Review of literature on regulatory transparency

Update on recent developments

Prepared for the Financial Services Authority

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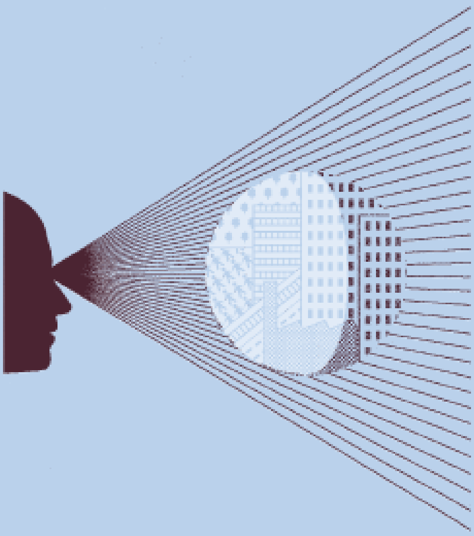

Executive summary

In 2008, the Financial Services Authority (FSA) published 'Transparency as a Regulatory Tool', a discussion paper considering the use of transparency by regulators generally, and also specifically in the context of the FSA's work. The proposals within the paper were supported by a literature review published by the FSA as an annex to the report.

The review provided detail of work undertaken by academics and government institutions to assess the effectiveness of disclosure requirements in delivering positive outcomes for customers. It found a number of examples where disclosure was effective; equally, there was evidence, both practical and theoretical, that disclosure can fail to achieve its objectives.

The FSA has asked Oxera to update this review. The update includes a review of further evidence since 2008, and of the literature in some related areas, such as further analysis of the approaches taken by regulators more generally, and the impact of that work.

The literature since 2008 includes much evidence comparable to that before 2008, but Oxera's review found many further practical tests of the benefits of disclosure. Specifically, there have been a number of studies of the effectiveness of disclosure in making markets work well for consumers, many of which relate to the specific case of financial services.

The studies show a number of cases where simple information requirements have resulted in improved transparency for consumers and therefore better market outcomes—for example, in informing consumers' use of credit cards. However, the evidence shows that this is rarely without limitation. Customers are in general not in a position to 'process' complex disclosure—they may not have the time or are unable to understand and then use the information. If the underlying products are complex, disclosure of even simple information may either be ignored or may lead to outcomes different to those that are intended.

These effects are particularly important where customers do not behave in accordance with traditional economic theory. Behavioural factors mean that customers give different importance to some factors than would perhaps be predicted—ie, consumers are 'biased'. The report presents some emerging conclusions as to how the insights from behavioural economics are being used to address such biases through regulation. The overall messages from the review of evidence in respect of market outcomes are as follows.

– **Disclosure requirements must remain simple and understandable**. If further, more complex, information is provided, this generally risks undermining the benefits of simple and understandable disclosure, and can therefore be counterproductive.

– **If the underlying services are complex and when behavioural factors play a role, consumers may not understand the information provided, however transparent it is**. In particular, consumers are likely to give particular weight to certain forms of information and this needs to be taken into consideration when deciding on a package of appropriate disclosure, and the form of that disclosure.

– **While potentially useful to consumers, information simplification can also lead to market distortions**. Such distortions may arise where firms concentrate on exploiting customers through other aspects of the services, or where tacit collusion may occur if there is largely complete transparency around services and their prices.

– **The combination of the above factors means that there are many cases where the impact of (additional) disclosure can not be accurately predicted.** It is therefore important to assess on a case-by-case basis whether the disclosure is likely to work as intended.

The 2008 review also considered how to influence firms' behaviour. It found evidence that corporate reputation is important and has a direct impact on shareholder value. The more recent literature confirms this. There are a number of examples of regulators giving significant publicity to negative information—both breaches of regulation and in some cases detailed information such as complaints data or data relating to the quality of service provided to customers. The evidence points to both approaches being effective—and the reputational impacts being particularly important in driving firms' responses to such disclosure.

The report also provides an update of the evidence in respect of wholesale markets, and the extent to which regulators should publish the supervisory information that they are able to gather on firms. It concludes that previous evidence that transparency should be beneficial remains, and has not been undermined by the 2008 financial crisis. The evidence points more to the fact that even the very significant disclosure provided by firms and intermediaries did not result in genuine transparency or understanding of the services provided.

One outcome of the crisis was the introduction of bank stress testing, and the publication of relevant data by EU and US authorities. So far, the reviews undertaken appear to point to this bringing benefits, and the adverse impacts of regulators having to publish their private analysis have been limited, although again care needs to be taken in assessing the potential impact of any specific proposals prior to implementation.

The report also includes a review of how regulators have sought to assess the impact of their regulation, supervision and enforcement. It indicates that there is extensive precedent of regulators using each of inputs, outputs and outcomes to measure the impact of regulation, and provides a number of examples of how these have been used and tested in practice.

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1 Introduction

In May 2008, the FSA published a discussion paper, ‘Transparency as a Regulatory Tool’. Its aim was to consider a set of principles which could govern whether disclosure would be effective in making markets work well for consumers, while remaining proportionate to the cost of providing and using the information.

Disclosure is a wide concept referring to the act of providing information (for example, about the prices or, more generally, terms and conditions of products) either publicly or to specific groups of people or firms, such as private individuals, customers and investors. Transparency refers more to the effect of disclosing information, and is achieved when that information can be clearly understood and processed by the users of that information. For example, firms disclose many pages of terms and conditions to customers making small purchases on Internet websites. While this represents full disclosure of this information, it is unlikely to result in transparency. The detail is not presented in a way that would be readily understood by most users of the information, and the effort required to understand the information is unlikely to be proportionate to the value to the item purchased.

In coming to the views within its 2008 paper, the FSA took into consideration both academic and real-world examples of how transparency could be effective in delivering intended outcomes, and where it had been or would be likely to be less effective. Annexed to the discussion paper, the FSA published a short literature review of evidence gathered in this area (‘the 2008 review’).

Oxera has been asked to update the FSA’s analysis of the literature. The analysis within Oxera’s review focuses on updating the review carried out by the FSA, in order to demonstrate the combined conclusions from the literature around the benefits of transparency and how disclosure can be designed in order to achieve the FSA’s regulatory objectives. There is a significant body of further evidence, reflecting developments in both the theory and the practice relating to the use of transparency. The findings of Oxera’s review of this new evidence are presented alongside a summary of the findings of the 2008 review, to allow the reader to understand the combined implications of the literature.

This review considers both the form of disclosure that is likely to be effective in delivering transparency to users, and therefore to deliver effective outcomes, and what forms of transparency are actually effective in making markets work better for customers**.** The literature shows that under some circumstances, it is possible to deliver improved transparency, for users to understand that information, and yet for markets to be less effective as a result. This effect is discussed specifically in section 2.4.

The Oxera literature review does not only examine the academic literature, but also the experience of regulators within and outside the financial services sector, drawing on Oxera’s own experience of working in these sectors. Nevertheless, the review is subject to a number of limitations:

– it was conducted as an update on the previous literature review, and is intended to represent a focused overview of the most important factors arising within the literature, rather than an extensive review of all further work;

– it mainly looks at the recent literature, since 2008. For convenience, it provides a short summary of the key insights from the previous literature review;

– the review of regulators’ experience within and outside financial services aims to provide some key examples, rather than a comprehensive review of all regulators.

Where possible, the Oxera review already draws out some of the main lessons or implications of the literature for policy-making. However, it should be borne in mind that the literature on disclosure cannot be directly translated into general lessons for policy. Many academic articles look at specific examples of disclosure and draw conclusions about its effectiveness or ineffectiveness but do not necessarily provide general lessons for policy-making. Further analysis, which would go beyond a literature review, may be required to assess in more detail the implications for policy-making. For example, an important strand in the literature about disclosure is the behavioural economics literature. Regulators have only recently started to assess the implications of this literature for their own tools and instruments and policy-making more general.[1]

This literature review focuses on the following questions.

– When and how is transparency effective in making markets work better (and what has been tried and shown not to be effective)?

– What helps consumers understand and engage better with the market and with information?

– In what ways can transparency be used to improve firms' behaviour?

– When is regulatory intervention necessary in wholesale markets to supply information on firms to the market?

– What do regulators disclose about the impact of their regulation, supervision and enforcement, and what is the impact of this?

[1] For example, the Netherlands Competition Authority (NMa) has commissioned a study from Oxera on the behavioural economics and its impact on competition policy. This study not only reviews the literature, but also provides further analysis to assess implications for policy-making. Oxera (2013, forthcoming).

2 When and how is transparency effective in making markets work better (and what has been tried and shown not to be effective)?

2.1 Introduction

This section considers the emerging evidence in respect of the effectiveness of the attempts of regulatory authorities to increase the level of transparency presented to consumers. The literature has analysed a number of key aspects which have an impact on the success of such measures. The aim of this review is to establish the lessons from that analysis, including empirical evidence and theoretical studies that seek to establish the criteria for transparency to be effective.

Specifically, the section considers:

– lessons from the 2008 review, which focused largely on experimental analysis of how customers responded to the provision of certain forms of information;

– examples from the financial services industry and from regulated industries more generally of where the provision of information has been perceived to be effective in supporting the effective functioning of markets; and

– further examples of when actions by regulators and the information provided in response have not been effective or would be unlikely to be effective, and initial thoughts on the reasons and the consequences for policy-makers.

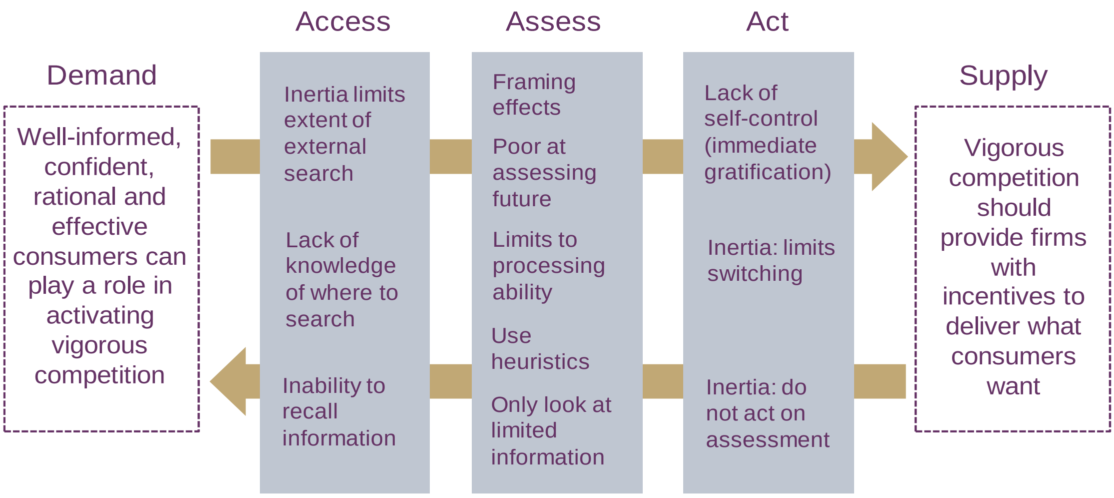
2.2 Background and evidence from the 2008 review

In a competitive market with asymmetric information, according to economic theory, the disclosure of economically relevant information will change the decisions made by market participants. This in turn will make the market more competitive, and push firms to improve their products and services, as better-informed consumers are more capable of making purchases that suit them.

While this represents an appropriate theoretical model from which to test the need for intervention by policy-makers, it is unlikely to be the case in practice that disclosure can be perfectly effective. As such, when considering the need for regulatory intervention, the potential benefits of the provision of information need to be balanced against the costs of providing information.

In practice, asymmetric information exists alongside other market failures, affecting consumers' behaviour and also the competitiveness of the market, and consumers do not always respond to information as traditional economic theory would predict. These effects, illustrated in Figure 2.1 below, make further disclosure of relevant information ineffective or even detrimental.

Figure 2.1 Interactions between demand and supply



Source: Office of Fair Trading (2010), 'Behavioural economics and competition policy', presentation by Amelia Fletcher, OFT behavioural economics seminar, April 22nd. This figure is available in several OFT presentations, and a condensed version is provided in OFT (2010), 'What does Behavioural Economics mean for Competition Policy', March, p. 9.

These issues may be of particular importance within the financial services sector owing to the relative complexity of some of the products sold and the existence of market failures other than information asymmetry.[2] The 2008 review included a summary of a number of studies that tested the circumstances under which information had been effective in reducing the extent of market failure.

The literature offers substantial evidence that consumers might not be able to fully understand relevant information or use it correctly at the time of making a decision (eg, Choi et al. 2006). There is, however, scope for regulatory disclosure to benefit consumers if information is disclosed in an appropriate manner and format so that it becomes embedded in consumers' decisions (Weil et al. 2006).

Similarly, it was argued that disclosure of information may have an effect on firms' behaviour only if they are able to observe that disclosure had an impact on consumers' behaviour such that their business would be affected if no actions were taken.

The remainder of this section considers further examples from more recent literature of the effects of disclosure, and which of these effects were observed, including practical examples of where regulators have included disclosure requirements.

2.3 Review of the literature since the 2008 review

2.3.1 Developments reported in the literature—when is disclosure effective?

Oxera's review of recent literature has found a number of examples of where disclosure in the financial services sector as well in other sectors—for example, required disclosure of certain prices—has had a positive impact on consumers' decision-making. This includes examples based on empirical testing—ie, testing of observed changes in market conditions as a result of disclosure—and some relevant experimental studies. Examples are given below where disclosure requirements did result in better outcomes for customers specifically within the financial services sector, although this effect was not without some qualification in most cases.

[2] For an overview of market failures in financial services, see Oxera (2006).

Effective disclosure—examples from financial services

There are a number of practical examples from financial services of where required disclosure to customers of information on financial services products has been found to improve market outcomes.

Andrews (2009) estimated that disclosure of product-specific price information of life and pensions investment products mandated by the Securities and Investments Board in 1995 in the UK increased the extent to which consumers consider a variety of providers of these products before marking purchasing decisions, as they made use of the newly disclosed information. The paper concludes that this is likely to have led to an increase in the efficiency of both consumers' consumption and firms' production.

Stango and Zinman (2011) tested whether disclosure of interest rates mandated under the Truth-in-Lending Act (TILA)[3] in the USA has changed lenders' ability to exploit consumers' tendency to systematically underestimate borrowing costs when an interest rate is not disclosed and overall costs need to be inferred from other loan terms (such as the monthly payment). They found that mandated disclosure of interest rates in the form of APR countered lenders' ability to offer loans with a true rate that is higher than what is perceived by consumers affected by that behavioural bias. Furthermore, they found that where TILA enforcement was weaker (as for non-bank finance companies), this led to greater price discrimination (ie, charging higher interest rates to consumers who showed more behavioural bias).

The US Credit Card Accountability, Responsibility, and Disclosure Act (CARD Act), which took effect in February 2010, included provisions to increase fairness and transparency in the credit card market (CFPB, 2011). The Act made credit card pricing, including interest rates and fees, more transparent, and mandated disclosure in a number of areas to empower consumers. Several studies have looked at the effect of this Act one year after its introduction. One of the main findings is that most consumers now find credit costs clearer. For example, Synovate (2011) showed how the mandated disclosure had different impacts on different classes of cardholders; debt revolvers, as well as those with lower education and income levels, were found to be most likely to have made use of increased transparency to improve their card usage.[4]

These examples show that disclosure can work and, where it is understood by the users, can result in better outcomes for customers. In particular, it is clear that disclosure can protect naive consumers from exploitation by firms, while potentially avoiding unintended consequences associated with more intrusive policy interventions. Other types of intervention, such as product regulation, may benefit naive consumers at the expense of sophisticated consumers (for example, where product regulation may reduce the variety of products, potentially resulting in the removal of certain products that would have met sophisticated consumers' needs).

The studies above consider circumstances where disclosure works, but do not directly seek to identify the factors that make the disclosure effective. There are now some studies that go beyond this and consider the lessons as to why disclosure is effective (see sections 3 and 4). Furthermore, it is also useful to look at studies that find that disclosure was not effective (see below).

[3] The TILA forms part of the 1968 Consumer Credit Protection Act, designed to ensure that customers who need credit are given meaningful information related to that credit.

[4] Campbell et al. (2011) found that disclosure mandated by the Act made the most credit-constrained cardholders more likely to adopt the new recommended 36-month repayment schedule. However, they also found that the cardholders who adopted this schedule for longer than four months made smaller payments and had higher credit payments than a matched cohort who did not adopt the plan. The intuition behind the findings may be that the 36-month recommended payments are based on a moving target—you are always 36 months away from repaying the balance in full.

When is disclosure effective? Studies on the complexity of information

The examples above show that there are circumstances where simple information can provide improved transparency and support customers. The literature also includes some studies that consider how much information can be provided before it becomes too complex for the user to understand.

An experiment in the food sector sought to test the extent to which the form of information and the time taken to process it can affect the consumer's decision-making process. Kiesel and Villas-Boas (2010) investigated experimentally how information can help consumers to make healthier food choices. Their results suggest that simple summary labels significantly affect sales, while more complex labelling fails to influence consumers' decisions. This is consistent with the general view that, in order to have economic value and be used by consumers, information has to be relatively easy to understand. It provides a clear example as to how the costs to consumers of acquiring and processing information can be an important consideration when assessing the most appropriate form of disclosure.

These information costs can be mitigated to the extent that end-customers use intermediaries (eg, IFAs) to inform their choices (or even make those choices for them). The 2010 Consumer Purchasing and Outcomes Survey shows that 69% of recent purchasers of retail financial *investment* products[5] found IFAs to be the most influential source of information, indicating that, for these types of financial services product, disclosure requirements can potentially be effective if targeted at such intermediaries. However, the use of financial advice comes with its own issues around trust and incentive misalignment. Financial advice is likely to be help consumers only if the intermediaries have incentives to operate in their clients' interests, which generally requires regulation.

Inderst and Ottaviani (2012) presented a model investigating the compensation structure for brokers advising customers on the suitability of financial products. They concluded that, while a policy of capping or banning brokers' commissions could reduce the exploitation of naive consumers, it risks stifling advisers' incentives to learn which products are most appropriate for individual customers. Making customers aware of their advisers' conflicts of interests by mandating disclosure of their commissions can increase consumer surplus without such unintended consequences, provided that they use the information. (This model does not take into account behavioural factors that could prevent some or all consumers from using the relevant information disclosed to them).

The more recent and past literature all indicates that there are limitations to users' ability to process information, which policy-makers need to consider in coming to the appropriate balance of information to be required. It also indicates that where there are complexities, it becomes more likely that consumers may respond to information in a way that regulators might not expect. This is considered further in section 3 below.

Regulators' approach to disclosure—wider practical evidence

A number of regulators also require either publication of quality of service information or the provision of such information to the regulator, which it then publishes. In the UK such information is made publicly available according to regulatory requirements in relation to a number of industries including telecommunications, postal services, gas, electricity, and water.

Experience suggests that it is generally difficult to establish the benefits of such information provision, although recent analysis from Ofwat, described in further detail in section 4 below, concluded that its regime, supported by league tables, had brought significant service improvements and the levelling-up of performance across the industry.

[5] The survey covered a number of specific investment products, grouped into five main categories: equity ISAs, unit trusts/investment trusts, investment bonds, 'other' investment products purchased by the sample of consumers (the vast majority of which were with-profit endowments) and pensions (excluding group personal pensions).

The Office of Fair Trading (OFT) investigated the care homes market in 2005 and issued recommendations which resulted in improvements in the provision and access of information (eg, fees and inspection reports) on care homes made available by care homes themselves, regulators and local authorities. The OFT later commissioned an assessment (GHK 2011) of the impact of those changes in the care homes market. The study concluded that those improvements had led to an increase in the welfare of care home residents and quality of the services provided by care homes.

There is also literature supporting the ability of such disclosure to provide incentives for firms to improve the services they offer to customers. Sluijs et al. (2011) ran a laboratory experiment in which consumers had different amount of information about product quality. They found that the efficiency and quality of decision-making increases with the level of disclosure about product quality, Moreover, they found that, when full information is disclosed (even to just some customers), the market produces a better outcome for consumers, than when all consumers have only imperfect information about product quality. This was found in terms of both surplus and average quality offered.[6]

2.3.2 Developments in the literature—when could disclosure be less effective or have negative consequences?

As discussed above, both theory and practice support the use of disclosure as a method of improving consumer welfare and making markets work effectively. However, disclosure is not always effective, and can even have negative effects. This section outlines further work on the theoretical and practical aspects that result in disclosure not achieving its aims. The section describes examples where disclosure has been ineffective—the information disclosed has not been used as expected—and where it has actually had adverse consequences, or where the proposed measures have not been implemented owing to concerns about the misuse of information.

Disclosure which is not used by customers—examples from financial services

As outlined above with respect to the example of food labelling, a key factor within the evidence relates to the ability of users to process the information provided. There are a number of examples from financial services where information has been available to customers, but has not been used, or has not been used in a way that benefits consumers.

For example, Bucks and Pence (2008) found that borrowers with adjustable-rate mortgages are likely either not to know how much their interest rates could change, or to underestimate the potential for rates to change. The authors suggest that a factor behind this lack of knowledge was customers' difficulties with gathering and processing information. This indicated clear limitations on the benefits of the disclosure of such information—ie, that customers may not use it in the way intended.

A further example showed that even seemingly simple and readily available new and highly salient information may not be used in the way which would be intended or predicted. Pontari et al. (2009) investigated the impact of the US Financial Industry Regulatory Authority's change in regulation for US mutual funds advertising. This change required cost information to be reported whenever performance information is present. The conclusion of their exploratory study was that, despite the presence of information about expenses, consumers overwhelmingly continued to give the greatest weight to past performance when choosing which fund to invest in. This demonstrates that consumers may give different weights to different types of information and may need guidance on how to use the information or on what type information is most important.

[6] The authors use subjects, acting as consumers and firms, to simulate a repeated game in an unspecified, abstract market with four consumers and two firms, where firms set the product quality (which comes at a cost) and its price (having observed the other firm's product quality) and consumers then decide whether to buy the product and from which firm. The game is played under different scenarios, where consumers have different information about product quality.

The FSA (2012) investigation into the sale of interest-rate hedging products to firms showed the difference between customers' ability to process information, which has implications for the way in which disclosure is provided to different groups of customers. The conclusions included that the lack of understanding of complex products combined with poor disclosure of exit costs were among the factors that motivated its push for a revision to the UK banks' sale practices for those products. In its investigation, the FSA made a distinction between unsophisticated firms (ie, those that were too small to be expected to have resources to fully understand the complex products they were offered) and more sophisticated firms (ie, those that were large enough to be expected to have resources to assess the appropriateness of more complex products).

Although the majority of the literature above focuses on private individuals, under certain circumstances sophisticated (institutional) investors may also suffer from biases similar to those of individual customers. A study on the new regime for the use of dealing commissions, which entailed improved disclosure of pricing information, found that pension fund trustees do not usually use (appropriate) information on commission spending presented by investment managers when appointing their fund manager. Rather, the most important factors determining their choice were the investment manager's reputation, philosophy and expertise, with past performance also playing a relatively important role in the decision-making process (Oxera 2009).

These examples show that behavioural factors and the complexity of some financial products may cause customers not to understand the information, or to ignore it. The evidence found by this review all appears to point to the importance, particularly within financial services, of both information being clearly presented and the impact of that information on customers, being understood in order for additional disclosure to be likely to lead to improved outcomes.

Disclosure which is not used by customers—other examples

There is evidence from other markets, where the products themselves are not well-understood by customers, that similar effects are observed—ie, customers do not understand the information and intended benefits of information are not realised.

In its recent submission to the ASA, Ofcom also identified a potential risk of the provision of very simple information (Ofcom 2011a). It found that seemingly transparent publication of maximum broadband speeds was misleading to consumers, as the relationship between actual and maximum speeds varied significantly across the industry. Ofcom recommended that where maximum speeds are to be used in advertisements, they should always be accompanied by further and equally prominent information on typical speed ranges, and by a qualifier explaining that actual speeds may vary, in order to prevent consumers from receiving lower speeds than they were led to expect.

This example further demonstrates how information can be transparent yet misleading where the underlying products are complex, and where customers may not fully understand what they are purchasing. It shows that there is a risk of disclosing too much information around a particular point of reference, which in turn can be misleading without appropriate qualifiers. The lesson seems to be that when information is disclosed, appropriate context or benchmarks should be provided so that consumers can use and evaluate the information appropriately.

The OFT (2012) concluded that it was necessary to protect consumers from airlines, in cases where customers were provided with transparency over a headline price only, and were then subject to 'drip pricing', with significant additional charges imposed for add-ons to the basic service. Here, it was difficult for customers to process the total combination of charges applied for the services, and they were not able to use the information effectively. The OFT's study concluded that transparency over total prices was important, but was not sufficient; it also proposed that charges which were presented as surcharges, but were in practice unavoidable by the end customer, specifically debit card payment surcharges, should no longer be permitted.

Disclosure which creates adverse consequences

Sometimes further disclosure risks undermining consumers' decision-making rather than improving it, or, simply, being ineffective. The Federal Reserve proposed disclosures for mortgage broker compensation to address concerns about conflict of interests, anticipating they would increase competition. However, following consultation, it did not adopt the rules, as interviews with consumers suggested that those disclosures would have confused them rather than help their decision-making process (Braunstein 2011).[7]

Even in markets with more sophisticated stakeholders, more information may deliver worse outcomes. John Kay's 2012 review of equity markets and long-term decision-making for the UK's Treasury concluded:

> Measures to increase the supply of data may increase the problem posed by cognitive biases such as excessive optimism, anchoring and loss aversion by increasing the amount and volume of noise generated by the financial system. We do not share the view that since these behaviours would not exist if people behaved as the model [efficient market hypothesis] asserts they should, public policy should proceed as if these 'irrational' behaviours do not exist: such an approach would not be consistent with the fundamental goals of creating high performing companies and providing good returns to savers.[8]

In retail energy markets, Ofgem concluded at the end of 2011 that consumers did not understand the tariffs they were being offered. It therefore proposed a range of policies to simplify energy tariffs. The proposals were aimed at increasing consumer engagement by improving tariff comparability and reducing tariff complexity (Ofgem 2011c).

Oxera (2012) assessed the potential impact of these proposals. While complexity may be a factor that hinders consumers' engagement, the analysis indicated that the specific proposed tariff simplification—which includes a restriction on the number of standard tariffs offered by suppliers—risks having several adverse effects. For instance, the reduced price dispersion caused by those restrictions could actually weaken consumers' incentives to engage. Survey evidence in energy and telecommunications markets reported by the study showed that substantial price gaps are needed to encourage consumers to switch suppliers. Furthermore, the resulting reduction in product differentiation and increase in product standardisation could lead to an overall increase in prices and foster tacit collusion. Ofgem has now concluded that further research on the impact of its proposals is necessary and deferred their implementation.

There is also a risk that transparency may facilitate tacit collusion if it helps firms monitor each other, although there have been limited recent examples where mandated disclosures have been shown to result in these unintended consequences. In the early 1990s, the Danish Competition Council began publishing price data for concrete in order to encourage consumers to switch between suppliers. Albæk et al. (1997) argued that the significant increase in prices within a year of the data publication was indicative that price transparency actually facilitated tacit collusion, as the market did not experience an increase in input costs or demand.

2.3.3 Summary

This section discusses a variety of further sources of evidence as to the effectiveness of disclosure in delivering transparency for users and in making markets work better.

[7] This is consistent with the findings from a previous study by the Federal Trade Commission in 2004 which used an economic experiment. It was found that consumers treated the commission information as particularly salient. They placed too much emphasis on the commissions, and too little on whether the loan was keenly priced. Consumers paid more for their loans than they would have in the absence of the commission information. This also created a bias against broker-arranged loans, even when the broker loans cost the same or less than direct lender loans. By placing brokers at a disadvantage to direct lenders, this could generate less competition and higher costs for all mortgage customers (FTC 2004).

[8] Kay (2012), para 4.17.

Economic theory suggests that disclosure should work in reducing information asymmetries between firms and customers. The provision of information should be effective in making markets work more effectively, with fewer other consequences than other forms of regulation. The literature contains a number of examples where disclosure has delivered clear benefits.

However, disclosure is not always effective, and a clear challenge for policy-makers is to require disclosure of the 'right' forms of information. The key messages from the literature in respect of the design of disclosure are as follows.

- **Disclosure requirements must remain simple and understandable**. If further more complex information is provided, this will generally risk undermining the benefits of disclosure.

- **If the underlying services are complex and when behavioural factors play a role, consumers may not understand the information provided, however transparent it is**. In particular, consumers are likely to give particular weight to certain types of information, and this needs to be considered when deciding on a package of appropriate disclosure.

- **While potentially useful to consumers, information simplification also has the risk of resulting in market distortions**. For example, such distortions can occur where firms concentrate on exploiting customers through other aspects of the services, or where tacit collusion may occur if there is largely complete transparency around services and their prices.

- **The combination of the above factors means that there are many cases where the impact of (additional) disclosure cannot be accurately predicted**. Until the predictive power of the theory improves (see next section), ensuring that disclosure will work as intended in the specific case would be likely to deliver benefits to customers.

This section presented examples where disclosure was ineffective as customers did not respond as predicted. New evidence from behavioural economics since the 2008 review is presented in the next section to seek to provide greater insight into some of these issues, to support understanding of how consumers respond to information, and therefore to ascertain the most effective way for information to be provided.

3 What helps consumers understand and engage better with the market and with information?

3.1 Introduction, and insights and evidence from the 2008 review

Section 2 provided examples where disclosure was effective, but equally examples, from both financial services and more generally from other markets, where disclosure was ineffective or even detrimental. This section considers further evidence as to what regulators and policy-makers can do to ensure that the information required will deliver its intended outcomes.

The question of what conditions are required to be met for information to be effectively processed by consumers was briefly considered in the 2008 review, which included the conclusions of Weil et al. (2006) in respect of several conditions that regulatory disclosures should fulfil in order to affect consumers' decisions:

– consumers must be able to see that they can gain from the information; they must think that it will help them achieve their own goals;

– information must be delivered in a useful format, in a timely manner and where users can find it, so that it fits into their existing decision-making process;

– the information must be easily understood;

– information must be readily available or easy to collect;

– failing the above, the existence of intermediaries can overcome some of the other conditions.

These are in themselves consistent with the evidence from section 2. In addition, section 2 highlights risks that, even where all conditions are met, consumers may not use relevant information to make an economically rational decision, even if that information is disclosed in an appropriate manner and form.

Since 2008, there have been a number of examples where insights of behavioural economics have been used to link such findings to cognitive biases. A very short summary of this literature is provided below, alongside other more recent studies which seek to establish criteria for effective disclosure.

3.2 Review of the literature since the 2008 review

3.2.1 Recent activity from governments and regulators in behavioural economics

Behavioural economics uses insights from psychology to explain why consumer behaviour may differ from that assumed in traditional economic models. Behavioural economics is not new—the first papers on the subject date back to the 1950s. Nevertheless, analysis using behavioural economics has received widespread attention in the last five to ten years, not just in academia but also among policy-makers and the wider public, in part due to popular books on economics, such as *Nudge* (Thaler and Sunstein 2008).

Insights from behavioural economics have started to capture the attention of policy-makers and regulators in a number of different areas. For example, in 2010 the Institute for Government, in partnership with the Cabinet Office, published the MINDSPACE report, showing how behavioural theory can help policy-makers achieve better outcomes for citizens

(Cabinet Office and Institute for Government 2010). The report presents a checklist of influences on human behaviour to support policy-making, some of which highlight how individuals' decisions can be influenced by cognitive biases and limit.

Subsequently, the Cabinet Office established a Behavioural Insight Team, which considered, for example, policy interventions that might 'nudge' people towards making better health and wealth choices.[9] An OFT study in 2010 describes various pieces of research that it has undertaken (OFT 2010). Since then, it has undertaken several further studies to explore the implications of behavioural economics for competition and consumer protection policy, including through the use of experiments. A number of economic regulators have also examined the implications of behavioural economics for understanding consumer switching behaviour, including Ofcom (2010), the communications regulator, and Ofgem (2011a), the energy regulator.

Behavioural economics adopts more psychologically realistic assumptions about consumers' preferences, decision-making and their consequent actions than the assumptions embedded in traditional economic models.[10]

It is clear therefore that behavioural economics can have important implications for:

– what types of information on financial services products should be provided to consumers;
– how much information should be provided and, crucially, how;
– who provides the information; and
– when the information should be provided.

The recent behavioural economics literature is extensive but is still developing significantly and regulators have only recently started to work out the implications for their tools and instruments and for policy-making more generally. Behavioural economics have started to influence certain policy areas—for example, pensions, where default options have been introduced to complement information disclosure.

Although some studies already attempt to set out some general lessons from behavioural economics for disclosure of information, the guidance is still relatively high-level. Further analysis to translate academic thinking into concrete implications for policy-making is required.

The review below refers to studies that have attempted to provide some general guidance and a few specific examples where behavioural economics has been investigated in considering the information provided to customers in respect of financial services.

A European Commission-sponsored report (Decision Technology et al. 2010) draws on the insights of behavioural economics, as well as survey and experimental evidence, to investigate consumer decision-making in retail financial investment services. Some of the key conclusions are that it is important to simplify and standardise product information; that financial advice is of particular importance, especially for less capable consumers; and that the impact of disclosing conflicts of interest can be both harmful as well as helpful to consumers in terms of their investment choices.

On this last point, consumers showed a 'knee-jerk' reaction moving away from the recommended investment alternative due to a loss of trust: and therefore that whilst disclosure could lead to better investment decisions when the interests of the party giving the advice and the party receiving it were adversely aligned, it would be likely to lead to worse decisions when their interests were aligned.

[9] See, for example, Cabinet Office Behavioural Insights Team (2010).
[10] See, for example, Oxera 2010 and, for an extensive literature review, Decision Technology et al. (2010, Chapter II).

This provides a good example of where behavioural factors need to be considered in assessing the benefits of disclosure. The disclosure of conflicts of interest appears beneficial, but the evidence was that the weight given to it by consumers can undermine the benefit of financial advice more generally.

Since 2004, the Federal Reserve has run an extensive consumer-testing programme with the aim of evaluating the ability of different types of disclosure to improve consumers' understanding of financial products and services. In 2011, it published a report outlining the conclusions of this programme (Hogarth and Merry 2011). While the report did not directly draw on behavioural economics in its design, the key insights from the testing are consistent with those from the emerging literature, namely:

– disclosure language should be plain but meaningful—design and presentation matter;

– achieving a neutral tone and standardising disclosure can be challenging;

– too much information can overwhelm consumers.

In the USA, the 2010 Memorandum for the Heads of Executive Departments and Agencies introduced guidelines on how to present summary information to consumers, identified as the most effective method for informing consumers at the point of decision (Executive Office of the President Office of Management and Budget, 2010). These principles are consistent with the findings above. The Memorandum also gave guidance on the use of simplification as a regulatory tool. It was argued that, due to cognitive factors, such as inertia, default rules may have a significant impact on behaviour and, in some contexts, be an appropriate substitute for mandates or bans. At the same time, when preferences are heterogeneous and consumers are appropriately informed and do not lack expertise, active choosing may be preferable.

The literature includes other experiments and theoretical pieces that are intended to guide the development of some of those principles. Bateman et al. (2011) used an experiment to investigate retirement savings decisions where potential customers were provided with information in different formats. This analysis concluded that decisions are affected by the presentation of information, even where customers have higher-than-average personal financial competence.

Avgouleas (2008) concluded that there is a need for further fragmentation of categorisation of investors (based on their investment experience, track record, education, and financial resources) in order to reflect the fact such different groups of investors are susceptible to cognitive biases to a different extent which appear to be linked to the influence of demographic factors.

Finally, Sasaki et al. (2011) used an online shopping experiment to prove that providing too much information about consumer products can lead participants to rely on information on popularity of the different items on sale—ie, to display herding behaviour.

3.2.2 Summary

Oxera's review of recent developments in literature has identified a growing body of behavioural economics literature, some of which is directly relevant to the question of how to improve consumers' understanding of the market. Many regulators have become interested in behavioural economics, including the importance/effects of information disclosure.

There is already some guidance on how to present information and under what circumstances it is effective. In the context of financial services products, based on a combination of the different studies above and in section 2, some key findings of behavioural economics that are likely to be of particular relevance in developing effective policies in respect of disclosure can be summarised as follows.

– **Framing matters**—the way in which information is framed in the provision of financial services can affect consumers' decisions.

– **Information might not be processed by consumers**, even if they are sophisticated, and can actually be counterproductive. Disclosure may therefore need to be complemented by other regulatory intervention such as default options.

– **Consumers may suffer from 'information overload'**, given their computational limits and willingness to put effort into the choice process, and, for example, simply 'follow the herd'.

– **Consumers may focus on a subset of information presented** (eg, they may focus mostly on those facts that come to mind most easily, such as recent experiences or events), which will provide lessons for how to present potentially competing information.

One of the lessons is that disclosure on its own may not be sufficient to achieve good outcomes for consumers, even if the disclosure results in transparency. For example, interventions such as providing default options may need to be considered.

The variety of conclusions from the different studies indicates that the effectiveness of disclosing information is likely to depend on the circumstances. Furthermore, the evidence indicates that while there are a number of practical examples that can provide guidance about likely responses by customers, this is yet to be linked to firm theoretical principles that can be used in the practical application of specific policies in different policy areas. It therefore appears likely that testing policy proposals prior to their implementation will continue to be particularly important where the evidence indicates that such factors are likely to be relevant in understanding the most effective form of disclosure to achieve policy objectives.

4 In what ways can transparency be used to improve firms' behaviour?

4.1 Introduction, and insights and evidence from the 2008 review

Section 3 above discusses how consumers are likely to respond to information, and therefore the emerging thinking on how to present information. Providing information to consumers may encourage them to change their behaviour, and enable them to make better purchasing choices. This section focuses on the other potential impact of information—that it may make firms change their behaviour. This can happen indirectly—through firms changing the products they offer in response to changes in the buying patterns of more-informed consumers. It can also happen directly—if information is published around firms' behaviour which may not immediately change consumers' behaviour but will have an impact on corporate reputation.

The 2008 review concluded that disclosure of information can influence firms' behaviour if:

- a sizeable proportion of consumers use or are expected to use the information for their choices—consistent with the findings of the previous sections; or
- it is relevant to investors and counterparties, and therefore affects firms' cost of capital.

The evidence concluded that corporate reputation is in practice an important channel through which disclosure affects firms' behaviour. There is evidence that corporate reputation has a positive impact on financial performance and on cost of capital (see, for example, Sabate and Puente 2003).

This section provides an update of the literature in respect of how disclosure of negative information can change firms' behaviour—both in cases where firms may expect consumers to respond directly to that information (eg, the publication of complaints data), or because of the reputational effects.

4.2 Review of the literature since the 2008 review

4.2.1 Evidence in the recent academic literature

Since 2008, there have been further studies within the literature which have shown how disclosure may provide an incentive to improve firms' behaviour through analysis of how the impact of changes to the reputation of firms has affected shareholder value.

Armour et al. (2011) found a large negative impact of the announcement of enforcement of financial and securities regulation on the stock price of penalised firms listed in the UK. The impact on their stock price is, on average, around nine times larger than the financial penalties imposed, although the scale of impact was linked to the type of enforcement. Specifically, the effect was demonstrable in cases where the enforcement was in respect of harm caused to customers or investors. Karpoff et al. (2008) presented consistent evidence on reputational losses for the US market. Given the size of the reputational damage imposed by market participants upon the revelation of misconduct, this indicates that transparency about enforcement is likely to be effective as a regulatory tool, both where firms have breached rules and potentially as a deterrent to others.

A compelling example of how firms' behaviour was affected by mandatory disclosure is provided by Bennear and Olmstead (2008). They found that the requirement to disclose information on drinking water violations by mailing information directly to households on an annual basis significantly reduced breaches by water suppliers in Massachusetts.

There appears to be a consistent message from both the previous literature review and the more recent analysis that negative information has a significant impact on the perception of firms by the financial markets, and also that the deterrent effect can improve firms' behaviour. This would be consistent with investors' reading into specific examples of negative practices the presumption that this may be symptomatic of firms' corporate behaviour more generally.

The ability of positive information to generate comparable positive shareholder returns is harder to test. A survey of UK finance directors (Armitage and Marston 2008) found that financial disclosure in all forms—including financial reports, news announcements and presentations—reduces the cost of equity (but only up to some level of disclosure, after which it becomes ineffective), and the cost of debt. Another key finding of the survey is that the promotion of a reputation for being transparent in financial matters and a resulting increase in shareholder confidence are seen as the main benefit of disclosure. The authors suggested that this is the case because a reputation for being transparent may enhance a company's overall reputation, which in turn brings commercial benefits.

4.2.2 Evidence from UK regulators

Consistent with the theory described above, in practice various regulators outside the financial services sector use transparency as a tool to encourage firms to improve the behaviour of regulated firms. Examples are considered below based on reputational effects, which generally appear effective, other than the example of carbon reduction where the problems of complexity appear to have outweighed the benefits to date, and also attempts to influence consumers directly, largely through complaints data.

For a number of years, Ofwat published a report based on league tables for service delivery by water companies (called the Overall Performance Assessment), which it used as a reputational tool. This contributed to significant service improvements and the levelling-up of performance across the industry. Equally, following the initial success of this approach, once all companies started to achieve a comparable level, Ofwat felt that the limits of what the existing scheme could achieve had been reached, and chose to update the approach in order to maintain the pressure on companies to improve (Ofwat 2010). A comparable approach, termed 'sunshine regulation', was used in the Netherlands as an alternative to formal price regulation. An analysis by Witte and Saal (2010) found that there was evidence that this had led to improved performance within the industry by comparison to the previous regime.

For a number of years, Ofgem has used 'naming and shaming' of companies that it believes act against the interests of consumers as a reputational tool by making public its investigations and the imposition of financial penalties (Ofgem 2004 and 2012). This is because it sees the practice as 'a strong deterrent in a highly competitive market' (Ofgem 2004).

The conclusions from the market evidence discussed above would indicate that these approaches should indeed work in practice. Van Erp (2010) also reviewed the literature on the impact of such regulatory disclosure of names of offending companies and investigated the conditions for effective disclosure strategies. She concludes that disclosure of offences can be an effective reputational tool to improve firms' compliance with regulation and thereby to protect consumers and investors if the publicity is made about sanctions on companies that pose a material risk for consumers, rather than about all enforcement actions taken.

As part of its Carbon Reduction Commitment energy efficiency scheme, DECC published a performance league table in 2011, ranking scheme participants in terms of their carbon emissions reduction performance. DECC saw the table as a tool to make energy efficiency become a reputational issues for firms. Despite the scheme being currently under review with a view of simplifying it, the government is proposing ‘to retain a reputational driver for the scheme’.[11] This would appear to be consistent with the conclusions from earlier sections around the limitations of complex information, particularly where the underlying messages are also complex.

An additional form of disclosure used extensively in seeking to improve firms’ behaviour relates to complaints data. There has been some recent work from regulatory bodies to assess whether the publication of complaints data works.

Ofcom (2011b) has published research highlighting the benefits of the publication of complaints data in influencing choice of supplier in telecoms market, which in turn may promote competition. In 2010, Consumer Focus launched a complaints league table to help consumers choose the energy supplier (Consumer Focus 2010). In the absence of regulatory intervention, there is unlikely to be a transparent way for such data to come into the market. These regulators have therefore used their powers to add such data into the market, and to seek to improve firms’ behaviour in the relevant markets.

This seems, at least in part, supported by survey evidence. In support of its new initiative, Consumer Focus commissioned research in the energy market which indicated that up to half of consumers were likely to use complaints data. More recently, a survey for the FSA (Sopp 2012) showed that 38% of customers said they would be likely to use complaints data as a factor in their choice of provider of financial services (32% for telecoms), and 8% would consider it as the most important factor (4% for telecoms).

4.2.3 Summary

This section has reviewed examples of the impact of ‘negative information’ on firms. The overall pattern of evidence is consistent with previous findings that such information can have a positive impact on firms’ behaviour, in particular:

– **negative announcements can impact shareholder value**. The evidence indicates that the impact of information which may damage reputation can have a significantly larger effect on shareholder value than any tangible costs to the firm;

– **publishing data that affects reputation can have a similar effect**. The widespread use of league tables is intended to create a similar incentive on firms to move towards the top of the tables, although effectiveness depends on the design of the incentives;

– **complaints data can affect buying decisions**. A number of regulators have sought to test the benefits of complaints data and have concluded that it is a factor for some customers, and therefore publication of transparent data that reaches future purchasers is likely to provide incentives to firms to reduce complaints.

Sections 2–4 have focused largely on information in retail markets targeted towards individual consumers. Section 5 below extends to the provision of information to wholesale customers, including a summary of lessons from the financial crisis.

[11] See DECC (2012), p. 66.

5 When is regulatory intervention necessary in wholesale markets to supply information on firms to the market?

5.1 Insights and evidence from the 2008 review

In addition to a review of how transparency could be effective in improving the effectiveness of markets for retail customers, the 2008 review included a review of the role of disclosure and transparency within wholesale markets. The review concluded that there are three main criteria that should be met for regulators to disclose, or require disclosure of, firm-level information into wholesale markets:

1) that market participants can use the disclosed information to re-assess the value of firms (ie. that information is 'value relevant');

2) there are market failures (eg, information asymmetries, disclosure as a public good) which cause the market to provide a socially inefficient level of disclosure; and

3) that direct and indirect costs of disclosure do not exceed the benefits.

The review found a rich body of evidence that shows that financial reporting by firms provides new and relevant information to investors (Healy and Palepu 2001) by reducing information asymmetries and investor risks and improving corporate governance (Weil et al. 2006). There is also evidence that greater transparency brings benefits to firms and that intermediaries (including rating agencies and financial analysts) play an important role in making disclosure effective.

However, the review also found evidence that disclosure requirements, such as those in the Sarbanes-Oxley Act in the USA, do impose costs and may have unintended consequences, including a reduction in production quantities, a decline in market competition, and an overall reduction in social welfare caused by an inefficient distortion of spending towards compliance activities (Ghose and Rajan 2006).

Separately, the review considered the value of supervisory information. It found evidence that some supervisory information collected by regulators can be of value to market participants (eg, Berger and Davies 1998), and no evidence that its disclosure has major unintended consequences despite not being designed for public disclosure.

This section considers the further evidence in respect of the benefits and costs of disclosure within wholesale markets, and also in respect of the impact of supervisory information, specifically with regard to the recent introduction of bank stress testing by EU and US authorities.

5.2 Review of the literature since the 2008 review

5.2.1 Evidence in the recent academic literature

There is an extensive literature on the impact of financial reporting generally. Beyer et al. (2010) reviewed both the theoretical and empirical literature on financial reporting over 2000–09, thereby extending the survey carried out by Healy and Palepu (2001). In particular, Beyer et al. surveyed the theoretical research on mandatory disclosures and reviewed the four main rationales for financial disclosure regulation, which have been identified in the literature:

– **financial externalities**, which exist when a firm's disclosure is informative also about the financial position of other firms;

– **real externalities**, which exist when a firm's disclosure affects other firms' real decisions, such as the decision of entering or exiting the market;
– **reduction of agency costs**, for example by allowing shareholders to better monitor the actions by firms' management; and
– **economies of scale**, as common accounting standards can result in efficiency gains.

The theoretical articles in the review show that disclosure of information can improve social welfare in the presence of financial and real externalities. For example, disclosure of expected earnings can affect other firms' decisions over production volumes. The findings are, instead, more mixed regarding the impact of common accounting standards. The authors point out that, while it is widely documented that more information reduces agency costs, mandatory disclosure is actually only desirable when regulators can enforce disclosures that shareholders cannot enforce on their own.

They also argue that, in order to improve the understanding of the impact of disclosure regulation, research needs to investigate further the effect of mandatory disclosure on heterogeneous firms, on firms' non-financial decisions (eg. on investment or production), and on different groups of market participants (for example, sophisticated versus unsophisticated investors).

There is also further evidence in the recent empirical literature of how financial transparency can affect firms' value. Lang and Maffett (2011) showed that, internationally, firms with greater transparency (based on accounting standards, auditor choice, earnings management, analyst following and forecast accuracy) experience less stocks' liquidity volatility, fewer extreme illiquidity events and lower correlations between the liquidity of their stocks and both market liquidity and market returns. The benefits from transparency are in principle particularly pronounced during periods of market stress.

The next section considers some ways in which the presence of such transparency failed to avert the financial crisis, but the overall conclusions point to there being significant levels of disclosure, without this disclosure resulting in genuine transparency over the underlying products.

Empirical analysis in Battalio et al. (2011) confuted earlier results in the literature that the disclosures imposed on firms trading in the over-the-counter market by the 1964 Securities Act in the USA had value relevance. However, the authors noted that an explanation of their results could simply be that the vast majority of those firms were already providing investors with financial information prior to the legislation. This shows the importance of considering existing disclosure when assessing proposals for further disclosure.

The literature looked again at the role of financial analysts as a market response to an information market failure. Arya and Mittendorf (2007) presented a model where, while firms could withhold disclosure in order to keep a competitive edge, no firm has incentives to do so unilaterally, as that would deter analyst following. In other words, the desire to attract analyst following can provide an incentive for firms to disclose voluntarily. This could suggest that in circumstances where there are effective intermediaries, then regulatory intervention is less likely to be required to ensure that there is sufficient disclosure of information.

As within retail markets, disclosure within wholesale markets can be ineffective and even have detrimental effects. The review in Beyer et al. (2010) touched on the negative effects of disclosure, including that it can reduce social welfare, facilitate collusion or reduce the overall informational content of market prices (as mandatory disclosure reduces information production by market participants). In their review of the empirical research, the authors conclude that the extensive literature on the Sarbanes-Oxley legislation, which introduced significant additional costs for listed companies, remains unable to establish its consequences.

The overall conclusion remains that disclosure requirements are of potentially significant benefit within wholesale markets, although there is likely to be a greater probability within this markets that sophisticated customers or financial intermediaries will provide incentives for information to be provided voluntarily. The next section provides a short summary of the literature which assesses what role transparency had within the financial crisis,

5.2.2 Recent financial crisis and transparency

The unfolding of the global financial crisis since 2008 has led to the build-up of a broad consensus that a lack of genuine transparency, rather than lack of information available, combined with the complexity of financial markets and certain new products, were important contributing factors behind the crisis. This is consistent with the message throughout this report that disclosure is not sufficient when it is difficult for users to process the information, and shows that this can apply even to highly sophisticated investors.

The crisis has provided practical evidence as to how the benefits of simply increasing disclosure will be limited by the complexity of the information provided. While many risks that led to the crisis were often fully disclosed, the markets failed to understand what was being disclosed or to appreciate its implications (Avgouleas 2009). The author concluded that disclosure failed to be effective in the capital markets because of product complexity and investors' cognitive biases and bounded rationality, and that disclosure-based market discipline failed in the context of banks' risk-tasking mainly because of the implicit government guarantee.

The point that the inadequacy of market discipline reduced the benefits of increased disclosure during the crisis was also put forward in the Turner Review (2009). This is consistent with the conclusions from the academic literature that consumers of complex financial products may not fully understand the implications of the information provided to them, and that this may apply to both private individuals and firms. The implication of the reviews related to the financial crisis is that, despite the presence of information around the risks of complex instruments, both groups of users nevertheless continued to purchase products that resulted in consumer detriment, and contributed to the significant market disruption.

This view was summarised by Ben Bernanke in a speech in 2009. He stressed that, in the run-up to the financial crisis, the innovation associated with many financial products designed for both retail consumers (eg, credit cards) and for more sophisticated investors (eg, structured credit products) resulted in increased complexity and therefore in reduced transparency, which in turn 'impedes competition and leads consumers to make poor choices'.

More generally, the financial crisis highlighted the importance of disclosure of information in financial markets, also between financial services firms as counterparties. The use of disclosure in delivering more effective transparency has become one of the objectives of a broad reform agenda in both the EU (eg, Markets in Financial Instruments Directive (MiFID) II and regulation of over-the-counter derivatives and the retail investment market) and the USA (the Dodd-Frank Act).

One of the conclusions has been that authorities should monitor the financial position of banks and publish their analysis, which is a new development since the previous review. This is considered in the next section.

This section has sought to outline the main themes arising in respect of financial market transparency since the financial crisis in 2008. Whilst the details are very complex and the process of seeking to reduce the risks of a repeat will be likely to take some time, the overall theme appears to date to be that future requirements in respect of disclosure need to concentrate more on the provision of information that allows market participants to better understand the risks of products, and that some of the existing market mechanisms provided significant quantities of disclosure but fell short of providing full transparency.

5.2.3 Disclosure of supervisory information

As discussed above, the financial crisis drew attention to the opacity of parts of the financial system, ie. even where banks may provide significant information about their activities, certain outcomes of the crisis showed that this was not sufficient to provide transparency, and regulators are starting to introduce measures to try to reduce that opacity.

In this context, Flannery et al. (2010) investigated whether banks are unusually opaque compared with non-financial firms, by looking at equity markets. They found that banks were much more opaque during the financial crisis and they conclude that public sector intervention to reduce bank opacity is appropriate, to the extent that opacity contributes to instability in the financial system.

One example of such intervention was the disclosure of bank stress-test results by EU and US authorities in 2009–11. The general view in the literature is that those disclosures were valued by market participants and helped stabilise the financial system (see, for example, Peristian et al. 2010). Goldstein and Sapra (2012), however, warned that, despite the benefits from a financial stability perspective, those disclosures could also carry costs, such as incentivising banks to hold sub-optimal asset portfolios, or generating over-reaction by market participants. The authors suggested that those costs may be reduced by disclosing only aggregate, rather than bank-specific, results.

5.2.4 Summary

It is well-established that transparency can have significant benefits in creating value and reducing the impact of asymmetric information in complex financial markets. The further research in recent years has confirmed this, but has also highlighted that the underlying complexity of the banking system and the presence of market stress have meant that the presence of both information and intermediaries (eg, analysts to process information) did not stop the financial crisis.

This review has not sought to investigate all the detailed aspects of how disclosure to the customers of financial institutions failed to avert the financial crisis. What the literature does identify is that there are some key messages from the crisis which are comparable to those we have found within the previous sections, specifically:

– that disclosure can be ineffective where complexity is high; and

– that customers (here sophisticated investors) suffer from biases which may limit their ability to process information.

This all indicates that regulatory authorities need to test, if seeking to rely on information provided by market participants, whether that information will actually deliver the same transparency that the regulator would wish to achieve. The insights from the 2008 review, which indicated that firms do not always have the incentive to disclose information, remain valid, and the financial crisis has led to a review of the way in which information is provided. This includes the need to consider the evidence from the recent financial crisis as to the limitations of information provided by intermediaries.

One recent response from EU and US supervisory authorities has been to provide information themselves to the market. They have introduced new forms of bank stress tests, and published some of their conclusions. The general conclusion is that this disclosure has been effective in helping to reduce risks, although care continues to be needed to avoid unintended consequences in the way information is provided to the market.

This indicates that regulators should consider their ability to provide any additional disclosure that they consider is not being provided through market mechanisms alone, as there are likely to be conditions where this can reduce risks, though as with the other markets considered in earlier sections, it is likely that significant testing of the specific circumstances of each market would be required.

6 What do regulators disclose about the impact of their regulation, supervision and enforcement and what is the impact of this?

Regulators disclose a variety of information about the impact of their regulation, supervision and enforcement. Some financial services regulators, for example in the UK, the Netherlands, and the USA, evaluate specific regulatory actions by reference to their impact on market outcomes—eg, cost–benefit analysis (CBA) or Regulatory Impact Assessments (RIAs). This has also become standard practice in the utility sectors in the UK. Post-implementation reviews are also carried out, but are far less common.

Less well-developed is the disclosure of more comprehensive measures of the overall success of regulatory bodies by reference to the overall impact on consumers, in terms of absolute levels or changes over time.

Furthermore, there would appear to be little, if any, evidence on the subsequent impact of disclosing information about the direct market impact of regulation. Performance or impact assessments are typically carried out by regulators for reasons of accountability—ie, to demonstrate to their stakeholders that they are fulfilling their duties and meeting their objectives, rather than to aim to have a further positive impact on the market. It is conceivable, however, that these impact assessments have further positive effects on firms and consumers. For example, explaining what impact supervision has had may give firms an incentive to make sure that they are compliant; moreover, it may enhance consumer confidence in the financial system. The evidence to substantiate this does not, however, appear to exist.

This section provides an overview of the information that regulators disclose about the impact of their activities. It draws on material developed for the FSA in an Oxera report on the experiences of regulators in measuring their impact on consumers and the market in general.[12]

6.1 Measures disclosed by regulators on the impact of regulation

Measures of the impact of regulation are most typically disclosed in ad hoc research designed to link specific regulatory interventions to specific changes in outcomes (eg, the work done by the OFT).[13] This type of research is increasingly being seen as necessary to evaluate whether specific regulation is actually working as intended.

Attempts have been made to develop more generalised methodologies for measuring the impact of the overall regulatory regime on markets and consumers. However, these developments are still either in their infancy—eg, the development of a market monitoring methodology by the Legal Services Board, LSB.[14] Alternatively, they have been developed using existing information largely generated for other regulatory purposes—eg, the re-use of information by Ofcom following the National Audit Office report on its effectiveness (NAO 2010).

[12] Oxera (2012 forthcoming). The report considers the experiences of 14 regulators across different sectors and a number of countries.

[13] See for example: GHK (2011).

[14] See Oxera (2011). The framework developed in Oxera's report has been used by the LSB and other bodies such as the OFT to monitor changes in the legal services sector. See Legal Services Board (2012).

The information that regulators disclose about their impact of regulation, enforcement and supervision can be summarised in three categories.

Inputs—the resources used in the production process of either the products/services sold by regulated parties (market inputs) or the regulator (regulatory inputs). An example of a market input would be a measure of the total hours of IFAs used in, say, the production of all mortgages in the UK. An example of a regulatory input would be the number of full-time equivalent supervisors used to supervise the production of those mortgages.

Further examples of inputs, used by the regulators described in the examples below, include:

– projects to trial different carbon-saving measures (Ofgem);
– speed of licence-processing (NAO on Ofcom);
– score on cost-effective regulation scorecard (British Columbia Securities Commission).

Disclosure of information about inputs does not directly provide an indication of the impact of a regulator, but may do so indirectly. For example, the number of full-time supervisors in a particular area may give an indication of the intensity of the supervision. In general, input measures are used not because they provides a good measure of the impact of regulation, enforcement and supervision, but because the data is often readily available and does not require much further analysis.

Outputs—the outputs of the regulated parties (market outputs) or of the regulator (regulatory outputs). An example of a market output would be the number of mortgages provided by a mortgage supplier (or the number across the industry); an example of a regulatory output would be the number of consultation papers published on the mortgage market, or the number of consumer complaints handled in relation to the supply of mortgages.

Further examples of outputs, used by the regulators described in the examples below, include:

– responding to customer complaints within four weeks (Ofgem);
– broadband quality measures (NAO on Ofcom);
– the quality of advice on mortgages (AFM).

Similar to inputs, outputs do not directly give an indication of the impact of regulation, enforcement or supervision, but may do so indirectly. If the number of enforcement cases has increased, this could considered an indication that enforcement is having an impact; although, in theory, it cannot be assumed that enforcement is indeed having an impact and ideally one would wish to see changes in market outcomes.

Outcomes—the results of all the participants (eg, producers, users such as private individuals and institutional investors, as well as regulators) acting in the market. At a high level, the market outcomes in financial services include, for example, consumers purchasing products that best suit their needs, competitive forces resulting in products that offer value for money for customers, consumers having a good understanding of the risks associated with products, and agents acting in the best interest of their clients. An example of a specific market outcome would be the number of consumers purchasing suitable mortgages, or the number of consumers being misled by their financial adviser. In some cases there may be regulatory outcomes—for example, in relation to complaint-handling, a regulatory outcome would be the number of consumers whose complaints are satisfactorily dealt with by the regulator. Market outcomes will capture the combined effect of regulation, enforcement and supervision.

Further examples of outcomes, used by the regulators described in the examples below, include:

– customer switching behaviour and customer satisfaction following switching (Ofgem);

– retail prices (NAO on Ofcom);
– percentage of workshop participants who recall investor education messages (British Columbia Securities Commission).

In many cases there is no bright-line test between what is an input, an output or an outcome. However, relevant changes in outcomes should be capable of signalling ‘if the world is improving or getting worse’, while changes in outputs do not necessarily signal a change for the better or worse. As an example, any change in the output of an increase in the number of mortgages sold could be positive (if the mortgages are suitable for their customers) or negative (if the increase just represents an increase in the sale of unsuitable mortgages). In particular in relation to regulatory outputs (or, indeed, inputs), the link between changes in these measures and the desirability of the change needs to be established by reference to a change in the outcome. For example, if the level of supervision of mortgage suppliers increases, but the sale of mortgages to customers remains unchanged, the change in the regulatory inputs is unlikely to have improved matters for consumers in practice. Similarly, if the regulator produces six consultation papers on mortgage market reforms, this will create a desirable change in outcomes only if, as a result of those consultations, customers purchase a different set of mortgages, or at least the transaction process by which they purchase mortgages is an improvement (as seen by customers) on what went before.

However, it can also be difficult to draw conclusions from some market outcomes. One market outcome that has been used in testing the effectiveness of regulation is consumer switching behaviour. Switching between products can be seen as a positive indicator of an actively competitive market, but it is not necessarily clear whether this brings benefits to consumers or not. Perhaps a better measure would be whether consumers are satisfied following switching, which is a question asked by Ofgem after asking about the extent of switching.

To provide further detail of how these issues have been dealt with by regulators in practice, five regulators have been selected for further consideration, including Ofgem, the NAO in a 2010 report about Ofcom, the Netherlands Authority for Financial Markets, the British Columbia Securities Commission, and the Legal Services Board (UK).

6.1.1 Ofgem

There are some similarities in aspects of the gas and electricity, and financial services markets that make Ofgem a useful regulator to learn from in terms of consumer engagement. Low levels of consumer switching is an issue faced in both industries, and Ofgem has conducted surveys of consumers to analyse the incidence and motivations behind this consumer behaviour. Behaviour also varies across types of consumer, which has been investigated by Ofgem through consumer engagement.

Ofgem’s new regulatory framework moves away from its previous input-focused approach to assessing performance towards a more impact-focused approach.[15] This has been particularly the case with regard to ‘securing value for money for consumers’, which has been a significant focus for Ofgem. Regular reports provide updates on market indicators, such as the net margins paid by customers.[16] The regulator’s approach includes consumer engagement and surveys, such as those carried out by Ipsos Mori.[17] The surveys asked consumers questions relating mainly to switching behaviour and awareness of different suppliers. Specific questions have included:

[15] Inputs refer to the resources used in the production process of the products/services sold by regulated parties (market inputs) or supervised by the regulator (regulatory inputs). An example of a market input would be a measure of the total hours of IFAs used, for example, in the production of all mortgages in the UK. An example of a regulatory input would be the number of full-time equivalent supervisors used to supervise the production of those mortgages.

[16] See Ofgem’s ‘Electricity and Gas Supply Market Indicators’, a weekly publication on Ofgem’s website.

[17] The latest survey is Ipsos Mori (2011).

– what companies or suppliers are you aware of that can currently sell you electricity or gas?
– have you switched your gas/electricity supplier in the last 12 months?
– what made you decide to switch?
– how satisfied were you with the switch?

While there is an extensive literature on measuring competition market outcomes among firms, for example from competition authorities, Ofgem's measurement of consumer outcomes reflecting behavioural economics is relatively novel and advanced.

Ofgem continues to report on regulatory activities as well. Its annual report lists several performance indicators, all of which are outputs of the regulator, rather than outcomes of direct stakeholder interest (Ofgem 2011b). As a result they cannot be used to assess how effective the regulator has been at changing the market outcomes in relation to the behaviour of the regulated parties, which is actually the primary focus of the objectives of Ofgem. The performance indicators with targets include:

– responding to customer contacts within ten working days;
– responding to complaints within four weeks;
– granting competitive licence applications within 45 working days of receipt;
– responding to inquiries under the Freedom of Information Act within 20 days of receipt;
– reducing carbon emissions.

These performance indicators have been criticised by the NAO (2010a) for being too activity-based and not sufficiently focused on measuring the regulator's effectiveness.

6.1.2 National Audit Office report on Ofcom

A 2010 NAO report on Ofcom developed a conceptual framework that translated government-determined objectives for Ofcom into outcomes and then metrics for which data was already available (NAO 2010b). These metrics were then assessed using a simple 'scorecard'. The NAO approach provides an example of a comprehensive conceptual framework for measuring the impact of regulatory activities for a regulator.

In its report, the NAO (para 2.1) concluded that:

> Ofcom should identify and measure longer-term outcomes and benefits, using an approach like the NAO's measurement framework. This could include analysis and explanation of the benefits delivered for consumers, such as price, choice, innovation and satisfaction, as well as benefits to markets.

With reference to Ofcom's objectives, the NAO identified key outcomes that it would expect Ofcom would wish to achieve, and then a set of 'indicators' under four headings:

– benefits to citizens and consumers;
– market indicators;
– stakeholder views;
– operational and cost efficiencies.

Indicators were also classified according to the NAO's judgement on the degree of Ofcom's influence over them.

The NAO then identified metrics for the indicators, which it used in assessing their effectiveness. For example, 'benefits to citizens and consumers' included 'retail prices', which was evaluated using metrics including trends in relevant prices in the communications sector (eg, fixed-line telephony charges) and comparison of UK prices with international comparators. This category also included 'quality of service', measured using the results of consumer research into perceptions of quality of service as well as value for money. Other indicators were based on market trend data, and some on the results of stakeholder consultation.

The various measures were summarised in the scorecard (reproduced below), providing a single measure of the impact of the regulator's activities.

Figure 6.1 NAO scorecard for Ofcom performance measurement

Figure 18
Performance scorecard

	Influence category 1 (high degree of influence by Ofcom)		Influence category 2 (medium degree of influence by Ofcom)		Influence category 3 (low degree of influence by Ofcom)	
	Indicator	Assessment	Indicator	Assessment	Indicator	Assessment
Benefits to citizens and consumers			Retail prices	B		
			Switching rates	C		
			Take-up	A		
			Choice and availability	A		
			Quality of service	B		
Market indicators			Market shares	A	Business revenues	A
			Broadband quality	C	Viewing/listening hours	B
			Value of spectrum to the economy	A		
Stakeholder views	Consultation processes	A	Interview results	B	Complaints indicators	B
Operational and cost efficiencies	Operating costs	A				
	Quality of cost information	B				
	Staff numbers and costs	B				
	Licence processing speed	A				
	Call centre performance	A				

NOTES
A = Good performance
B = Some room for improvement
C = Attention needed

Source: National Audit Office

Source: National Audit Office (2010b).

6.1.3 Netherlands Authority for Financial Markets

The AFM is a conduct authority and therefore similar in terms of its remit to the forthcoming FCA, with objectives to promote:

– fair and efficient operation of financial markets;
– confidence among consumers and firms in the financial markets.

The AFM is responsible for supervision of financial markets, focusing on promoting orderly and transparent financial market processes and making sure that agents act in the interest of clients; and supervising and authorising firms to offer financial services. It states that, in achieving these objectives, it will contribute to prosperity and the reputation of the Dutch economy. It does not have a competition objective, nor does it have a wider role in ensuring that markets function well.

The AFM measures its own performance on the basis of performance indicators. In its supervisory work, it focuses on specific themes and then assesses the effect of its intervention by measuring a combination of input, output and outcome measures. The effects of interventions are measured on the basis of: 1) a market analysis (eg, research into the quality of advice on mortgages); 2) surveys among consumers and other stakeholders, including the biannual stakeholder survey; and 3) policy evaluations, which are usually carried out by the Ministry of Finance in collaboration with the AFM. The stakeholder surveys focus on measuring the AFM's the performance as a regulator rather than market outcomes.

6.1.4 British Columbia Securities Commission

In Canada the prudential regulator (the Office of the Superintendent of Financial Institutions) is a federal body, whereas consumer protection in financial services is dealt with by provincial agencies. In terms of clear definition of strategic objectives, setting targets to those ends and making use of stakeholder engagement, the securities commission of British Columbia stands out as a useful example. With data covering at least seven years, progress in these areas has been assessed, and can continue to be assessed in future.

The Commission has defined four operational objectives from its mission statement, and with these are metrics for measuring performance, as set out below:

> **'1 Promote a culture of compliance**
>
> Percentage of reviewed issuers that reduce deficiencies
>
> Average number of deficiencies per examination in Capital Markets Regulation
>
> **2 Act decisively against misconduct**
>
> Average time to respond to misconduct with disruptive action
>
> Average life, in months, of cases resolved via settlement or enforcement decision
>
> **3 Educate investors**
>
> Number of complaints and tipoffs received as a result of InvestRight investor education and outreach programs
>
> Percentage of workshop participants who recall investor education messages
>
> Percentage of Canadian investors aware of provincial securities regulators (awareness questions in investor survey)
>
> **4 Advance cost-effective regulation**
>
> Average score on cost-effective regulation scorecard
>
> Average approved local IT project post-implementation score'[18]

The measures of its performance are focused on regulated inputs and outputs, rather than more general market outcomes. Market research is used to measure investor awareness, but for awareness of regulatory actions rather than more general education levels.

6.1.5 Legal Services Board

The LSB has developed a framework[19] within which to measure outcomes relevant to its regulatory role. This involved developing measures of how relevant legal markets currently function and how they develop over time. While the relevant market and nature of the regulator are relatively unlike those in financial services, there are some learning points, as the framework attempts to measure the impact of the regulatory regime as a whole, rather than the impact of specific regulatory actions.

The LSB required an understanding of how the relevant markets currently function and any developments over time. To this end, it translated its objectives into a range of indicators

[18] British Columbia Securities Commission (2011), ' BC Securities Commission Service Plan, 2011 – 2014'

[19] Oxera has been advising LSB in this development process. The information presented here is based on the work that Oxera has been doing for the LSB and is not drawn from a published LSB document. Further details can be found, however, in LSB (2012a). See also Oxera (2011).

(which represent market outcomes), which in turn were translated into different metrics. The following three types of indicator were to be monitored:

– input indicators, to capture factors that could affect the markets (eg, new technologies). These will be updated over time to reflect changing internal and external factors (eg, implementation of any new regulation);
– market-functioning indicators, to identify the mechanisms through which the markets change (eg, barriers to entry, switching rates)—these indicators assist in assessing causality;
– performance indicators, to capture changes to the market outcomes (eg, market concentration metrics).

The measurement of indicators was also considered in terms of 'directness':

– direct measures, which monitor the indicator of interest directly—eg, the registration of a new business providing family law services in Brighton indicates improved access;
– indirect/proxy measures, which monitor the indicator of interest indirectly. These typically consider the mechanism(s) through which the change in regulation (or other source) is expected to alter the market outcomes, and monitor changes at an intermediate stage—eg, the registration of a new business providing family law services in Brighton may indicate increased competition for family law services, and thus lower prices/improved quality of services;
– intermediate measures, which overlap closely with market-functioning indicators to validate the link between proxy and market outcome.

Type of customer was also a relevant consideration. Legal service providers often differentiate between types of consumer, limiting demand-side substitutability. For example, 'consumers' cannot substitute between services provided by the Crown Prosecution Service and Criminal Defence Service in crime; similarly, natural persons may not be able to access the same set of services as legal persons (eg, corporations) in civil law.

The LSB has only recently finalised the framework for monitoring market outcomes and has started applying it to different markets, in cooperation with other bodies such as the Law Society and the Ministry of Justice (see LSB 2012b).

6.2 Summary of insights

The Oxera report on measuring outcomes provides further details on the information that regulators disclose on the impact of their activities generally (Oxera 2012 forthcoming). It highlights some useful insights, including the following.

– Regulators primarily disclose information about the impact of individual regulatory interventions through cost–benefit analyses and regulatory impact assessments. More comprehensive measurement of the impact of regulatory regimes on markets and consumers is much more in its infancy, and there are only a few possible examples.

– Regulators disclose a wide range of information about their performance and market outcomes, covering data on their own activities, data collected through supervision activities, and data from market research. The information that regulators disclose about their impact of regulation, enforcement and supervision can be summarised in three categories:

  – inputs—the resources used in the production process by regulated parties (market inputs) or the regulator (regulatory inputs);
  – outputs—of the regulated parties (market outputs) or the regulator (regulatory outputs);
  – outcomes—the results of all the participants (eg, producers, users and regulators) acting in the market.

- Most studies focus on measuring the impact of a regulator or regulation and do not distinguish explicitly between the impact of regulation, enforcement or supervision. The focus tends to be on measuring the impact of regulation; however, in measuring that, the impact of enforcement and supervision is also likely to be captured. However, there are also examples of assessments of specific interventions.[20]

- There is indeed extensive experience in measuring competition market outcomes among competition authorities. The measuring of consumer protection and market integrity are areas where market outcomes are less developed.

- Both perception and reality matter to regulators when measuring market outcomes. Although the measurement and disclosure of information on perception has its disadvantages (eg, it may be more volatile and driven by factors other than the regulator or regulation; perception may not necessarily be an informed view, etc), regulators often do not consider it sufficient to disclose information about impacts based on 'reality' alone. In doing so, the regulator may not capture the full consumer experience. Indeed, an improvement in consumer perception/experience is arguably the ultimate test, as shown by the example of switching, where an increase in observed switching is not necessarily a good outcome.

- The extent of information provided by regulators on the impact of regulation on markets and consumers is, however, often rather limited. This is primarily due to concerns over causality—it is often not clear what factors caused the change in the market, and, in particular, the relevance of regulatory regimes can be uncertain. This is perhaps the main reason why many regulators focus on the impact of specific regulatory actions rather than broader regulatory regimes.

- Performance or impact assessments are typically carried out by regulators for reasons of accountability—ie, to demonstrate to their stakeholders that they are fulfilling their duties and meeting their objectives, rather than to aim to have a further positive impact on the market.

- There would appear to be little, if any, evidence on the subsequent impact of disclosing information about the direct market impact of regulation. Hypothetically, it is conceivable, that impact assessments have further positive effects on firms and consumers, perhaps by giving firms an incentive to make sure that they are compliant or enhancing consumer confidence in the financial system. The evidence to substantiate this does not, however, appear to exist.

[20] For example, in a study for the Ministry of Economic Affairs in the Netherlands, Oxera assessed the impact of specific interventions (such as merger decisions and cartel investigations), see Oxera (2004).

7 Conclusions

Oxera has performed a review of the literature around the use of disclosure and transparency as a regulatory tool, focusing on further evidence since the FSA's review in 2008. The review has demonstrated that many of the themes identified in the 2008 review continue to be supported by more recent evidence.

This review has considered a number of key questions, relating to how transparency can be achieved, and where there is evidence that it has delivered benefits for consumers, and what lessons can be taken in respect of the best form of information provision in the future—both for individual consumers and to financial intermediaries and larger customers within wholesale markets.

The literature has assessed the benefits of information for a variety of different objectives including:

- to help individual customers understand financial services products;
- more generally, to help individual consumers make informed decisions and understand the risks and benefits of different products;
- to consider where financial intermediaries can support a well-functioning market;
- to improve firms' behaviour, including reducing complaints and improving the quality of services provided to customers; and
- to reduce information asymmetries and support the working of wholesale financial markets, in particular to reduce the risk of a future financial crisis.

These aims are very different – financial services are different to other products and can be more complex. Wholesale customers and financial intermediaries have a very different understanding of products and should have a greater ability to process information. However, there are a number of key messages which emerge throughout the review, specifically:

- that disclosure is not sufficient to provide transparency, and that information needs to be able to be processed by customers for it to result in true transparency;
- that there are limitations on the complexity of information that can be processed by all customers, and that excessive information provision undermines the benefits of providing the information at all;
- that there are examples of where apparently simple information was not processed by customers, and that this can be attributed to 'biases' where all types of customers have certain preferences which cause them to act in a way which can be inconsistent with traditional economic theory;
- that behavioural economics may be able to support the design of disclosure in the context of such biases, but that there is not yet sufficient theoretical underpinning to support any specific approach, and testing will be critical; and
- that regardless of the design of disclosure, if the underlying services are too complex, then customers will not be able to process the information, and therefore transparency will remain limited regardless of the form of disclosure, unless financial intermediaries

are able to support end customers in coming to an understanding of the information available.

The report also includes a review of how regulators have sought to assess the impact of their regulation, supervision and enforcement. It indicates that there is extensive precedent of regulators using each of inputs, outputs and outcomes to measure the impact of regulation, but that this is largely to show a clear pattern of accountability rather than intended to have a further positive impact on the market itself.

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