rather, it should be interpreted as indicative of the weakness of our data.

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[66] It is important to keep in mind that in any given year, many of the firms declared in default may have been out of business for some time already. Moreover, claims against those firms may relate to business conducted years before.

[67] We adopted bivariate regressions estimated as well as the outcome of the general to specific approach carried out starting from the predictors that were significant in the first step of the analysis.

[68] The amount measure is total loss, while the incidence measure used is the number of upheld complaints. These two measures provide an important distinction, because a large amount may be spread across a few individuals, and vice versa, so it is important to consider both. Refer to section 6 for a more detailed discussion of the differences between the incidence and amount measures.

Table A4.2: Predictors of the amount of losses accounting for firm size, for the full sample of firms with losses reported.

Dependent variable: total loss	Control variable	
Predictor	**# Advisers**	**Revenues**
Number of advisers	+**	NA
Revenues	NA	+**
% of advisers who passed exam, % competent advisers, Value of clawed back commissions, % advisers on total staff, Rate of growth in revenue, Owner: firm, Sole trader	0	0
Number of clawed back commissions	+**	+**
Own funds	0	-*
Capital and reserves	0	-*
Number of AR files reviewed	0	-**
Number of AR visited	0	-*
Adviser churn	+*	0
Rate of growth in number of advisers	-**	-*
Owner: individual	-*	0
Corporate	0	-*
Partnership	-*	0
Capital share	0	+**

**significant at 10 per cent level; **significant at 5 per cent level, all regressions have robust standard errors*
Source: Europe Economics calculations

A4.16 The estimates associated with PIF ownership and the type of PIF (Corporate, partnership or sole trader)[69] are rarely significant and change sign in the various specifications. This suggests that there is no straightforward relationship between these firm characteristics and consumer losses either.

A4.17 The number of clawed back commissions is positively associated with the total loss but does not have a significant effect on loss defined by the number of upheld complaints when the full sample is taken into account. Similarly, no significant results are present when only PIFs with 25 or fewer advisers are taken into account.

[69] Note that these are dummy variables in the regression estimation.

Table A4.3: Predictors of amount of losses, PIFs with 25 or fewer advisers

Dependent variable: total loss	Control variable	
Predictor	**# Advisers**	**Revenues**
Number of advisers	0	NA
Revenues	NA	0
% of advisers who passed exam	0	0
% competent advisers	0	0
Value of clawed back commissions	0	0
Number of clawed back commissions	0	0
Own funds	0	-*
Capital and reserves	0	0
Number of AR files reviewed	0	0
Number of AR visited	0	0
% advisers on total staff	0	0
Adviser churn	+**	+**
Rate of growth in number of advisers	0	0
Rate of growth in revenue	0	0
Owner: firm	+*	0
Owner: individual	-*	-*
Corporate	0	0
Partnership	-*	-*
Sole trader	0	-**
Capital share	+**	+**

**significant at 10 per cent level; **significant at 5 per cent level, all regressions have robust standard errors*
Source: Europe Economics calculations

A4.18 A similar result emerges in relation to the number of appointed representatives (AR) visited and the number of appointed representative files reviewed. They are associated with a reduction in losses indicating that the control measures implemented by PIFs are working. The fact that the effect disappears if only smaller PIFs are taken into account is not surprising since only networks have appointed representatives. However, the lack of robustness of this particular predictor to controlling for the number of advisers is difficult to explain.

A4.19 In order to check if the number of AR files may be a useful predictor for our scopes, at least for networks, we have estimated regressions where only those PIFs that visited at least one AR in the period are included. In such a case the number of files reviewed is negatively associated with losses and highly significant. However also in this subsample the variable is not significant if the number of advisers is used as a control rather than the overall revenues.

Table A4.4: Predictors of incidence of losses, full sample

Dependent variable: upheld complaints	Control variable	
Predictor	**# Advisers**	**Revenues**
Number of advisers	+**	NA
Revenues	NA	+**
% of advisers who passed exam	0	0
% competent advisers	0	0
Value of clawed back commissions	0	0
Number of clawed back commissions	0	0
Own funds	0	-*
Capital and reserves	0	-**
Number of AR files reviewed	0	-**
Number of AR visited	0	-**
% advisers on total staff	0	0
Adviser churn	+*	0
Rate of growth in number of advisers	-*	-**
Rate of growth in revenue	0	0
Owner: firm	0	-**
Owner: individual	0	+*
Corporate	0	0
Partnership	0	+*
Sole trader	0	+*
Capital share	0	+*

**significant at 10 per cent level; **significant at 5 per cent level, all regressions have robust standard errors*
Source: Europe Economics calculations

A4.20 The capital share, i.e. the ratio between capital and reserves and overall revenues, is statistically significant in five of the estimated specifications, while the amount of own funds is significant in four instances. It is interesting to note that these variables are significant in the same specifications but with different signs.

A4.21 Another interesting result relates to the effect of firm growth on losses. Firm growth is measured as the growth rate in the number of advisers between 2002 and 2007 from TARDIS data.[70]

A4.22 Intuitive expectations for the sign of this variable are ambiguous. On the one hand one may expect that rapid growth may be achieved at the expense of quality and therefore expect a positive sign. On the other hand, if the market is working properly and

consumers are sufficiently well informed, a growing PIF is likely to be a PIF that is offering good advice and therefore a negative sign should be expected.

A4.23 The results presented in A4.4 tend to support the latter hypothesis as there is a negative association between growth in advisers and consumer loss, whilst there is no significant result for growth in revenues.

A4.24 This result does not apply to small firms, as can be seen in Table A4.5, as is only to be expected if the hypothesis supported in A4.4 holds, since the cases in A4.5 present relatively little scope for upside growth — by definition, small firms have not yet grown significantly.

Table A4.5: Predictors of incidence of losses: PIFs with 25 or fewer advisers

Dependent variable: upheld complaints	Control variable	
Predictor	**# Advisers**	**Revenues**
Number of advisers	0	NA
Revenues	NA	0
% of advisers who passed exam	0	0
% competent advisers	0	0
Value of clawed back commissions	0	0
Number of clawed back commissions	0	0
Own funds	0	-*
Capital and reserves	0	0
Number of AR files reviewed	0	0
Number of AR visited	0	0
% advisers on total staff	0	0
Adviser churn	+**	+**
Rate of growth in number of advisers	0	0
Rate of growth in revenue	0	0
Owner: firm	+*	0
Owner: individual	0	0
Corporate	0	0
Partnership	0	0
Sole trader	0	0
Capital share	0	+*

**significant at 10 per cent level; **significant at 5 per cent level, all regressions have robust standard errors*
Source: Europe Economics calculations

[70] Regressions with the growth in revenues from the RMAR returns were also attempted but no significant results emerged.

A4.25 The last predictor we discuss is the churn in advisers. The RMAR data report the number of advisers who left the PIF in the reporting period thus this variable is defined as the ratio between the advisers who left and the total number of advisers.

A4.26 This predictor is statistically significant in most specifications (six) and even where it is not statistically significant it only just fails to be so. Furthermore, it is possible to adopt a different estimation approach under which adviser churn is statistically significant in all specifications.[71]

A4.27 There would appear to be two natural classes of candidate explanation for why consumer detriment might increase with adviser churn:

(a) First, when adviser churn is high, advisers may be taking time to become familiar with the firm's products and procedures and more likely to make errors. (So in this case consumer loss would be a consequence of adviser churn.)

(b) Second, when advisers or the firm become aware that poor financial advice has been given, the adviser may be encouraged to move on. (So in this case adviser churn would be a consequence of consumer loss.)

A4.28 In order to determine which class of explanation ((a) or (b)) is more likely to be correct, we would need data that allowed us to consider the time dimension (i.e. whether losses follow when advisers leave or advisers leave after imposing losses). As we shall see, our data are not adequate for this.

Results of the general to specific approach

A4.29 We completed our analysis of the data by estimating the relationship between consumer loss and all the variables that were significant in the first stage of the process. The only variable that shows a sufficient degree of robustness is the churn of advisers that is part of the final model in three of the attempted specifications. No other variables survive in more than one specification.[72]

Predictors and time lags

A4.30 All the results presented in A4.2 to A4.5 are based on a purely cross-sectional dataset. This means that consumer loss that is measured at time *t* is related to firm characteristics at time *t*. This is clearly far from optimal if one wants to "predict" consumer losses before they actually arise.

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[71] We proved that if a tobit model with robust standard errors is estimated, rather than the standard OLS model, then the turnover of advisers is significant in all specifications.

[72] We adopted a general to specific approach in which a full model with all the variables that were significant in the bivariate regressions were initially included and then non significant variables excluded up to generating the simplest possible model.

A4.31 We have adopted two strategies to test whether it is possible to find variables at time *t-k* that can predict losses that arise at time *t*. Firstly we have related the measures of consumer loss to the initial value of the predictor available from the RMAR returns. Secondly, for the few variables available from FAME we have used various base years for our tests.

A4.32 The results obtained using the first method are not encouraging: all significant relationships collapse in the sample that includes only small PIFs and only the number of AR files reviewed is significant in two specifications in the full sample. This may be due to a number of factors such as:

- measurement error has been mitigated through the averaging procedure implemented in order to construct the cross-sectional dataset;
- there is a very short time span for which we have RMAR data available (roughly 2 years);
- there is no genuine relationship.

A4.33 Using the FAME dataset offers somewhat more encouraging results although we could only test the relationship between firm size (at various points in time) and consumer loss. We report the results of these regressions in A4.6.

A4.34 The relationship between firm size and losses is confirmed by the results. However the relationship is less clear if size is measured by the number of employees rather than by turnover. This is likely to be due to the fact that our measure is now the number of employees rather than the number of advisers, when it is the latter that are most likely to cause consumer loss. Therefore organisational and hierarchical differences between the different firms may influence the results.

Table A4.6: Firm size and future losses

Variable measured in year	Number of employees	Revenues
1996	0	0
1997	0	+**
1998	0	+**
1999	0	+**
2000	0	+*
2001	+*	+**
2002	0	+*
2003	0	+**
2004	0	+*
2005	+*	+**
2006	0	+**
2007	+**	+**

**significant at 10 per cent level; **significant at 5 per cent level, all regressions have robust standard errors*
Source: Europe Economics calculations

A4.35 There is a strong relationship between (past) revenues and (future) losses. One possibility is that this indicates that firm size is likely to be a predictor of consumer loss. Another is that this simply reflect correlation between current revenues and past revenues.

The Financial Services Authority
25 The North Colonnade Canary Wharf London E14 5HS
Telephone: +44 (0)20 7066 1000 Fax: +44 (0)20 7066 1099
Website: http://www.fsa.gov.uk