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Executive summary

This report, commissioned by Open Water, is designed to help support company readiness for retail market opening.

The report supports the next iteration of the Market Architecture Plan (MAP3) and represents a practical guide setting out the issues companies may want to consider as they prepare for competition in the non-household retail market in England. In this context, this report covers six areas:

1.	treatment of incumbent and new entrant retailers	section 3
2.	retail decision-making	section 4
3.	financing of the non-household retail business activities	section 5
4.	data cleansing and validation	section 6
5.	interfaces in the competitive market	section 7
6.	interactions with the Drinking Water Inspectorate (DWI) and Environment Agency (EA)	section 8

The report is not definitive and Ofwat and Market Operator Services Limited (MOSL) may issue more prescriptive guidance in some areas as progress is made towards the opening of the non-household retail market in April 2017. This document is intended solely to support the companies by identifying issues that they may want to consider.

In addition, Open Water recommended to Ofwat that the preparations for market opening be underpinned by a new licence condition requiring companies to comply with the necessary preparatory steps. It is understood that the Ofwat consultation document on licensing will propose a new licence condition obliging companies to carry out the set of activities defined in a formal transition plan produced by the overall programme. This would cover the sorts of activities referred to in sections 6 to 8 of this report. The new condition would not cover matters relating to the level playing field, and it is understood that Ofwat is likely to signal that it expects to consult further on this area later in the year.

Level playing field (sections 2 to 5)

These sections were developed by Oxera.

The first three areas above are related, and seek to achieve the same overall objective. Specifically, the creation of a level playing field in the non-household retail market and a competitive non-household retail market that delivers the objectives of the Water Act 2014.

In some ways, the water industry in England is in a fortunate position, in that it can heed the practical lessons from the introduction of competition in other sectors, including electricity and gas supply, telecoms and the Scottish water industry. In developing this practical guide, these lessons have been examined to provide the areas of consideration for incumbent companies as they prepare for retail market opening in April 2017. Some of the key themes are as follows.

Transparency may help a company demonstrate that a level playing field exists in practice

In practice, this could cover any negotiated departures from the published wholesale charges scheme (i.e. the charges that retailers pay to the wholesaler). The Water Act 2014 requires details of these agreements to be published by Ofwat, but a company could consider doing more by making available (e.g. publishing) the tariff structures that have been negotiated with retailers.

Subject to any charging rules produced by Ofwat, the principle of transparency could cover agreements for intra-company transactions involving the non-household retail business activities (e.g. for shared cost services between the wholesale and non-household retail business activities).

Non-price discrimination is already a statutory obligation on companies, but will remain a relevant consideration in ensuring a level playing field

Notably, these considerations relate to the scope for information-sharing between the wholesale and non-household retail business activities, particularly if these activities remain within the same legally integrated company structure (e.g. if an incumbent company does not apply to the Secretary of State to exit from the non-household retail market under the exit regulations). In this regard, the introduction of new governance arrangements typically has an important role in controlling the flows of information to (and from) the non-household retail business activities.

Experience from other sectors shows that such arrangements can be facilitated through several measures, including:

- initiating a form of separation of IT systems, involving restricting access to information held electronically in the wholesale or retail business activities;
- separating the firm's assets to various degrees, including office space and the labour force;
- having some form of governance separation, which may involve creating a
 distinct management team and divisional board. This may also create an
 environment that allows for independence of decision-making for the nonhousehold retail business activities.

These are not necessarily the only measures that may help to drive a 'culture change' in the non-household retail business activities.

Compliance has an important role in ensuring a level playing field

Compliance plays an important role across all areas. Indeed, the compliance and monitoring function is important in giving stakeholders (e.g. regulators and new entrants) confidence about the extent to which a level playing field exists. This would not only involve monitoring compliance, but would also cover the procedures in place if non-compliance is identified. Indeed, the importance of compliance is visible across all of the sectors examined in this report. This covers a range of aspects including, for example, rolling out a training programme across employees in the wholesale and retail business activities, establishing a clear code of practice for employees to follow, and having clear job descriptions for all employees.

The level playing field is intertwined with the choice of retail strategy and organisational structure

Incumbent companies are faced with a choice of retail strategies, with some of these strategies made possible through the Defra 'exit' regulations.

The three main retail strategies and organisational structures are summarised below.

- 1. To remain legally integrated—the wholesale and retail business activities remain within the same legal appointment.
- 2. To consolidate their non-household retail activities into a single, legally separate, licensed retail business outside the current appointment—legal separation through the Defra 'exit' regulations.
- 3. To sell non-household retail activities to a third-party licensed retailer through the Defra 'exit' regulations.

A company's choice of retail strategy and organisational structure will have implications for the risks that it faces, as well as how the level playing field is evidenced. For example, a company that chooses to remain legally integrated may need to consider additional questions in order to test the extent to which a level playing field exists in practice.

Figure 1 summarises high-level questions arising from these considerations. The questions are intended to provide a framework for companies to consider, and should be interpreted as guidance rather than an exhaustive list. Figure 1 divides the questions with reference to the overall timeline for introducing non-household retail competition in England, to indicate when the questions may be relevant.

The timeline takes into account three critical phases:

- May 2015 to September 2016: the period leading up to the 'go active' date when the central settlement systems are activated;
- October 2016 to March 2017: the period leading up to the 'go live' date
 when the central settlement systems are operating in shadow form ahead of
 the opening of the non-household retail market;
- April 2017 onwards: after retail market opening or 'go live'.

Figure 1 Overall questions May 2015 to October 2016 April 2017 September to March 2017 onwards 2016 Overall Do incumbent Ultimately, the overall question is what measures are in place companies have a plan to ensure that there is equivalence of the price and non-price in place to ensure that terms offered to the incumbent and new entrant retailers? the wholesale/retail business will be ready for market opening? Wholesale Will non-household business activities share costs Are there departures from the charges and and services (e.g. IT, corporate, legal) with other published wholesale charges intra-company business units/businesses? schemes? If so: transactions · wholesale and household retail • why is a departure merited? If so, will: · would all retailers be offered · those services be provided through an agreement that departure on equivalent with measured performance criteria? terms? · the transfer price for those services be 'market- how are departures tested', consistent with RAG5? documented? What payment and credit terms are available to retailers? · how would you show that payment and credit terms are consistent with the assessment of the retailers' credit standing? are equivalent payment and credit terms available to retailers of a similar credit standing? How does the wholesaler ensure this? Information How will information on wholesale activities be kept Are there measures in place to monitor compliance and record management. separate from information on retail activities? governance · access to office areas/buildings breaches? • access to IT systems (e.g. billing) • will a compliance officer be managing staff interactions compliance appointed and an internal audit function be set up to How do you satisfy yourself that decisions at the monitor compliance? non-household retail level are made independently of the wholesale (or another associate) business? how are decisions taken in the non-household retail · what governance arrangements are in place to maintain the independence of non-household retail decision-making? would a new entrant be satisfied with those arrangements?

Note: The questions should be interpreted as guidance rather than an exhaustive list.

Source: Oxera.

Data cleansing and validation and interfaces (sections 6 and 7)

These sections were developed by SMC on behalf of Open Water.

Incumbent companies would be responsible for loading the Market Operator (MO) systems with complete and accurate data before the start of the competitive market. The data requirements will be detailed in the Data Catalogue (CSD0301) published alongside MAP3, which will give companies an early opportunity to review their data and plan their data validation and cleansing activities.

Experience in other industries has shown that significant time and effort could be required to achieve the necessary standards of data, and an early start of the task is recommended.

As regards interfaces, following the initial data load, the successful operation of the competitive market will depend partly on the effective and efficient operation of the MO systems. It would be the responsibility of wholesalers and retailers (including the incumbent and new entrants) to ensure that their internal systems are capable of producing the quality and quantity of accurate information to facilitate the smooth operation of the competitive market.

Several of the tasks in these areas would, almost certainly, need to be completed by the 'go active' date above. Indeed, in relation to data cleansing and validation, it is understood that all initial data load requirements would need to be completed for the 'go active' date in preparation for 'shadow operation' of the MO systems as further data loading may not be possible after the 'go active' milestone has been achieved.

It is currently expected that a detailed timetable will be determined once there is greater clarity in this area following the vendor selection process for the MO systems (which is currently expected to be completed in early August 2015).

Interactions with the DWI and EA (section 8)

This section was developed by the Open Water team.

The wholesaler-retail code sets out the terms of trade between each wholesaler and each retailer, including the necessary operational interactions. A principle underpinning the development of the wholesale-retail code has been that it should sit alongside the statutory obligations and duties applying to companies, and it does not seek to interfere with these—for example, in matters relating to public health or the environment (i.e. DWI and the EA). The establishment of the market means that the roles and responsibilities of wholesalers and retailers need to be clarified in the crucial areas overseen by Defra, the DWI and the EA. These areas include, for example, SEMD, water quality monitoring, and trade effluent consents.

The current draft of the statutory wholesale-retail code was developed following work undertaken by the Open Water team with incumbent companies, new entrants, Defra and other stakeholders. This collaborative process continued after the publication of MAP2 through the 'task and finish' groups, hosted by Water UK between December 2014 and April 2015.

The task and finish groups will continue beyond MAP3, and will involve Open Water working closely with Defra, the DWI, the EA and water companies, again hosted by Water UK, over the coming period (i.e. by holding the workshops). It is understood that this process will continue for as long as is necessary.

Ultimately, the statutory wholesale-retail code will be finalised only when the DWI, EA and Defra (as regards the SEMD) are satisfied that they can meet their statutory duties in the competitive market.

1 Introduction

Open Water commissioned this study to help support company readiness for retail market opening. It is intended as a practical guide, setting out the areas that companies may wish to consider as they prepare for competition in the non-household retail market in England.

The report was prepared by Oxera and Strategic Management Consultants (SMC) in collaboration with Open Water. Oxera prepared sections 2 to 5 focusing on the level playing field, while SMC prepared sections 6 and 7 focusing on data preparation and upload, as well as interfaces in the competitive market.

The report covers three areas related to the level playing field (prepared by Oxera):

- the treatment of incumbent and new entrant retailers;
- retail decision-making;
- financing of the non-household retail business activities.

In addition, the report covers other aspects relating to company readiness (prepared by SMC), including:

- data cleansing and validation;
- detailed interfaces in the competitive market;

Finally, the report covers:

• interactions with the Drinking Water Inspectorate (DWI) and the Environment Agency (EA).

Each section includes practical examples from other sectors that have faced similar issues, and questions for companies to consider. These questions are intended to provide a framework for companies; as such, they should be interpreted as recommendations of issues worth considering rather than an exhaustive list of 'must dos'.

While the report focuses on the issues and questions for incumbent companies, it may also be relevant to new entrants, which are likely to want to understand how the market may work and how they may have to prepare for retail market opening (e.g. how they may want to interact with the Market Operator, MO).

The report is not definitive and Ofwat and Market Operator Services Limited (MOSL) may issue more prescriptive guidance in some areas as progress is made towards the opening of the non-household retail market in April 2017. This document is intended solely to support the companies by identifying issues that they may want to consider.

In addition, Open Water recommended to Ofwat that the preparations for market opening be underpinned by a new licence condition requiring companies to comply with the necessary preparatory steps. It is understood that the Ofwat consultation document on licensing will propose a new licence condition obliging companies to carry out the set of activities defined in a formal transition plan produced by the overall programme. This would cover the sorts of activities referred to in sections 6 to 8 of this report. The new condition would not cover

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matters relating to the level playing field, and it is understood that Ofwat is likely to signal that it expects to consult further on this area later in the year.

2 The Water Act 2014 and the level playing field

2.1 The need for a level playing field

Privatisation of the water industry in the late 1980s led to the creation of regulated regional monopolies: the water and wastewater companies. To date, these companies have provided wholesale activities (abstraction, treatment and distribution in relation to water services) and retail activities (customer-facing) under a vertically integrated structure.

However, the Water Act 2014 ('the 2014 Act') could change these arrangements by introducing retail competition for all non-household customers in England, with the opening of the non-household retail market in April 2017. It means that some operators willing to enter the downstream retail markets will have to seek access to wholesale services from the incumbent wholesale operator.

The 2014 Act will therefore create a situation involving the incumbent wholesaler providing access to natural monopoly facilities (i.e. wholesale services) to its own retail arm as well as to new entrants, which would compete with each other in the downstream retail market.^{1,2}

The main objective of the 2014 Act is to create an environment in which retailers can compete to deliver full benefits to non-household customers. However, this can be achieved only if there is a level playing field between the incumbent retailer and new entrants in the downstream market.

2.2 What is a level playing field?

In the water sector, the concept of the level playing field has been covered in other publications, including in previous versions of the Open Water Market Architecture Plan (MAP). Box 2.1 gives an overview, based on an Ofwat consultation on this issue.

Box 2.1 Level playing field

A level playing field gives all companies an equal opportunity to provide services to customers. In this context, 'customers' include all those that participate in a market. For example, a retailer that buys a supply of water from a wholesaler is a customer of that wholesaler.

A market with a level playing field does not permit the giving of undue preference to, or undue discrimination against, one party relative to other parties. This means, for example:

- a vertically integrated company offering the same network service and terms to entrants with a wholesale authorisation as it offers to its own wholesale operation;
- companies with significant market power not abusing that power to disadvantage other companies relative to their own organisations; and
- customers being free to switch supplier without their retailer 'blocking' the switch.

Source: Ofwat (2013), 'A level playing field for the water market—a discussion document', September, p. 10.

A level playing field could be facilitated through regulatory measures, including:

 access regulation through discrete and binding revenue controls, which set the cap on the revenue that can be collected from each business unit, including wholesale business activities;

¹ Natural monopoly exists if, over the relevant range of outputs, the costs of production are minimised by concentrating production in a single firm. This would result from the presence of economies of scale, which would lead to unit costs falling with the output level.

² Unless the incumbent retailer decides to sell its non-household retail business activities to a third party, via the exit provisions that will be introduced on retail market opening.

 codes and rules that set out high-level procedures to be followed by market participants (as required under the Water Act 2014)—e.g. covering how service issues are dealt with.³

However, experience from other regulated sectors (e.g. electricity and gas supply, and telecoms) shows that other factors are important, including:

- establishing the underlying business systems and processes to ensure that the market codes and rules are followed in practice;
- organisational changes to achieve behavioural and cultural change (e.g. through measures to separate the wholesale and retail business activities).

Companies are usually best placed to make these changes, since:

- from a practical perspective, it is only the regulated companies that can introduce new business processes or the necessary changes in culture to achieve a level playing field;
- it is the companies that are subject to proceedings under competition law.⁴
 Precedents show that economic regulators may not be able to fully 'insulate' companies from the risk of non-compliance with competition law.⁵

2.3 Interactions between the level playing field and retail strategy

In the context of their broader retail strategy, some incumbent companies may decide to introduce some form of 'separation' to help them achieve the level playing field and meet their obligations under competition law. The Defra exit regulations provide the mechanism to achieve legal separation, which is the highest form of operational separation (and involves the creation of a separate board and the submission of separate statutory accounts). Box 2.2 gives an overview of Defra's exit regulations.

³ For example, the operational rules set out the processes that link retail activities (customer-facing) with wholesale activities (asset management and operations); see Open Water (2014), 'Market architecture plan', July, p. 35. Market codes set out the rules for how the market functions, including the rules for providing access to information, how customers switch supplier, the basis for calculating wholesale charges and the process for changing the market rules; see Open Water (2014), 'Market architecture plan', July, p. 43. It is understood that both sets of rules will be set out in a statutory wholesale-retail code; see Open Water (2014), 'Market Architecture Plan 2', December.

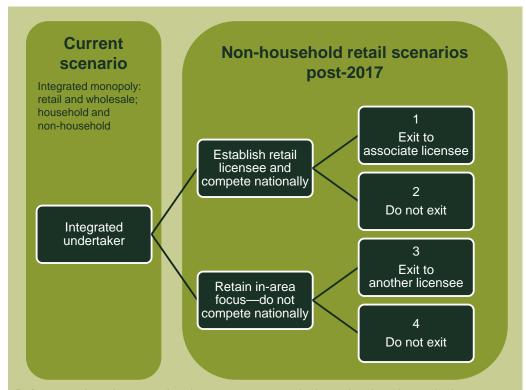
⁴ Article 102 and the Competition Act 1998 (CA98) Chapter II. Treaty on the Functioning of the European Union – Part Three: Union Policies and Internal Actions - Title Vii: Common Rules on Competition, Taxation and Approximation of laws - Chapter 1: Rules on competition - Section 1: Rules applying to undertakings - Article 102 (ex Article 82 TEC). Available at http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:12008E102.

⁵ The precedents are the *Deutsche Telekom* and *Telefónica* 'margin squeeze' cases (margin squeeze is discussed in section 3). Deutsche Telekom argued that access prices set were within regulatory caps; however, this was not accepted as a defence. See Court of First Instance (2010), Judgment of the Court of First Instance in Case T-271/03, *Deutsche Telekom AG v Commission of the European Communities*, 10 April. Similarly, in the *Telefónica* margin squeeze case, the EU Court of Justice confirmed an earlier ruling that the scope of competition law cannot be limited by the existence of a regulatory framework. See European Court of Justice (2014), *Telefónica SA and Telefónica de España SAU v European Commission*, Judgment of the Court, Case 295/12 P, 10 July.

⁶ Business and physical separation is discussed in section 3.

⁷ Department for Environment, Food and Rural Affairs (2014), 'Retail exits consultation document', December, p. 12.

Box 2.2 Retail strategy



Defra recognises that an undertaker cannot compete in the national market under its own licence of appointment; instead, it must establish a separate legal entity with a retail licence—an 'associate licensee'. Hence, the decision about whether to exit from the non-household retail market is intertwined with the company's choice of retail strategy. For example, a retailer that wants to compete nationally may want to 'exit' to an associate licensee and consolidate its non-household retail functions outside the regulatory ring-fence.

Source: Adapted from Figure 1 in Department for Environment, Food and Rural Affairs (2014), 'Retail exits consultation document', December, p. 12.

The Market Architecture Plan 2 (MAP2) set out three possible high-level organisational strategies for responding to the risks and opportunities of the new non-household retail market (although it is recognised that other such strategies are available to incumbent companies, e.g. joint ventures). The latter two organisational strategies involve an incumbent company 'exiting' from the non-household retail market.⁸

- 1. To remain legally integrated.
- 2. To consolidate its non-household retail activities into a single, legally separate, licensed retail business outside the current appointment (i.e. legal separation).
- 3. To sell non-household retail activities to a third-party licensed retailer.

Hence, through the Defra exit regulations, which allow for legal separation, the level playing field is closely intertwined with the company's choice of how to organise itself for the retail market. Beyond these organisational arrangements, companies have a choice of how to operate within the retail market.

8

⁸ Open Water (2014), 'Market Architecture Plan 2', December, p. 37.

2.4 Three elements to the level playing field

This report covers three aspects of the level playing field—specifically:

- the treatment of new entrant and incumbent retailers (section 3);
- independent decision-making and governance (section 4);
- financing of non-household retail business activities (section 5).

Each section sets out practical questions that incumbent companies may wish to consider as they prepare for the opening-up of the retail market in England. Since the issues will depend on how a company chooses to organise itself for the new retail market, this report presents key issues against each of the main organisational strategies noted above.

In addition, Oxera and Open Water are aware that Ofwat has commented on the importance of its ex post enforcement of a level playing field. This may make it all the more important that companies consider carefully the issues discussed in this document on company readiness.

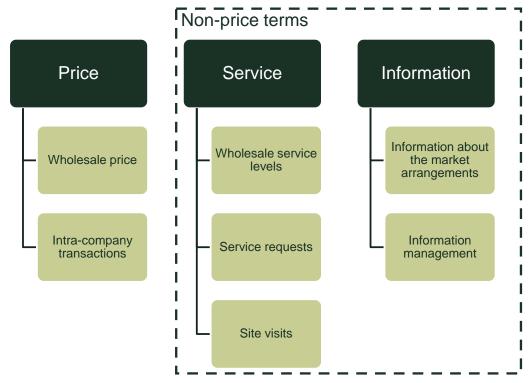
3 Level playing field in the treatment of retailers

The concept of the level playing field is expected to cover wholesalers' potential transactions and interactions with retailers, and includes (but is not limited to):

- · the price for wholesale services;
- the range of wholesale services provided;
- access to information.

Figure 3.1 sets out the broad areas covered under each of these categories.

Figure 3.1 Equivalence in the non-household retail market



Source: Oxera.

In practice, there may be several issues in each area that may pose a challenge to the level playing field once the competitive market opens in April 2017. For each of the areas identified, the remainder of this section summarises:

- why is this important and what are the issues?
- what are the possible consequences for incumbent companies?
- what are the relevant aspects or questions that incumbent companies would need to consider?
- what would these aspects or questions mean in practice?
- what is the economic and policy rationale that underpins these issues?

Several of these issues have arisen in other sectors, where the concept of equivalence of treatment applies (e.g. telecoms). Equivalence involves the wholesaler providing access on an equal or similar basis to all new entrants, including the incumbent's own retail arm.

This section focuses on practical measures to achieve the level playing field rather than the different forms of separation per se. ⁹ While separation may help to create the environment for a level playing field, it may not always address all areas where undue discrimination may arise. ^{10, 11}

Nevertheless, the ability to engage in undue discrimination in these areas may depend to an extent on a company's choice of organisational strategy for the non-household retail market. Hence, this section covers the questions for consideration against the three main organisational strategies set out in section 2, namely:

- to remain legally integrated;
- to consolidate its non-household retail activities into a single, legally separate, licensed retail business outside the current appointment (i.e. legal separation);
- to sell non-household retail activities to a third-party licensed retailer.

3.1 Wholesale price

3.1.1 Why is this important and what are the issues?

The level playing field could be compromised by a wholesaler charging different prices for what is essentially the same product or service. This may be overcome by using some form of price regulation. That is, where the regulator sets or approves the wholesale price, which is made available to all downstream market participants (e.g. through a published charges scheme).

While price regulation may help to overcome possible concerns in this area, there may be departures from wholesale charges, including through:

- any potential incentives that grant non-household customers a discount on wholesale charges if they can reduce the costs borne by the wholesaler (e.g. through changing their consumption behaviour);¹²
- potentially providing more tailored wholesale services (i.e. as an additional service).

Possible issues for such agreements include:

how does the incumbent demonstrate that those departures are consistent
with the level playing field? For example, that they would not be used simply
to provide a retailer with an advantage in the competitive market (e.g. through
reducing the wholesale price and increasing the gross margin (retail –
wholesale price).

Similarly, several companies already have legacy agreements with non-household customers that fall outside their standard charges. The 'special agreements' are between the current vertically integrated incumbents and non-

⁹ See Cave, M. (2006), 'Six degrees of separation: operational separation as a remedy in European Telecommunications Regulation', *Communications & Strategies*, **64**, 4th Quarter, December.

¹⁰ In this context undue discrimination would include a situation where a wholesaler offers different conditions to its retailers, not on the basis of cost but in order to acquire a competitive advantage in the market. Such behaviour could be harmful to competition.

¹¹ However, this is not necessarily the case for stronger forms of separation. Especially as ownership separation (the strongest form of separation) is introduced as the remedy of last resort to remove the ability and incentive to discriminate.

¹² This is made possible through the Water Act 2014. Similar opportunities may exist in the non-household retail market, through Section 29e of the Water Services etc. Scotland Act 2005.

household customers, so there may be possible issues as regards how those agreements are moved to the non-household retail market, including:

- are wholesale charges available for those legacy special agreements?
 and, if so:
- does the gross margin allow an 'efficient' retailer to cover the costs associated with providing retail services to that customer?¹³

The Water Act 2014 introduced a new requirement for companies to notify Ofwat each time they make a new special agreement. These agreements must be published by Ofwat in its register. There are also provisions in the Act that will allow customers with a special agreement to take these with them if they switch to an alternative supplier or if they are transferred as part of a retail exit.

In the competitive market a retailer will be able to apply for reduced wholesale charges where someone does something to reduce pressure on the network.

Ofwat's approach to special agreements are expected to be discussed in Ofwat's forthcoming policy and licensing consultation.

3.1.2 What are the possible consequences for companies?

As regards departures from wholesale charges (including legacy agreements), there may be a question around whether the gross margin allows an 'efficient' retailer to cover the costs associated with providing retail services to that customer. Otherwise, the consequence may be that the wholesaler risks being inconsistent with Ofwat's charging rules or wider competition law through reducing the margins available to new entrants so that they cannot serve a customer in a profitable way—what is known as a 'margin squeeze'. 14

3.1.3 What are the relevant considerations for companies?

In addition to the competition law aspects discussed above, other considerations include the following:

 subject to any charging rules produced by Ofwat, are opportunities for departures from wholesale charges available to all retailers, consistent with the concept of the level playing field?

In addition, as regards legacy agreements:

• are separate wholesale charges made available to all retailers, consistent with the concept of the level playing field?

Indeed, such considerations may help incumbent companies to demonstrate that there is a level playing field in this area. Figure 3.2 summarises some of the key relevant questions.

¹³ For example, an entrant that is as efficient as the dominant firm. This is discussed further in section 3.2.5 in the context of ex post competition tests.

¹⁴ Margin squeeze is a practice whereby the wholesaler does not leave enough margin to some retailers. By choosing to set a high wholesale charge, and a low retail price, the wholesaler may create a situation in which the retailers may not serve the market in a profitable way.

Figure 3.2 Summary of key questions



- are there departures from the published wholesale charges schemes?
- why is a departure merited?
- would all retailers be offered that departure/service if applicable?
- how are departures documented?
- how are applications for departures dealt with?
- how are wholesale charges set for special agreements?
- are these wholesale charges available to all retailers?
- are discounts related to the special agreement allocated to the wholesale or retail service?
- and would they allow an 'efficient' new entrant to provide those services?

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

3.1.4 What would these aspects or questions mean in practice?

It is possible to draw on the lessons from other sectors about how these aspects have been addressed in practice. Typically, these aspects are managed by ensuring that there is transparency in relation to departures from the published wholesale charges (i.e. the charges that the retailers pay for wholesale services).

In Scotland, the wholesale services agreement (WSA) has an important role in this regard. It specifies the charges that retailers must pay by reference to the wholesale charges scheme. Moreover, it sets out the wholesale services to be provided, as well as the terms attached to those services. The WSA also contains provisions for departures from published wholesale charges under incentive mechanisms, i.e. Section 29E. ¹⁵ These documents allow for departures to be documented transparently and then monitored by the economic regulator, for example if concerns arise.

A similar concept exists in telecoms, although it does not serve exactly the same purpose. Here, BT is required to have service-level agreements in place with each downstream retailer, which specify the quality of service requirements for each retailer and the key performance indicators (KPIs) in place to monitor the delivery of that level of service. ¹⁶ The Water Act 2014 requires details of negotiated departures to be published by Ofwat, but a company could consider doing more by making available (e.g. publishing) the tariff structures that have been negotiated with retailers.

3.1.5 What economic and policy rationale underpins these issues?

The economic and policy rationale in this area relates to the scope for potential undue discrimination through the wholesale price. Price discrimination may consist of the upstream monopolist supplying a wholesale input (e.g. a

¹⁵ Shepherd and Wedderburn (2012), 'The template wholesale services agreement', June.

¹⁶ European Commission (2013), 'Draft Commission Recommendation on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment', 26 June. See also the template Service Level Agreement schedule, available at: https://www2.bt.com/static/i/media/pdf/service_level_agreement_version2_10feb05.pdf.

wholesale water service) at a lower price to its own retail arm than to competing retailers, potentially allowing itself a higher gross margin (i.e. retail price – wholesale price). Such behaviour may squeeze the margins available to new entrants, which may amount to what is known as a margin squeeze.¹⁷

Examples of margin squeeze cases include Deutsche Telekom and Telefónica, with both organisations found to have abused their dominant position in their respective wholesale markets by engaging in a margin squeeze.¹⁸

3.2 Intra-company transactions

3.2.1 Why is this important and what are the issues?

As recognised in the MAP, there may be several areas where the incumbent retailer shares costs and services with the wholesaler or an associate company, including in relation to:

- corporate services/overheads
 - premises
 - HR/legal
 - accounting
 - treasury
 - board functions
- operational services
 - billing systems
 - IT services
 - metering contract
 - connections contract

The decision about how the incumbent retailer procures these services may be driven by practical, strategic or commercial considerations. There may also be a time dimension, as a retailer may decide to move premises or procure a new IT contract on the expiry of an existing lease. In principle, an economic regulator should not become concerned about such operational decisions. However, an exception to this could be if such agreements (e.g. agreements between the wholesaler and the incumbent retailer) cross-subsidise the costs of the incumbent retailer such that the incumbent retailer is put at an unfair advantage in the non-household retail market (e.g. through having a transfer price, which is below market rates for those services).

A company's choice of organisational structure may have important implications for the extent to which a regulator may have concerns in this area. For example, a company choosing to remain legally integrated may face additional challenges, demonstrating that its non-household retail arm does not gain an unfair advantage through contracts for shared services.

3.2.2 What are the possible consequences for companies?

Ultimately, the consequences in this area relate to non-compliance with sectorspecific rules (e.g. licence conditions, as in the case of water) or competition law.

¹⁷ A key consideration is whether the wholesale price is regulated (as a form of access regulation), or is subject to bilateral negotiation and agreement, with the incumbent wholesaler able to agree the terms of access with each retailer. The presence of access regulation may limit the ability of the upstream incumbent to engage in price discrimination. However, access regulation does not necessarily remove the incumbent's ability to engage in a margin squeeze (as a margin squeeze may also arise from reducing the retail price).
¹⁸ Deutsche Telekom AG v Commission of the European Communities, Case T-271/03, Judgment of April 10th 2008, and Wanadoo España v. Telefónica, COMP/38.784, Commission Decision of July 4th 2007.

As regards non-compliance with sector-specific rules, this could, for example, relate to the non-household retail business activities receiving a cross-subsidy through the transfer price for shared services (e.g. for services shared with the wholesale business activities), providing a competitive advantage in the retail market. Sector-specific rules may prohibit such behaviour. For example, Ofwat has set an expectation that the transfer prices for shared services between wholesale and retail business activities will be consistent with the prices charged to external third parties.¹⁹

While Ofwat has set rules regarding 'market testing' requirements, the application of competition law is to an extent less clear. A relevant issue is whether the transfer price for the shared services could amount to an abuse of dominance through the incumbent wholesaler providing services to its own retailer at a price below the 'market rate'. This may relate to a margin squeeze, but ultimately depends on the issue of whose costs the regulator or competition authority considers in the margin squeeze assessment (as discussed below), as well as the level of other retail costs.

3.2.3 What are the relevant aspects for companies to consider?

Relevant aspects for companies to consider include whether shared services are provided through an agreement, and are subject to market testing, and whether intra-company or group transactions are consistent with sector-specific rules? Indeed, such considerations may help incumbent companies to demonstrate that there is a level playing field in this area.

Figure 3.3 below summarises some of the key questions in this area against the three main organisational strategies discussed above.

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¹⁹ Ofwat (2015), 'RAG2.05 – guideline for classification of costs across the price controls', February, p. 4.

Figure 3.3 Summary of key questions

Questions for companies remaining legally integrated or exiting to an associate licensee

- does the non-household retail 'business' share costs and services with other parts of the business (e.g. IT, corporate, legal)?
 - e.g. the wholesale and household retail business activities?
- if so, are those services:
- provided through an arm's-length agreement?
- subject to market testing?
- measured against key performance indicators (KPIs)?
- would the incumbent company be prepared to offer those services to a third party, as it would its own retail arm?
- are intra-company/group transactions consistent with sector-specific rules, including the discrete and binding revenue controls and regulatory accounting guidelines?

Questions for companies exiting to a third-party licensee

- are there shared costs and services between the incumbent and the third party?
- e if co
- are these services provided through an arm's-length agreement?

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

3.2.4 What would these aspects or questions mean in practice?

In other sectors, these aspects are managed through market testing the contract (as stipulated by Ofwat). As an additional measure, some regulators have recommended or mandated the use of service-level agreements when shared costs and services exist between the regulated and contestable business activities. This can be seen in energy supply, following the separation of the 'natural monopoly' distribution and the 'customer-facing' retail business activities (e.g. in relation to premises).²⁰

Another example is Scottish Water, where service-level agreements are used for the costs and services shared with its legally separate retail arm, Business Stream (as summarised in Box 3.1).

Box 3.1 Scottish Water compliance statement

Scottish Water is required to prepare a compliance statement for approval by the Water Industry Commission for Scotland (WICS). The statement is the responsibility of a Compliance Officer at Scottish Water and sets out the arrangements for intra-company transactions. An extract is provided below:

Business Stream has full responsibility for carrying out the activities required by its licences. Where Scottish Water or Business Stream acts as a contract to the other, this relationship is governed by a service agreement, agreed by the Commission. Depending on the nature of the agreement there may be discussions between the parties relating to day-to-day operation of agreements, related to the review of the service provided or related to the termination or extension of the agreement.

In 2014/15, Scottish Water provided several services to Business Stream, including internal audit, insurance and a licensing agreement covering the use of Scottish Water's trademarks.

²⁰ Ofgem (2000), 'Separation of PES Businesses—Progress Report', November, p. 12.

The compliance statement is required under the Water Services (Intra-Group Regulation) Directions 2006. Compliance and the role of the compliance statement are discussed in the following subsections (i.e. as regards wholesale service levels and information management).

Source: Open Water (2014), 'Workshop 2: Discussion paper. What are the issues that arise in demonstrating an arm's length relationship between the wholesale and retail business activities?'

Compliance and the role of the compliance statement are covered in relation to wholesale service levels and information management.

3.2.5 What economic and policy rationale underpins these issues?

The consideration of sector-specific rules (as discussed above) and the interpretation of competition law are relevant in this area. Ultimately, the sector-specific rules cover two aspects:

- discrete and binding revenue controls for the wholesale and retail business activities. Those price controls are derived from cost allocation rules, which appear to use fully distributed costs (FDCs) as the relevant cost standard.^{21, 22} There is also an expectation that there will be no cross-subsidy across those price controls (Box 3.2);
- principles for 'market testing'. Ofwat has set an expectation that the transfer prices for shared services between wholesale and retail business activities will be consistent with the prices charged to external third parties (Box 3.2).

Box 3.2 Extract from Ofwat's cost allocation principles

Non-discrimination

Companies should ensure that no undue preference or discrimination is shown by water undertakers and sewerage undertakers in relation to the provision of services by themselves or other service providers (this is consistent with the new duty in section 2 of the Water Industry Act 1991 that has been (or, in relation to Welsh water companies, will be) inserted by section 23 of the Water Act 2014). Therefore the attribution or allocation of costs and revenues should not favour any business unit or service within the regulated company and it should be possible to demonstrate that internal transfer charges are consistent with the prices charged to external third parties.

No cross-subsidy between price controls

Following the introduction of separate binding price controls at the 2014 price review, companies cannot transfer costs between the price control units in setting prices and preparing regulatory accounting statements. The revenue allowance for each price control is determined by the costs specific to that particular price control. Therefore companies should also ensure that there is no cross-subsidy between price control units. In accordance with RAG 5, transfer prices for transactions between price control units should be based on market price unless no market exists, in which case transfer prices should be based on cost.

Source: Ofwat (2015), 'RAG2.05 – guideline for classification of costs across the price controls', February, p. 4.

As regards competition law, a relevant issue would be whether the transfer price for the shared services could amount to an abuse of dominance through the incumbent wholesaler providing services to its own retailer at a price below the 'market rate'. This may relate to a margin squeeze, but ultimately depends on the issue of whose costs should be used in the margin squeeze assessment:

²¹ FDCs are the costs associated with one particular segment in a situation when all costs are allocated across the company's business areas. These include the direct costs and an allocated portion of the indirect costs. Indirect costs are allocated according to the principle of cost causality, which requires that costs (and revenues) are attributed or allocated to those activities and services that cause the cost (or revenue) to be incurred.

²² Ofwat (2015), 'RAG2.05 – guideline for classification of costs across the price controls', February, p. 7.

- use the costs of the dominant company's downstream business—the 'equally efficient operator test' (EEO);
- 2. use the costs of a hypothetical reasonably efficient competitor—the 'hypothetical reasonably efficient operator test' (REO).

The first test is the standard test for margin squeeze in competition law.²³ The second has been used in markets that are in the process of liberalisation, including telecoms, and has been used mainly in the context of ex ante regulation. The use of this 'REO' test may promote the entry of operators that are 'not yet' efficient. From a consumer welfare perspective, a justification for using this test is that the entrants' cost may deliver longer-term gains. Using the higher cost base of the entrant initially leads to a short-term inefficiency and potentially higher prices, as it protects the less efficient player. However, as the entrants establish themselves in the market, efficiency would be expected to increase as downstream competition delivers more cost-reflective prices.

An example in this area relates to Ofcom examining BT's pricing of its line rental product, BT Together. Ofcom applied several cost tests to assess the margin squeeze allegation, including the REO test. While Ofcom did not use the REO test to reach its final assessment, it did modify its imputation test to exclude structural advantages derived from BT's inherited customer base. Ofcom's ruling suggests that where a dominant company's unit cost is lower than that of its rivals due to scale or scope economies, and it has formally held a monopoly position, it may be reasonable to adjust its cost base for features of market structure that are not due to 'competition on the merits'.

However, there is still debate on the relevance of the tests. In previous European cases (*Deutsche Telekom* and *Telefónica*), the competition authority has typically applied the 'EEO' test, which uses the company's own retail costs. This is on the basis that it may be more reasonable to assume that incumbents should price on the basis of their own costs, as the costs of the new entrant are likely to be unknown. However, this may not be true for shared services, which can be subject to some form of market testing. This may be an issue to which companies may want to pay particular attention.

3.3 Payment terms and arrangements

3.3.1 Why is this important and what are the issues?

Oxera understands that several aspects of payment terms remain subject to ongoing discussions among Defra, Ofwat and Open Water. Therefore, this subsection provides some high-level considerations as an initial draft to help with those discussions. It would need to be updated once there is resolution of these issues more generally.

Payment terms may affect the level of risk facing the wholesaler;²⁶ specifically, the risk of non-payment from a retailer defaulting or exiting from the retail market without paying the amounts due. This means that there is an important market design issue of what would be a reasonable balance of risk between the

²³ For example, it was used in the *Deutsche Telekom* and *Telefónica* cases, as discussed above.

²⁴ Ofcom (2004), 'Investigation against BT about potential anti-competitive exclusionary behaviour', Decision of the Office of Communications, case CW/00760/03/04, July.

²⁵ See Niels, G., Jenkins, H., and Kavanagh, J. (2011), *Economics for competition lawyers*, Oxford University Press, pp. 244–45.

²⁶ Payment terms relate to the terms and conditions attached to the payment of wholesale charges. In particular, they set out the arrangements for how and when the retailer will pay the wholesaler for the wholesale services provided.

wholesaler, the retailer and customers—i.e. the extent to which the wholesaler is insulated from default risk.

There are several other important market design issues to consider as regards payment terms, including to what extent:

- is there scope for the wholesaler to apply more indirect forms of price discrimination through the payment terms attached to wholesale services?²⁷
- do payment terms impose transaction costs on new entrants (e.g. through having prolonged negotiations)?²⁸ Does this represent a barrier to entry?
- do the credit arrangements increase costs for more efficient market participants and create a source of inefficiency in the non-household retail market?²⁹
- does applying the same credit requirements reduce the attractiveness of entry for some retailers (e.g. small retailers or new entrants), if those retailers have to fund, for example, 75 days' worth of wholesale charges? Does this represent a barrier to entry?

The choice of organisational structure may also have important implications in this area. For example, there may be issues around how an incumbent company that chooses to remain legally integrated implements the standard payment terms between its non-household retail and wholesale business activities.

3.3.2 What are the possible consequences for companies?

The possible consequences will depend on the resolution of the issues above.

3.3.3 What are the relevant aspects for companies to consider?

Figure 3.4 summarises some of the key questions in this area.

Figure 3.4 Summary of key questions

Questions for all companies

- what payment and credit terms are available to retailers?
- how would you show that payment and credit terms are consistent with the assessment of the retailers' credit standing?
- are equivalent payment and credit terms available to retailers of a similar credit standing? How does the wholesaler ensure this?
- if a letter of credit is provided from the wholesaler as guarantor, what are the terms associated with that letter of credit? Is that letter of credit remunerated?
- if prepayment is required by the wholesaler, what are the terms associated with prepayment?

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

²⁷ For example, through a wholesaler imposing different payment terms on retailers with a similar credit standing. If a new entrant is offered more onerous credit arrangements than can reasonably be justified, this may serve to raise its costs and place it at a competitive disadvantage in the non-household retail market.
²⁸ Similar to the discussion above, prolonged and complex negotiations may serve to raise a retailer's costs, placing it at a competitive disadvantage in the retail market.

²⁹ For example, this may arise if the credit terms are set in line with the retailer with the worst level of creditworthiness—i.e. to protect the wholesaler from the credit risk associated with that retailer.

3.4 Wholesale service levels: service requests and site visits

3.4.1 Why is this important and what are the issues?

The retailer is not likely to receive a lower-quality product for a given service. For potable water, the water that flows from the tap is likely to be treated to the same standards, as the wholesaler has to meet mandatory drinking water standards. However, potentially a retailer could gain an advantage if it is offered additional or more tailored services that are not paid for through wholesale charges. This was covered in section 3.1 in the context of departures from the published wholesale charges scheme.

An issue that is likely to be most relevant relates to the levels of service the wholesaler provides to the retailer, which may have an impact on the service that a retailer provides to its own customers. This relates to two areas:

- service requests, including response to operational incidents;
- site visits.

As discussed in the MAP, wholesalers will receive service requests from retailers, including in relation to new connections, metering and general service issues (i.e. operational incidents).³⁰ Ultimately, there may be potential scope for the level playing field to be compromised in terms of how those service requests are logged and then dealt with—e.g. if the wholesaler prioritises the service requests received from its own retailer. In fact, similar concerns were raised in telecoms in relation to repair faults before the voluntary undertakings from BT in 2005.³¹

In addition, a wholesaler will have to make planned (e.g. water quality sampling) and unplanned site visits (e.g. in an emergency) to a customer's premises. Inevitably, site visits will involve interaction with the non-household customer. There may be scope for the level playing field to be compromised in relation to how the wholesaler arranges, communicates and completes those site visits.

It is understood that 'codes' (i.e. the statutory wholesale-retail code) will set out the procedures to be followed in relation to service requests and site visits, as well as the other rules underpinning the retail market. ³² This could help provide a common set of procedures that the wholesaler will apply to all retailers, thus reducing the scope for discrimination in this area. However, in practice, this may depend on:

- the underlying business systems and processes;
- compliance with the procedures.

In relation to a company's choice of organisational structure, these issues inevitably apply to the wholesale and retail business activities that remain legally integrated or under the same ownership structure. Although these issues may be most prevalent for those companies that choose to remain legally integrated.

³⁰ Open Water (2014), 'Market architecture plan', July, pp. 36–7.

³¹ Indeed, this was one of the areas (namely inferior processes and the lack of priority for wholesale customers' product development) where Ofcom received complaints from BT's wholesale customers; see Ofcom (2004), 'Strategic Review of Telecommunications Phase 2 consultation document, November, p. 15. ³² Indeed, MAP2 explains that this is consistent with the multi-lateral codes framework in Scotland, which consists of the operational and market code; see Open Water (2014), 'Market Architecture Plan 2', December, pp. 26–30.

3.4.2 What are the possible consequences for companies?

The consequences may relate to non-compliance with sector-specific market rules (i.e. the statutory wholesale-retail code), with competition law, or with any provisions introduced by Ofwat in licences under Section 23 of the Water Act 2014. Issues may arise if the wholesaler deals (or is seen to deal) with site visits or service requests more effectively for some retailers compared with others, which might compromise the level playing field in some cases.

3.4.3 What are the relevant aspects for companies to consider?

Relevant aspects for companies to consider include:

• are processes the same or similar for all retailers, as regards service requests, site visits and emergency procedures?

Indeed, such considerations may help incumbent companies to demonstrate that there is a level playing field in this area. Figure 3.5 summarises some of the key questions in this area.

Figure 3.5 Summary of key questions

Questions for all companies

- are processes equivalent for all retailers as regards service requests, site visits and emergency procedures?
- how will you ensure compliance with these processes?
- how are service requests logged and dealt with?
- how are site visits arranged and managed (e.g. water quality sampling)?
- how are relevant parties kept informed?
- how does the wholesaler intend to communicate with retailers and customers in the event of an emergency?

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

3.4.4 What would these aspects or questions mean in practice?

Experience from other sectors shows that these aspects can be managed through various initiatives, as follows (note that these are some illustrative examples, and not a comprehensive list).

- Having one service desk as a single point of contact for all retailers (e.g. Scottish Water's wholesale service desk). This means a single channel for communication between the wholesaler and each retailer, reducing the risk that one retailer's service requests will be prioritised.
- Having an internal system (e.g. a management information system) in place to deal with service requests from retailers. Management information systems can help ensure that service requests are dealt with in the order they are received (e.g. Scottish Water).
- Having a robust compliance regime in place. Scottish Water, BT and Royal
 Mail all have compliance teams or designated individuals responsible for
 compliance. Royal Mail has specific compliance units to monitor all aspects of
 compliance throughout the business. As regards network access, Royal Mail
 has a Compliance Director, who deals with all concerns about non-

compliance.³³ Similarly, in BT, this function is undertaken by the Equality of Access Board (EAB), as set out in Box 3.3 below. Similar arrangements apply in the context of Scottish Water, which has a designated Compliance Officer (see Box 3.4).

Box 3.3 Compliance: BT's Equality of Access Board

As part of the voluntary undertakings, BT also established a supervisory board, the EAB. It consists of five people, three independent members, in addition to a non-executive director and one BT senior manager. BT appoints the independent members following consultation with Ofcom. Chaired by the non-executive director of BT, EAB's main work tasks include the examination of BT's compliance with the conditions of the undertakings. Its scope of review covers:

- the content of the 'Code of Practice';
- complaints from employees in terms of observance of these requirements;
- BT's results performance against predefined targets;
- product roadmaps, volume forecasts and investments.

The EAB regularly reports to the BT Group plc board on BT's compliance with the conditions of the undertakings, and informs Ofcom of any non-trivial breach of these conditions. On an annual basis, the EAB submits a report on the results of the examination of BT's compliance with the conditions of the undertakings. To assist the EAB with analysis and reports, the Equality of Access Office (EAO) has been established.

Some examples of issues examined by the EAB are provided below.

- Assessing milestone delivery associated with the undertakings: an example of a
 milestone is whether customer records are in fully separate systems. The EAB also
 carries out annual checks on whether user access controls are in place for certain
 network systems which are not completely separate yet (e.g. due to complex network
 characteristics of the system).
- Investigating breaches of the undertakings: the EAB assesses any non-compliance with the undertakings and seeks to understand the impact that this might have on CPs and on BT's business. The EAB evaluates breaches reported to them by BT as well as those raised by CPs and through the formal complaints process. Following a breach notification, the EAB examines the breach, gives its view on the case and either endorses BT's view of its significance (non-trivial or trivial) or makes a finding of its own. An example of a breach is an instance in 2013/14 when Openreach had administered wayleaves (i.e. written agreements that allow Openreach to access a consumer's land so that BT apparatus can be installed, maintained or repaired) on behalf of BT Wholesale. It was found that this activity should have been offered as a service on an equivalent basis to other CPs. Openreach now provides this equivalently via an Office Services contract.
- Understanding industry concerns: the EAB keeps in regular contact with non-BT CPs and industry associations and hears views on a wide range of issues through both formal and informal channels. This includes formal complaints from CPs and informal feedback. In January 2014, the EAO sent out a survey to a range of CPs and industry associations to hear their views on the undertakings. The aim of the survey was to gain a snapshot of CPs' perceptions of the undertakings some eight years after they were agreed and to supplement the EAO's existing industry engagement.
- Risk-based approach to ongoing compliance: the EAB takes a risk-based approach to compliance, based on findings from its monitoring activities and feedback from stakeholders including CPs, Ofcom and BT. For example, in 2012/13 it identified some risks in terms of BT's compliance with the undertakings, which were used to shape its work during 2013/14. A key area of concern is inappropriate information sharing, especially with the creation of BT Technology Services and Operations (BT TSO). BT TSO supports all lines of business including Openreach, and is considered to be a risk area.

Source: Ofcom (2014), 'Consolidated version of the Undertakings given to Ofcom by BT pursuant to the Enterprise Act 2002', 19 June.

³³ Royal Mail (2014), 'Investigating Allegations of Non-compliance', May.

Box 3.4 Scottish Water Compliance Statement: arrangements that require monitoring by the Compliance Officer

The Scottish Water Compliance Statement sets out several areas that require monitoring by Scottish Water's Compliance Officer. These are described below, with only the salient points highlighted.

- **Confidential information**—Scottish Water has established managerial and operational systems to prevent any licensed provider from accessing confidential information, with a few exceptions (e.g. WICS' consent has been granted to a licensed provider to access the information in any particular circumstance).
- Information provided to licensed providers—this relates to two areas: market data in
 relation to premises; and communications directly to licensed providers. In relation to
 communications directly to licensed providers, Scottish Water also exchanges information
 with licensed providers in relation to requests for services from Scottish Water. In this
 regard, all licensed providers are treated in exactly the same manner.
- Independent managerial functions—this relates to independence from Business
 Stream, information in relation to Business Stream and independence from other licensed
 providers. Business Stream is responsible for its own activities, with its own senior
 management team appointed by its Chief Executive and Board. Scottish Water and
 Business Stream have been directed by WICS to comply with a Governance Code, which
 ensures that, for example, Business Stream can take all strategic and operational
 decisions independently of Scottish Water and its other subsidiaries.
- **Independent operational functions**—with regard to independence from Business Stream, all Business Stream staff report to Business Stream management.
- Ensure secure use or access to Scottish Water resources—no Scottish Water premises are used by any licensed provider. In relation to ring-fencing between Scottish Water and Business Stream systems, Scottish Water's data systems are now separate from Business Stream. All Business Stream systems are now hosted on IT infrastructure that is separate from that of Scottish Water and are therefore physically separate from Scottish Water's systems. Finally, if staff were to move from Business Stream to Scottish Water, Scottish Water would apply a quarantine period in the case of sensitive areas (e.g. the Wholesale Service Team or the Wholesale Service Desk) before such individuals could take up their new roles.

Source: Open Water (2014), 'Workshop 2: Discussion paper. What are the issues that arise in demonstrating an arm's length relationship between the wholesale and retail business activities?'

Moreover, BT, Royal Mail and Scottish Water have all undertaken a
programme of compliance training across the wholesale business (or the
division providing access) in relation to compliance. This training extends to
engineers or sub-contractors, who will have contact with customers when
dealing with retailers' service requests or operational calls. This may also be
an initiative that companies would find helpful to consider.

3.5 Information management

3.5.1 Why is this important and what are the issues?

A retailer could gain an advantage in the non-household retail market if it has access to confidential information on wholesale services through its relationship or interactions with the wholesaler. This extends to information the wholesaler holds about other retailers (e.g. the creditworthiness of retailers).

Before BT proposed the voluntary undertakings, Ofcom set out the areas where there could be unfair treatment in respect of the interactions between BT's access division and its own commercial arm (as summarised in Box 3.5 below).

Box 3.5 BT: access to information and other non-price discriminatory practices

In its Strategic Review of Telecommunications (Phase 2) document, Ofcom noted that it had received evidence of unfair treatment of BT's wholesale customers in specific areas, including:

- preferential knowledge of product innovation. For example, through group activities
 such as those led by the Chief Broadband Officer, or through management or board
 meetings, BT's retail activities could access earlier information on major developments
 such as product feature changes, technical information and price changes than wholesale
 customers are able to access;
- influencing wholesale product and process investment priorities. BT's retail activities
 could be able to exert more influence than its other wholesale customers over product
 development and process changes. This is magnified by what wholesale customers often
 perceive as an ineffective consultation process during the planning and development of
 new products. BT's retail activities could be able to secure faster product development as
 a result;
- better quality processes. For example, in some months this year over 40 per cent of BT engineer WLR appointments have been missed;
- more retail competitor intelligence. BT's retail activities could become aware, via staff
 or systems common with its wholesale activities, of the activities of its retail competitors;
- cost allocation. BT has the incentive to load costs at the wholesale level away from a
 product where BT has a high retail market share, towards products where it has a low
 market share.

Source: Ofcom (2004), 'Strategic Review of Telecommunications: Phase 2 Consultation Document', 18 November, para 6.18.

Some of the areas described in Box 3.5 relate to access to information—i.e. the incumbent could gain an advantage with regard to information about products, as well as information about competitors. In the context of the water industry, there are potentially similar areas where an incumbent retailer could gain an advantage through its relationship with the wholesaler. Indeed, the MAP set out the other areas where an incumbent retailer could potentially gain an advantage, including through:³⁴

- · operational and asset information;
- customer information;
- price information (e.g. a retailer could gain an unfair advantage if it had access to information on pricing structures or price changes before others);
- competitor information (e.g. a retailer could gain an unfair advantage if it had intelligence on other retailers through its relationship with the wholesaler, such as information on retailer creditworthiness).

As regards a company's choice of retail strategy and organisational structure, these issues inevitably apply to the wholesale and retail business activities that remain legally integrated or under the same ownership structure. Although these issues may be most prevalent for those companies that remain legally integrated.

3.5.2 What are the possible consequences for companies?

The consequences in this area would relate to non-compliance with sector-specific rules concerning the level playing field and/or competition law.

³⁴ These issues were also identified in the MAP document; see Open Water (2014), 'Market architecture plan', July, p. 26.

Specifically, there is an issue as to whether a retailer has potential access to confidential information, and, if so, whether that information provides the retailer with an advantage in the non-household retail market to the detriment of broader consumer outcomes. Box 3.6 provides an example of a complaint made by Freeserve in this area.

Box 3.6 Complaint made by Freeserve

In 2002 Freeserve alleged that BT had orchestrated a campaign of anti-competitive behaviour The complaint covered the following areas.

- Cross-marketing activity between BT and BT Openworld (BTOW). Freeserve alleged
 that in relation to cross-marketing, BT broadband newspaper adverts were targeted at
 consumers and designed specifically to benefit its own ISP, BTOW. Freeserve also
 claimed that the hyperlink on the adverts for BT broadband gave an advantage to BTOW,
 as the website had a direct link to BTOW. Freeserve believed that BT used its corporate
 brand to cross-market BTOW and make BT synonymous with ADSL to the exclusion of
 other ISPs.
- Advance notification of wholesale price reductions. Freeserve alleged that the speed with which BTOW began marketing its reduced price broadband service meant that it must have had advance notice from BT of wholesale price cuts.
- Cross-subsidy. Freeserve presented Oftel (now Ofcom) with a hypothetical business
 case for BTOW, which claimed that BTOW was making a loss up to March 2003.
 Freeserve believed that this showed that BT was unfairly cross-subsidising BTOW.

In each of these three areas, Oftel did not find evidence of anti-competitive behaviour by BT. In relation to cross-marketing activity, Oftel noted that BT was entitled to trade on its brand awareness and use that to promote its Internet services. Many ISPs such as Freeserve were already undertaking substantial mass media campaigns for their narrowband products and had begun to do this for broadband.

In relation to wholesale price reduction, Oftel noted that BTOW had confirmed to Oftel that it decided its marketing budget for promoting its retail price reduction on 26 February (after the wholesale announcement earlier that day). Oftel also observed that Freeserve had announced price reductions for its broadband retail products on the same day as BT's wholesale price reductions and a day before BTOW's own announcement.

In relation to claims of cross-subsidy and margin squeeze, Oftel noted that several ISPs were undercutting BTOW's new monthly rental price (£29.99), which indicated that there was a sufficient retail margin to allow competition with BTOW. Furthermore, the business case that Freeserve presented only covered one year, 2002/03. Oftel noted that it was perfectly possible for a service to make a loss in the first year without the pricing being judged to be predatory in competition law terms, provided that the product shows a positive return in a reasonable period. BTOW's own business case, presented to Oftel, showed that payback would occur over a longer period than one year. Oftel accepted that BTOW's business case was not implausible in its margin squeeze investigations.

Source: Oftel (2002), 'Competition Bulletin', Issue 25.

More recently, concerns about access to information arose following the creation of another BT division (as set out in Box 3.7 below).

Box 3.7 Access to information in BT Technology, Service and Operations (BT TSO)

BT TSO was established in 2013 and involved the movement of people to and from other parts of BT, including Openreach. There is a risk that BT TSO, as a single unit servicing all the other lines of business, may inappropriately share information or overstep operational boundaries with Openreach. The EAO has conducted a review of this area and found that while information-sharing governance is in place, it will need to be continuously maintained and monitored. For example, there have been some breaches of the undertakings involving BT TSO, including those resulting from reorganisations. In 2013/14, the EAO concluded that the following two cases involving BT TSO were non-trivial breaches of the undertakings:

- Eighteen individuals who moved from BT TSO to BT Business inappropriately retained their BT TSO access to systems, which contained BT Wholesale customer confidential information (the EAO noted that access to the systems was withdrawn);
- an individual working in the part of BT TSO that supports BT Global Services, was given
 access to the broadband test tools. Non-BT CPs are not able to access these systems in
 the same way, so this was found to be a breach of BT Wholesale's obligation to provide
 broadband on an equivalent basis in Markets 1 and 2. (Access was withdrawn and the
 individual moved to using the test tools that are provided equivalently to all CPs.)

The EAB plans to undertake the following activities in order to minimise risks associated with compliance with the undertakings in BT TSO:

- complete detailed substantive testing of information-sharing controls;
- keep BT TSO/Openreach people moves under review;
- review processes for prioritising BT's developments in relation to requests from non-BT CPs.

Source: BT Group plc (2014), 'Annual Report 2014 of the Equality of Access Board', 22 May, pp. 5 and 11.

3.5.3 What are the relevant aspects for companies to consider?

Relevant aspects for companies to consider include:

- how is information shared with retailers (e.g. operational information)?
- where appropriate, is the same information available to all retailers, and how does this happen?

Indeed, such considerations may help incumbent companies to demonstrate that there is a level playing field in this area. Figure 3.6 summarises some of the key questions in this area against the three main organisational strategies discussed above.

Figure 3.6 Summary of key questions

Questions for all companies

- what procedures are in place for information management (e.g. to ensure confidentiality is maintained)?
- how is information shared with retailers (e.g. operational information)?
 - where appropriate, is the same information available to all retailers? How does this happen?
- how do you ensure the incumbent does not gain an advantage as regards wholesale pricing structures before retail market opening?
- are there procedures in place to monitor compliance and record breaches?

Questions for companies remaining legally integrated or exiting to an associate licensee

- is information on wholesale activities kept separate from information on retail activities? If so, how? For example, in relation to:
- · access to office areas/buildings
- access to IT systems
- managing staff interactions
- arrangements for staff with access to information on wholesale and retail business activities
- access to email and telephone systems

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

3.5.4 What would these aspects or questions mean in practice?

In other sectors (e.g. telecoms and post), these aspects have typically been managed through:

- restricting access to IT systems;
- physical business separation;
- restricting or ring-fencing information;
- establishing a compliance function.

Each area is discussed below.

IT systems

A level playing field as regards IT systems could be achieved, for example, through 'lighter-touch' approaches, including user access controls, through to complete physical separation of IT systems (see Figure 3.7).

Figure 3.7 IT separation

Lighter-touch approaches

User access controls

Data Physical separation

Source: Oxera.

Box 3.8 provides an overview of how a gradual approach to information separation has been adopted in telecoms, based on the areas covered above.

Box 3.8 IT separation in the case of BT

In 2009, Ofcom identified three different levels of separation that broadly described the level of separation between Openreach and the rest of BT.

- Level 1 (user access controls): Openreach and the rest of BT share the same applications and data, but there are user access controls in place that restrict the sort of information that users can access.
- Level 2 (application and data separation): Openreach and the rest of BT have separate
 applications and data. This requires the development of new applications or the
 modification of existing applications, and the migration of data to these separated
 applications.
- Level 3 (physical separation): this level of separation requires that the separated applications and data described in Level 2 run on physically separate hardware and operating systems.

Level 1 and Level 2 separation is referred to as 'logical' separation; Level 3 physical separation is the ultimate objective. However, Ofcom noted that having multiple levels allows some form of separation to be implemented at an early stage until the work to complete full physical separation is finished.

Initially, Ofcom required physical separation by June 2010, but then it noted that Level 3 separation would be 'driven more by pragmatic considerations, such as the timing of the delivery of new systems to support new products, and the replacement of old systems and hardware.' (para. 3.20) Ofcom noted that achieving separation was a complex task.

In relation to customer records, Ofcom proposed a set of new systems separation milestones.

- By June 2010, Level 2 separation to be achieved for 80% of customer service records.
- By December 2012, Level 2 separation to be achieved for 90% of customer service records.
- By June 2014, a certain proportion (to be advised by BT by the end of 2011) of customer service records to achieve Level 2 separation.

The deadline for full physical separation (Level 3) was not specified.

Source: Ofcom (2009), 'Re-prioritising BT's remaining Undertakings commitments on information systems separation', 11 September.

The discussion above concerns issues relating to information held electronically. However, there may be potentially scope for an incumbent retailer to gain an advantage from access to information through other means, including 'informal' conversations between employees (who may have once been colleagues) in the wholesale and retail division.

Physical business separation

Experience shows that the risks associated with these more 'informal' exchanges of information can be mitigated through physical business separation, which involves separation of the firm's business to various degrees. For example, this may involve separation of the labour force and of premises or office space, as set out in the table below from Cave (2006).

³⁵ Cave, M. (2006), 'Six degrees of separation: operational separation as a remedy in European Telecommunications Regulation', December.

Table 3.1 Areas covered under physical business separation

Premises	Staff can readily be physically separated in different offices and workplaces
Operational support systems (OSS)	These can be separated at a cost
Labour force	Separate units can have a different internal labour market—i.e. no movement between them, or they can be integrated
Brand	The organisations can bear the same or different means, or a compromise—e.g. 'x' a division of 'y' corporation
Management information systems	Their separation will increase trust in prohibitions on illegitimate information transfers across the boundary
Strategy	Strategy, especially strategic investment decisions, such as construction of a fibre to the node (FTTN) network, is likely to fall to the main board and not be 'separated'

Source: Cave, M. (2006), 'Six degrees of separation: operational separation as a remedy in European Telecommunications Regulation', *Communications & Strategies*, **64**, 4th Quarter, December.

Relevant examples where such forms of separation have been introduced include electricity and gas supply, telecoms and postal services.³⁶

Restricting or 'ring-fencing' access to information

In addition, when the wholesaler and retailer share common ownership, experience from other sectors shows that arrangements are often set up to define who can access information across both wholesale and retail divisions. For example, in the case of telecoms, certain BT employees (classified as 'Annex 2' employees, as their roles are identified in Annex 2 of the undertakings) span the separation boundary and can deal with information and employees from both Openreach and other BT divisions. The particular way in which they can span the boundary is set out in the relevant sections of the undertakings. Staff listed in Annex 2 may work in areas such as legal and regulatory, HR, finance and security.³⁷

Likewise, the Scottish Water governance code lists the employees who can access confidential information and the categories of information they can access. These employees include the treasury manager, who can secure and approve financial transactions and can deal with any insurance issues. There are also conditions in place to ensure that these individuals receive specific training in relation to information management.³⁸

Section 4.3 covers some these issues from the perspective of governance—i.e. managing confidentiality at the group or company board level.

As shown in Table 3.1, other measures may also play an important role here. For example, the wholesaler having a single and central point of contact for all retailers, as discussed in the context of service levels in section 3.4.

Compliance

Finally, compliance can be important in terms of how to investigate breaches relating to access to information. As covered in section 3.4, the EAB performs

³⁶ See Ofgem (2000), 'Separation of PES businesses: progress report', November.

³⁷ See BT (2013), 'It matters – BT Undertakings code of practice', December; Ofcom (2014), 'Consolidated version of the Undertakings given to Ofcom by BT pursuant to the Enterprise Act 2002', 19 June.

³⁸ Open Water (2014), 'Workshop 2: discussion paper. What are the issues that arise in demonstrating an arm's length relationship between the wholesale and retail business activities?', Appendix 3.

this role for Openreach, while the Compliance Officer performs this role for Scottish Water.

3.6 Information about the market arrangements

3.6.1 Why is this important and what are the issues?

Without examining this factor in too much detail, this is important in relation to employees in the wholesale business treating the downstream retailers in an equivalent way when communicating information about the retail market. The relevant consideration here is whether the wholesaler may potentially provide information that could influence a customer's perception (positively or negatively) of a retailer. An obvious (particularly problematic) example is a wholesaler recommending a particular retailer to a non-household customer, which would disadvantage the other retailers in the downstream market.

The issue relates to how the wholesaler communicates with non-household customers whenever there are interactions with the end-customer—for example, if the wholesaler receives a call by accident or if the operational or capital investment teams come into contact with customers. This applies not only to the wholesaler's employees, but also to sub-contractors acting on behalf of the wholesaler (e.g. for capital investment planning). These issues inevitably apply to all companies, irrespective of the choice of retail strategy and organisational structure. However, the issues may be most prevalent for companies that choose to remain legally integrated.

3.6.2 What are the possible consequences for companies?

The consequences are that a wholesaler may potentially provide a retailer with an advantage in this area, which may be inconsistent with sector-specific rules as regards the level playing field. In addition, having a lack of clarity around the market arrangements may also increase the likelihood of non-compliance with competition law in other areas (e.g. the wholesaler sharing confidential information with retailers).

3.6.3 What are the relevant aspects for companies to consider?

Relevant aspects for companies to consider include the following:

- are employees across the business aware of the new market arrangements?
- do employees in the wholesale division have a clear understanding about what they can and cannot say about the new market arrangements?
 - are they clear and factual when communicating with or about retailers?

Indeed, such considerations may assist incumbent companies to demonstrate that there is a level playing field in this area. Figure 3.8 summarises some of the key questions in this area.

Figure 3.8 Summary of key questions

Questions for all companies

- are employees across the business aware of the new market arrangements?
 - have they been given training about the implications of the new retail market arrangements?
 - who do the employees in the wholesale business activities consider to be their customers?
- do employees in the wholesale division have a clear understanding about what they can and cannot say about the new market arrangements?
- what about sub-contractors?
- are there procedures in place to identify when something goes wrong?
- e.g. what action would be taken, if any?

Questions for companies remaining legally integrated or exiting to an associate licensee

- do employees across the business have clear job descriptions?
- do employees across the legally integrated business (i.e. wholesale and retail) have a clear and separate identity?
- what access do employees have to data from another 'business' (retail or wholesale)?

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

3.6.4 What would these aspects or questions mean in practice?

Experience from other sectors typically shows that these aspects can be managed through a combination of measures, including compliance training and a code of practice for all staff (e.g. outlining what they can and cannot say, as set out in Box 3.9).

Box 3.9 Equivalence as it applies to Openreach engineers

Engineers at Openreach may be required to visit the homes and businesses of Communication Providers' end-customers (e.g. to carry out service repairs, installations and maintenance). Openreach has noted that it provides its engineers with regular training and materials to ensure that they remain neutral. Importantly, Openreach engineers are told 'not to enter into any discussions about pricing with the end user'.

Openreach has published a number of 'Do's and Don'ts' for its engineers, as shown below:

DO

- use the Openreach and CP name when you introduce yourself to an end user
- check the 'Additional Customer Details" screen on your laptop before you visit the end user to look for reseller IDs or other important notes that have been added by the CP
- act professionally and impartially when representing a CP
- ask the end user to contact their CP if they want to know the charge for a service
- · keep job notes clear and factual

DON'T

- recommend the products and services of any CP
- make negative or derogatory comments about any CP
- get involved in pricing discussions with end users
- give end users the Openreach website for pricing information. These prices are the wholesale prices that we charge CPs, not end users

Source: See Openreach website, 'What we tell our engineers', available at: https://www.openreach.co.uk/orpg/home/aboutus/equivalence/whatwetellourengineers/whatwetellourengineers.do.

3.7 Timeline

Figure 3.9 provides an indicative timeline for when these questions could be asked, taking into account the milestones in the overall timeline for retail market opening. ³⁹ As discussed above, these questions are intended to provide a framework for companies to consider—i.e. they should be interpreted as issues for consideration rather than an exhaustive or definitive list.

The timeline takes into account three critical phases:

- May 2015 to September 2016: the period leading up to the 'go active' date, when the central settlement systems are activated;
- October 2016 to March 2017: the period leading up to the 'go-live' date, when the central settlement systems are operating in shadow form ahead of the opening of the non-household retail market;
- April 2017 onwards: the period after retail market opening or 'go live'.

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 $^{^{\}rm 39}$ Ofwat (2015), 'Integrated market opening plan', March.

Figure 3.9 Timeline

	May 2015 to September 2016	October 2016 to March 2017	April 2017 onwards	
Overall			is what measures are in place to e of the price and non-price terms ew entrant retailers?	
Wholesale charges	How are wholesale charges set for special agreements?		Are there departures from the published wholesale charges schemes? If so: • why is a departure merited? • would all retailers be offered that departure on equivalent terms? • how are departures documented?	
Payment terms	What payment terms are expected between the wholesaler and the incumbent retailer?		What payment and credit terms are available to retailers? • how would you show that payment and credit terms are consistent with the assessment of the retailers' credit standing? • are equivalent payment and credit terms available to retailers of a similar credit standing? How does the wholesaler ensure this?	
Shared costs and services	Will the non-household business activities share costs and services (e.g. IT, corporate, legal) with other business units/businesses? • wholesale and household retail If so, will: • those services be provided through an agreement with measured performance criteria? • the transfer price for those services be 'market-tested', consistent with RAG5?		Are the intra-company/group transactions consistent with sector-specific rules, including the binding revenue caps and regulatory accounting guidelines (RAGs)?	
Wholesale service levels	Will processes be equivalent for all retailers as regards service requests, site visits and emergency procedures? • how will you ensure compliance with these processes?		Are there procedures in place to monitor compliance and record breaches?	
Information management	advantage as regards wholesale pricing structures before retail market opening?		 will there be a compliance officer appointed and an internal audit function to monitor compliance? will a risk register be maintained? 	
Information about the market arrangements	arrangements?e.g. have they been given to the new arrangements?	siness aware of the new market raining about the implications of e wholesale business activities ers?		

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

4 The level playing field and retail decision-making

4.1 Retail decision-making and governance

According to the European Central Bank, governance can be defined as the set of:

procedures and processes according to which an organisation is directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among the different participants in the organisation – such as the board, managers, shareholders and other stakeholders – and lays down the rules and procedures for decision-making.⁴⁰

Governance covers several dimensions as to how an organisation operates. In its broadest sense, governance covers the relationship between firms within the same company group, or different divisions within the same firm. For instance, the links between the wholesale and retail divisions of the same firm fall under the scope of governance.

In a narrower sense, governance defines the procedures and processes according to which an organisation is directed and controlled, including the rules and procedures for decision-making.

4.2 Importance of governance and the level playing field

A level playing field at the downstream level may require the incumbent at the wholesale level not to influence the decisions of its downstream retail arm. This is why the MAP and the MAP2 identified governance as an important aspect in the context of securing the level playing field.⁴¹

In addition, wholesale and retail business activities may face slightly different incentives and objectives. For example, the wholesale business may face incentives to ensure that the distribution network is managed optimally (e.g. network optimisation) and water management at the individual-customer level, while the incentives of the retail business may focus more closely on the latter (as this may serve as an additional value-added service). The independence of retail decision-making may be important if the regulators are seeking to promote the objectives of the retailer in the context of the non-household retail market.⁴²

For companies that remain legally integrated, the independence of decision-making can be a challenge. The potential risks relate to the wholesale division influencing outcomes in the non-household retail market and vice versa, through:

- the management of confidential information;
- reporting flows;
- · design of incentives;
- creation of the identity of the retail business.

Hence, the choice of organisational structure has important implications in each area (e.g. companies that remain legally integrated may have to provide more evidence or a more thorough response to the questions to demonstrate that a

⁴¹ Open Water (2014), 'Market Architecture Plan 2: delivering an effective retail market for non-household customers'. December p. 7

⁴⁰ European Central Bank (2004), 'Annual report', p. 269.

customers', December, p. 7.

42 Indeed, this issue was discussed in WICS' written evidence in respect of the Water Bill. Public Bill Committee (2013), 'Written evidence submitted by the Water Industry Commission for Scotland', December, available at: http://www.publications.parliament.uk/pa/cm201314/cmpublic/water/memo/wb13.htm.

level playing field exists in this area). For each of the areas identified, the remainder of this section summarises:

- why is this important and what are the issues?
- what are the possible consequences for incumbent companies?
- what are the relevant aspects or questions that incumbent companies would need to consider?
- what would these aspects or questions mean in practice?

4.3 Information flows and confidential information

4.3.1 Why is this important and what are the issues?

The management of confidentiality in an integrated organisation may present a challenge to the independence of retail decision-making. If confidentiality between the wholesale and retail divisions is not maintained, information about the wholesaler upstream may provide the incumbent retailer with an advantage in the downstream retail market.

This may be the case at the board level, where strategic decisions are taken about wholesale and retail business activities (e.g. in relation to price promotions or other areas where confidential information is provided). (See also section 3.5.)

4.3.2 What are the possible consequences for companies?

The consequences are similar to those discussed in section 3.5, as regards possible challenges to the level playing field.

4.3.3 What are the relevant aspects for companies to consider?

Figure 4.1 summarises some of the key questions in this area, taking into account a company's choice of retail strategy and organisational structure.

Figure 4.1 Questions: information flows

Questions for companies remaining legally integrated or exiting to an associate licensee

- what are the flows of information across the business?
- what measures are in place to ensure that there are restrictions on access to confidential information?
- how is confidentiality of wholesale/retail activities maintained at the board level (e.g. information contained in board papers)?
- are there arrangements in place for management and staff that cover both wholesale and retail areas (e.g. corporate)? To maintain confidentiality, for example

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

4.3.4 What would these aspects or questions mean in practice?

This relates to the issues discussed in section 3.5, although the focus here is much narrower—i.e. restricting access to information that may have an impact on the independence of retail decision-making.

Experience from other sectors typically shows that these aspects can be managed through a combination of measures. In particular, there are two measures that impose restrictions on information flows aiming to manage confidentiality in the context of retail decision-making: the restriction of information on board papers, and the management of access to information. These two examples are discussed in turn.

Restriction of information on board papers

Ultimately, whatever the level of board interaction (whether at the company board or group board level), there may be scope for the management of the non-household retail division to gain access to information on the wholesale business activities (or vice versa). There may be measures that can be introduced to manage such potential risks, including having board members absenting themselves from board discussions, restricting access to information contained in board papers and clearly documenting interactions at board level.⁴³

Table 4.1 sets out elements of good and bad practice as regards board structure information flows and reporting, as set out by Ofgem in the context of the separation of public electricity suppliers (PES) businesses.

Table 4.1 Separation of distribution and supply in electricity

Positive indicators	Negative indicators
Board structure: separate reporting path for distribution and supply	Supply directors present when distribution business being discussed at board or executive levels
Financial control: distribution business including meter operations has separate financial control, subject to company law restraints	Group financial controller manages routine finance operations of distribution business
Board-level training in place	

Source: Ofgem (2000), 'Separation of PES businesses: progress report', November, p. 12.

As shown in the table above, Ofgem considered that having supply directors present when the distribution business was being discussed at the board or executive level was a 'negative indicator' as regards the extent of managerial separation.

Management of access to information

As discussed in section 3.5, BT and Scottish Water sought to manage access to confidential information by designating individuals with access to such information, and by seeking to manage this access transparently.

4.4 Reporting flows

4.4.1 Why is this important and what are the issues?

Reporting flows may determine the extent to which the retailer acts independently from wholesale business activities (or another associate business). For example, independence (and the level playing field) may be compromised if the managing director of the non-household retail arm is a direct report to the management of the wholesale business, or the managing directors

⁴³ Open Water (2014), 'Market Architecture Plan 2', December, p. 39. Although MAP2 noted that those measures may be hard to implement and difficult to explain to other market participants.

of both divisions sit at the same board. This may allow the wholesale business to set the objectives of the non-household retail arm.

4.4.2 What are the possible consequences for companies?

Informal and non-transparent reporting flows between the wholesale and its non-household retail arm may increase the perception that the incumbent retailer has some form of advantage over new entrants. This may increase the likelihood of a competition complaint from an entrant.

4.4.3 What are the relevant aspects for companies to consider?

Figure 4.2 summarises some of the key questions in this area, taking into account a company's choice of retail strategy and organisational structure.

Figure 4.2 Questions: reporting flows

Questions for companies remaining legally integrated or exiting to an associate licensee

- who reports to whom within the overall company structure? In particular, to whom does the management of the non-household retail business activities report?
- can you explain any reporting arrangements (including financial reporting) in place between the incumbent retailer and other integrated business activities/associate businesses?

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

4.4.4 What would these aspects or questions mean in practice?

Independent reporting structures can avoid such a scenario, helping to create a level playing field. Indeed, this relates to what Cave (2006) called 'governance separation', which goes beyond operational separation by creating a distinct divisional board, with non-executive directors independent of the group.⁴⁴

Experience from other sectors typically shows that these aspects are managed through a combination of measures. Openreach and Royal Mail have separate management and boards for their wholesale and retail business activities. In addition, the management of each business unit only meets at the overall group board or company board level.

Some examples of measures implemented by BT are described in Box 4.1.

⁴⁴ Cave, M. (2006), 'Six degrees of separation: operational separation as a remedy in European Telecommunications Regulation', *Communications & Strategies*, 64, 4th Quarter, December.

Box 4.1 Appointment of CEO for Openreach

The document outlining the undertakings given to Ofcom by BT (consolidated version of the undertakings dated 19 June 2014) provides the requirements in relation to the appointment of a CEO for AS (Access Services, i.e. Openreach). In particular:

- BT must appoint the AS CEO within one month of the date that the undertakings take effect;
- the AS CEO shall report solely and directly to the BT Group plc CEO;
- the AS CEO shall not be a member of the BT Group Operating Committee but may attend
 where matters pertaining to AS are discussed and where such attendance is appropriate.
 The Equality of Access Office shall be notified of such attendances;
- the AS management board shall manage AS in a way designed to secure compliance with those sections of these undertakings applicable to AS and shall operate to terms of reference agreed by the BT Group plc CEO following consultation with Ofcom. The terms of reference will be notified to Ofcom.

Source: Based on Ofcom (2014), 'Consolidated version of the Undertakings given to Ofcom by BT pursuant to the Enterprise Act 2002', 19 June, paras 5.24–5.27.

In Royal Mail, management separation was achieved through creating a distinct Royal Mail wholesale business, with a separate Managing Director (now the Consumer and Network Access division). The Managing Director of the Consumer and Network Access division reports directly to the Chief Executive of Royal Mail Group.⁴⁵

In addition, for retail market opening in Scotland, Business Stream established its own independent Board, as discussed in the extract in Box 4.2 below.

Box 4.2 Board separation: Business Stream

Business Stream and SW have put in place robust governance arrangements which satisfy the Commission's requirement including:

Establishment of the Business Stream Board

Business Stream operates with its own independent Board comprising a Chair, two Non-Executive Directors, a Managing Director and a Finance Director. The current Board has been in place since April 2007 and has exercised independent decision-making since its inception. There are no cross-directorships with SW, except for a common Chair.

Scottish Water Business Stream Holdings

To promote the independence of Business Stream, SW has established a holding company to take responsibility for SW's interest in Business Stream. The holding company, Scottish Water Business Stream Holdings Limited (SWBSH), has responsibility for:

- taking decisions that the SW Board would otherwise take in respect of Business Stream;
- providing financial backing for Business Stream as the sole shareholder and sole source of funding, receiving Business Stream dividends and insulating the remainder of SW's business from the financial fortunes of Business Stream.

SWBSH's board comprises the Non-Executive Directors of SW, the SW Chairman and the Managing Director of Business Stream. In recognition of SW's obligations around the use and probity of public funds, the Finance Director of SW is also on the board of SWBSH.

The relationship between Business Stream, SWBSH and SW is controlled by a Governance Code which is enforced by the Commission.

Note: SW, Scottish Water; the Commission, WICS.

Source: Business Stream (2008), 'Governance', January.

While the extract above is from before retail market opening, Business Stream continues to operate with its own independent board.⁴⁶

⁴⁵ See Royal Mail (2006), 'Royal Mail's Response to Postcomm's Strategy Review'; and Royal Mail Group (2012), 'Royal Mail company structure', July. Further information is available at: https://www.royalmailwholesale.com/compliance-faqs/.

⁴⁶ For further information, see 'Business Stream and Scottish Water', available at: http://www.business-stream.co.uk/about-us/governance-and-compliance/business-stream-and-scottish-water.

4.5 Design of incentives

4.5.1 Why is this important and what are the issues?

Appropriate incentives may help to promote the independence of retail decision-making. As Cave (2006) recognises, incentives may have an impact on the behaviour of employees in the wholesale or retail business:

In the absence of appropriate incentives, senior managers will maximise group shareholder value rather than divisional profits, as a means of personal advancement and a response to share options. This may lead executives to practice discrimination against competitors whose success in downstream market would otherwise jeopardise group profit. To prevent this, managerial remuneration should be tied to divisional performance and (where possible) restrictions should be imposed on the movement of senior staff from the separated unit to the group.⁴⁷

If the retail management's incentives are tied to the performance of the wholesale business activities or company group for example, this may cause a perception that the retail business activities are not acting independently of the wholesale business. Likewise, a similar perception may arise if the incentives of the wholesale management are tied to the performance of the retail business activities. Incentive design (e.g. structure of remuneration) at both the wholesale and the retail level is central to ensuring independent decision-making and a level playing field.

4.5.2 What are the possible consequences for companies?

The possible consequence is that it may be difficult to introduce the necessary culture change in the non-household retail business activities. This may increase the likelihood of a competition complaint—e.g. the retailer having access to confidential information on the wholesale business activities through informal conversations.

4.5.3 What are the relevant aspects for companies to consider?

Figure 4.3 summarises some of the key questions in this area, taking into account a company's choice of retail strategy and organisational structure.

Figure 4.3 Questions: incentives

Questions for companies remaining legally integrated or exiting to an associate licensee

- are the objectives and incentives of management and staff in the wholesale business activities tied to the performance of the wholesale 'business'?
- similarly, are the objectives and incentives of management and staff in the non-household retail 'business' tied to the performance of that 'business'?

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

⁴⁷ Cave, M. (2006), 'Six degrees of separation: operational separation as a remedy in European Telecommunications Regulation', *Communications and Strategies*, **64**, 4th Quarter, December.

4.5.4 What would these aspects or questions mean in practice?

Experience from other sectors typically shows that these aspects can be managed through separating management and staff incentives. To separate management and staff incentives, Openreach decided to set remuneration based on divisional performance. This was to overcome concerns about the incentives and behaviour of employees (see Box 4.3).

Box 4.3 Remuneration of Openreach services staff

In the document outlining the undertakings given to Ofcom by BT (consolidated version of the undertakings dated 19 June 2014), it is stipulated that remuneration for BT employees working in the area of access services should only reflect the objectives of access services. As noted in para. 6.7:

- all incentive remuneration of BT employees working for AS [i.e. Access Services, Openreach] shall reflect solely the objectives of AS;
- AS will operate to a Scorecard which reflects its responsibilities to deliver Equivalence of Inputs and fair access to its products. The principles of that Scorecard will be cascaded to all BT employees working for AS who have currently, or may have in the future, bonus payments:
- bonus payments based on Scorecard performance shall relate solely to the performance of AS and to any other relevant obligations under these Undertakings;
- such bonus payments shall not be denominated in BT Group plc shares, but BT employees
 working for AS remain eligible to participate in BT's ongoing and future general allemployee share plans and benefits arrangements.

Note: 'Scorecard' means a measure for setting targets in connection with the incentive remuneration of certain BT employees.

Source: Based on Ofcom (2014), 'Consolidated version of the Undertakings given to Ofcom by BT pursuant to the Enterprise Act 2002', 19 June, para. 6.7.

4.6 Retail identity

4.6.1 Why is this important and what are the issues?

Staff identity may have an impact on behaviour, which may determine the extent to which the retail business acts independently of the wholesale business (and vice versa). In an integrated company, identity has two dimensions:

- whether staff clearly identify themselves, through clear job descriptions, as belonging to the wholesale or the retail business activities (or both);
- whether staff have clarity on their role(s) and no 'preferential' access to their colleagues in a separate business.

If management and staff do not distinguish the wholesale and the retail activities, the decision taken at one level or another may take into account the interests of both divisions. In addition, if management and staff do not have clear roles within the wholesale or retail divisions of the company, this may cause a perception that the retail business activities may not act independently.

Therefore, the management and promotion of clear identities contributes to the independence of retail decision-making.

4.6.2 What are the possible consequences for companies?

Similar to the discussion above regarding incentives, a possible consequence is that it may be difficult to introduce the necessary culture change in the non-

household retail business activities. This may increase the likelihood of a competition complaint.

4.6.3 What are the relevant aspects for companies to consider?

Figure 4.4 summarises some of the key questions in this area, taking into account a company's choice of retail strategy and organisational structure.

Figure 4.4 Questions: retail identity

Questions for companies remaining legally integrated or exiting to an associate licensee

- do staff have a clear identity as working for the wholesale or non-household retail business activities?
- who do they consider to be their customers?
- have their day-to-day roles and job descriptions changed?
- how do wholesale and retail staff interact?
- are other retailers able to interact in the same way?

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

4.6.4 What would these aspects or questions mean in practice?

Experience from other sectors typically shows that these aspects can be managed by several initiatives. For example, to overcome the challenges that identity may cause to the independence of retail decision-making, Openreach, Royal Mail and Scottish Water have completed a comprehensive training programme, covering issues of compliance.

In addition, in the case of BT, there is a code of practice in place, which clearly sets out the role of employees in complying with the BT undertakings. ⁴⁸ For example, as discussed in section 3.6, engineers at Openreach may be required to interact with the end-customers on behalf of CPs. The engineers are given clear guidance about how to remain neutral in their dealings with end-customers.

Other initiatives may also foster a clear sense of identity between the wholesale and retail divisions of a company, such as having buildings or office spaces that are clearly separated (as discussed in section 3.5) and separate email addresses or telephone directories.

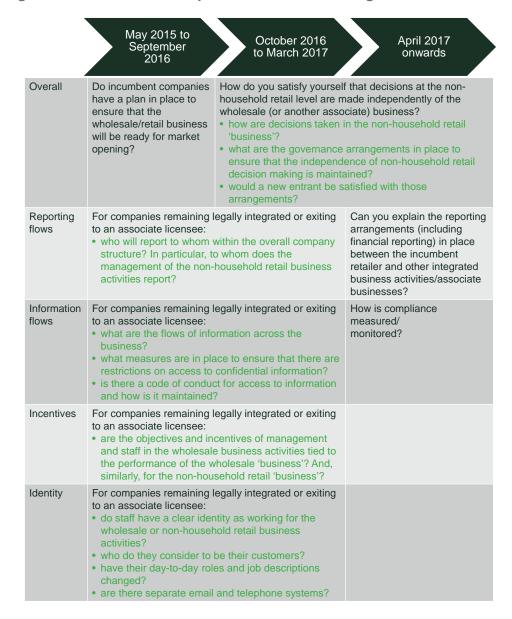
4.7 Timeline

Figure 4.5 provides an indicative timeline for when it may be appropriate to ask these questions, taking into account the overall timeline for retail market opening. As in section 3.7, the figure takes into account the three critical phases ahead of retail market opening.

As discussed above, these questions are intended to provide a framework for companies to consider—i.e. they should be interpreted as issues for consideration rather than an exhaustive or definitive list.

⁴⁸ The code of practice is published on BT's website, and stipulates restrictions on information sharing and influencing commercial policy. The code of practice also has a clause in relation to the Statement of Requirements processes. It requires staff to 'make sure that decisions are made on an objective and fair basis without taking into account who the customer is'. BT (2013), 'It matters: BT undertakings code of practice part two', December, p.3.

Figure 4.5 Timeline: independent decision-making



Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

5 The level playing field and retail financing

5.1 The importance of retail financing

As regards the non-household retail market, retail financing is relevant for both of the areas discussed in sections 3 and 4 of this report:

- the cost of finance is one of the economic costs faced by the non-household retail business activities. As with other costs (e.g. operating costs), receiving services (in this case, access to finance) from a related business could represent a source of cross-subsidy, as covered in section 3;
- if the non-household retail business is dependent on another business activity
 or associate business for financing (e.g. the wholesaler), this may influence
 the extent to which the retailer can act independently of that business activity.
 In this way, access to finance could potentially be used to influence the non-household retail business activities, as covered in section 4.

An incumbent company's choice of retail strategy and organisational structure have important implications in relation to the financing of the non-household retail business activities. For example, a company that chooses to remain legally integrated may be faced with challenges in the above two areas.

Recognising the relevance of retail financing, in particular access to finance for the retailer, this section examines the following questions.

- · What are the issues?
- What are the possible consequences for incumbent companies?
- What are the relevant aspects or questions that incumbent companies would need to consider?
- What would these aspects or questions mean in practice?
- What is the economic and policy rationale that underpins these issues?

5.2 Access to finance

5.2.1 What are the issues?

The retailer will require access to funds to cover its working capital requirements (which comprise most of its capital employed). Consequently, the issues are two-fold: how does the retailer access those funds, and at what cost? For example, it may be possible for a retailer to gain an advantage if it can fund its working capital requirements directly from the wholesale business at (or below) the wholesale cost of capital (see Figure 5.1 below). However, the same may be true for a new entrant that receives funding from another associate business (e.g. a large energy retailer).

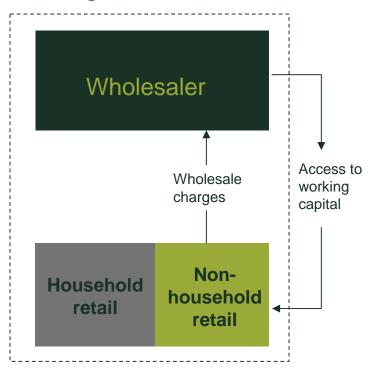


Figure 5.1 Financing flows in the retail business

Note: Dashed line represents legally integrated water company for this example. Source: Oxera.

Ultimately, the extent to which this presents a concern to companies depends on general requirements under competition law, as well as sector-specific rules.

With regard to sector-specific rules, Ofwat has not yet set out its policy as to how it would consider the incumbent's financing costs. Although previous guidance may suggest that Ofwat may consider an incumbent retailer's financing costs from the perspective of a new entrant.

In assessing working capital requirements, companies may wish to cross-check their analyses against rates that new entrants are able to raise (that is, not vertically integrated water companies).⁴⁹

5.2.2 What are the possible consequences for incumbent companies?

The potential risk relates to non-compliance with competition law (e.g. through engaging in a 'margin squeeze') or sector-specific requirements (albeit the latter may be more likely). Ultimately, these risks reside with the incumbent retailers.

5.2.3 What are the relevant aspects or questions that incumbent companies would need to consider?

Figure 5.2 below summarises some of the key questions in this area, taking into account a company's choice of retail strategy and organisational structure.

⁴⁹ Ofwat (2014), 'Setting price controls for 2015-20 – guidance for companies on producing default tariffs', April, p. 19.

Figure 5.2 Questions: retail financing

Questions for companies remaining legally integrated or exiting to an associate licensee

- does the cost of finance reflect the capital employed and risks faced by retailers in providing retail services?
 - e.g. is the cost of financing supported by market benchmarks, taking into account the capital structure?
- what are the arrangements in place through which the retail business can fund its working capital requirements? For example:
 - through retained earnings?
 - from the wholesaler?
 - from the group company or another associate entity?

Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

5.2.4 What would these aspects or questions mean in practice?

Experience from some sectors typically shows that these aspects can be managed through several initiatives. In particular, by ensuring that the non-household retail business activities are funded at arm's length from the regulated wholesale business activities. This could be done:

- for internal transactions, by using a benchmark cost of capital that reflects the risks associated with the retail business. This is the approach used in the Scottish water sector, with the financing of Business Stream;
- by ensuring that there are no financing flows between the wholesale and the non-household retail business activities. This could be achieved, for example, by the incumbent retailer borrowing funds through an arm's-length holding company (as in the case of Business Stream). This could mitigate the risk of the wholesaler influencing the retailer by restricting access to finance. Alternatively, it could mitigate the risk of cross-subsidy, if a benchmark cost of capital is also used (as discussed above), although this option might result in the retailer paying potentially higher costs, with potentially costs to consumers (at least in the short term).

5.2.5 What is the economic and policy rationale that underpins these issues?

The economic and policy rationale for retail financing arises through competition law and sector-specific rules.

Competition law

Access to finance at a low rate from another business activity or associate business will not necessarily amount to a margin squeeze under competition law (it also depends on the other retail costs).⁵⁰ Ultimately, it depends on 'whose

⁵⁰ It is worth also examining Shepherd and Wedderburn's note on this subject in the context of precedents for cases in which the Chapter II Prohibition and/or Article 102 TFEU have been applied in the context of parent

costs?' As discussed in section 3, a competition authority could consider two possible approaches:

- 1. use the costs of the dominant company's downstream business;
- 2. use the costs of the hypothetical reasonably efficient competitor.

The former test could involve comparing the non-household retail business with another legally integrated incumbent retailer. In this case, the other legally integrated retailer may also be able to raise finance from another business activity or associate business at a low cost. In this scenario, the incumbent retailer's behaviour may not affect the development of competition. Indeed, this may provide a 'good outcome' for consumers, as they benefit from lower prices.

Under the latter test, which uses the costs of a hypothetical reasonably efficient competitor, access to finance (and the cost of finance) could be compared with that of a 'stand-alone' new entrant to the market. As discussed in section 3, there is a precedent for a regulatory authority (Ofcom) examining the 'margin squeeze' using the latter test (in addition to the former test).

Overall, it may depend on sector-specific policy and rules, which may seek to promote entry from stand-alone new retailers. In this case, the regulator might expect the incumbent retailers to raise finance on a stand-alone basis as an entry assistance measure.⁵¹ This may raise costs (and prices to consumers) in the short term, but may reduce costs (and prices to consumers) in the medium to long term as those retailers increase the level of competition in the non-household retail market (see discussion in section 3).

Sector-specific rules

For PR14, Ofwat set separate allowed returns for the wholesale and non-household retail business activities. The allowed returns were used to set the discrete and binding revenue controls for each business activity. Indeed, the binding nature of the price controls has been reinforced through the regulatory accounting guidelines, which prohibit cross-subsidy across the price controls (see section 3). If this is interpreted as applying to the financing costs, as well as other costs, this may restrict a retailer's ability to raise finance from the regulated business at (or below) the wholesale weighted average cost of capital (WACC).

This, of course, assumes that a wholesaler would have the incentive to lend funds to its own retail arm at the wholesale WACC. It is not clear that it would be rational for a wholesaler to divert funds from a regulated business, which earns a stable allowed return, to a contestable business activity that is inherently more risky.

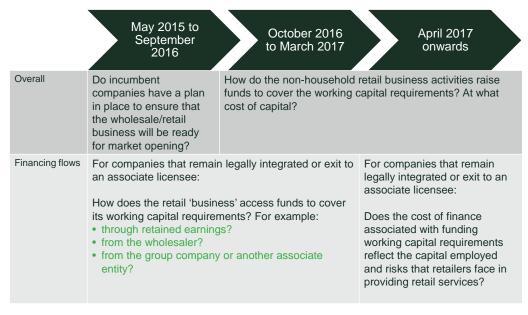
5.3 Timeline

Figure 5.3 summarises the questions and provides an indicative timeline for when it may be appropriate to ask these questions, taking into account the overall timeline for retail market opening. As in section 3.7, the figure takes into account the three critical phases ahead of retail market opening.

As discussed above, these questions are intended to provide a framework for companies to consider—i.e. they should be interpreted as issues for consideration rather than an exhaustive or definitive list.

company guarantees (PCGs). Shepherd and Wedderburn (2015), 'Level Playing Field – Abuse of Dominance – Water UK Query', April. Available on request from Shepherd and Wedderburn. ⁵¹ See the discussion in section 3.3.

Figure 5.3 Timeline: retail financing



Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

Source: Oxera.

6 Data cleansing and validation

This section was prepared by SMC on behalf of Open Water.

Given the nature of the issues considered here, it is necessarily more definitive. However, it will be for Ofwat and the future Market Operator (MO) to define finally exact requirements that companies will have to meet.

6.1 Introduction

The effective operation of the competitive market and particularly the new MO systems will be reliant upon the ability of all market participants to collect and exchange data in a common format and in an efficient manner. The importance of clean and accurate data therefore cannot be understated. Wholesalers and retailers have the responsibility to ensure that the data they provide and transact is accurate, up to date, and in the correct format required for the operation of the MO systems.

This section considers the data validation and cleansing that would be required in preparation for the initial data loading of the MO systems prior to the 'go active' milestone.

There are three key messages to recognise in this section, as set out in Box 6.1.

Box 6.1 Key messages

- Clean, accurate and validated data (consistent with the Data Catalogue, CSD0301) is essential to the effective operation of the competitive market.
- Procurement of the MO systems is in progress. Vendor appointment is scheduled for early August 2015. It is currently expected that the detailed timetable for implementation of the MO systems and initial data loading will be determined following the vendor selection process.
- Shadow operations should not be considered as a contingency period for data validation and cleansing as further data loading may not be possible after the 'go active' milestone has been achieved.

6.2 Background

6.2.1 Procurement of the MO systems and impact on data

To enable the MO to deliver services in the areas of registration and switching, financial settlement, market governance, and industry data exchange, the MO systems will be developed, comprising:

- a registration system and database;
- a settlement system including a meter reading preparation system, a charge calculation system, and associated databases; and
- a management information/business intelligence system.

Wholesalers and retailers will participate in the competitive market using the MO systems.

Vendor selection for the provision of the new systems is expected to be completed in July 2015 with the vendor appointment expected to be confirmed in

early August 2015 at which point the timelines for systems delivery and initial data loading will become clearer.

6.2.2 What is data cleansing and validation?

Data cleansing and validation aims to ensure that data is sensible, reasonable, complete and within acceptable boundaries as defined in the Data Catalogue (the Data Catalogue is a code subsidiary document, CSD).⁵²

Data cleansing is the process of detecting, correcting and, if appropriate, removing corrupt or inaccurate records. After cleansing, the data should be consistent with other internal and external databases and fit to transact with the MO systems. Data cleansing may be required due to inaccurate data entry, issues with legacy systems or may have been introduced when importing data from external systems.

Data cleansing solutions may entail checking data with a validated data set or by adding related information. For example, appending addresses with postcodes or telephone numbers related to that address. Data cleansing may also involve activities such as standardisation of abbreviations, for example, 'St' for Street, 'Av' for Avenue.

Data validation differs from data cleansing in that validation occurs at data entry, and any validation errors will result in rejected transactions. Validation will confirm that clean data conforms to the formatting requirements of the target systems.

6.3 Initial data load and data maintenance

6.3.1 Why is this issue important?

The provision of sufficiently accurate data related to non-household customers, their meters and premises is likely to be a prerequisite for the successful launch of the competitive market.⁵³

The MO systems will be the repository for this data, and the initial data load will be completed by the incumbent wholesalers and retailers prior to the market 'go active' milestone.

Incumbent wholesalers and retailers would need to be in a position to create and repackage data in the format required by the Data Catalogue (CSD0301) and successfully complete the initial data load of MO systems in accordance with the plan to be published by the appointed vendor.

The initial data load requirements apply to all incumbent wholesalers and retailers irrespective of how they intend to operate in the competitive market, including those considering to 'exit' from the competitive market under the Defra exit provisions.

All initial data load activities would be expected to be completed prior to the 'go active' date, in preparation for shadow operations (i.e. Q4 2016).⁵⁴ Shadow operations should not be considered to be a contingency period as further data loading may not be possible after the 'go active' milestone has been achieved.

 $^{^{52}}$ A series of CSDs, including the Data Catalogue CSD, have been created that clearly define the data and transactions that will form the basis of the MO systems.

⁵³ The required level of accuracy will be set by the MO.

⁵⁴ Ofwat (2015), 'Integrated market opening plan', March.

6.3.2 What are the possible consequences for companies?

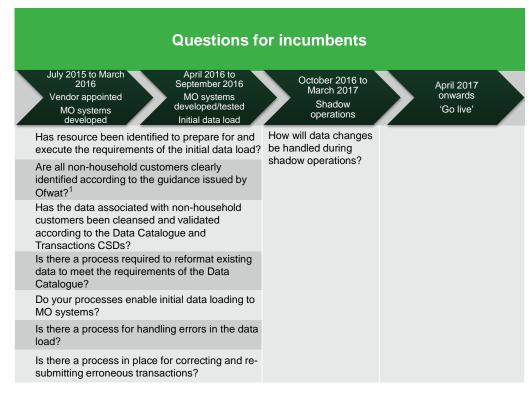
There is little margin for error in the data formatting, as incorrectly formatted data could, and most likely will, result in rejections in transaction processing. Transaction rejections have an immediate and substantial effect on the settlement and registration systems and can affect financial settlements between wholesalers and retailers and cash flow within their businesses.

It may not be wise to underestimate the company resources needed to achieve and maintain the level of quality of data required. Early adoption of data cleansing and validation processes could play an important role in a company avoiding significant problems with data loading into the MO systems, and subsequent data processing during live operations.

6.3.3 What are the questions?

Figure 6.1 summarises some of the key questions in this area

Figure 6.1 Questions: data cleansing and validation



Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list. ¹Ofwat (2015), 'Guidance on eligibility – a consultation', March.

6.3.4 What do the questions mean in practice?

Experience in other industries has shown that the quality of customer data is often variable and in some cases out of date. Customer names and addresses are particularly prone to variable quality as they are composed of free text which can be difficult to validate. Postcode data is a common cause for concern, as there are a number of postcode databases available and the addresses associated with a particular postcode are not always consistent across the databases. Meter numbering systems vary considerably, even within related systems in a single business, and meter locations often require a degree of local knowledge. This can lead to issues when acquiring data from other wholesalers

and retailers, as their data may not be consistent with the requirements of the systems of the recipient trading party.

Failure to validate and cleanse data adequately for the initial data load could severely restrict the ability of companies to participate successfully in the competitive market. In order to mitigate this risk companies should consider early commencement of data validation and cleansing processes based upon the information available in the Data Catalogue. It is important to note that processes would need to be embedded into normal operations and executed on a regular basis.

The MO systems build is currently scheduled to be completed by the end of Q1 2016, and testing and commissioning will be completed at the end of Q3 2016. Incumbents would need to plan accordingly and in particular they would need to ensure that data validation and cleansing has been completed in accordance with the requirements of MO.

7 Interfaces

This section was prepared by SMC on behalf of Open Water.

Given the nature of the issues considered here, it is necessarily more definitive. However, it will be for Ofwat and the future Market Operator to define finally exact requirements that companies will have to meet.

7.1 Introduction

The reliable and timely exchange of accurate data is likely to be essential to wholesalers' and retailers' ability to participate in the competitive market following go-live.

This section examines the interfaces between wholesalers and the MO and retailers and the MO. It also underlines the importance of the compatibility of the wholesalers' and retailers' internal systems with these interfaces. In particular, it considers the potential impact on existing internal systems, processes and interfaces for incumbent wholesalers and retailers, and additional requirements for new market entrants.

The MAP3 CSDs contain details of technical interface standards. However, companies would need to be mindful that the eventual interface solution is likely to need to be validated and formalised during the detailed design by the MO system vendor.

There are three key messages to recognise in this section, as set out in Box 7.1.

Box 7.1 Key messages

- Timely and accurate transactional processing using MO interfaces is likely to be key to successful market operation.
- Procurement of the MO systems is in progress. Vendor appointment is scheduled for early August 2015. It is currently expected that the detailed timetable for establishing the interfaces with the MO systems will be determined following the vendor selection process.
- It is likely that reviewing current processes and systems now will greatly enhance the potential for successful implementation of the new interfaces.

7.2 Overview of the MO systems and implications for interfaces

The MO systems will enable wholesalers and retailers to provide information regarding registration and transfer of customers, and data for the settlement systems for billing purposes. It is understood that three types of interface are likely to be implemented:

- an automated interface for transferring large volumes of data at low cost;
- a semi-manual interface for participants to upload data files to and download data files from manually, to be used as a contingency or as a low-cost alternative for new or small market entrants with lower volumes of data to be transferred:
- a manual interface such as set of secure web forms to enter data into manually, to be used as a contingency or as a very low-cost alternative for new or small market entrants with lower volumes of data to be transferred.

In addition, it is understood that the data model for the market, and for the MO in particular, would probably include:

- for registration and switching, a centrally held record of premises, service points, and associated meters and wholesalers and retailers. The central data model will not hold customer-level data;
- for operational services, a centrally held record of service requests and notifications; and
- for metering and financial settlement, a centrally held record of meter readings, wholesale charging schemes and derived wholesale charges.

Wholesalers and retailers may be well advised to consider undertaking a review of their internal systems and processes in preparation for market opening and to ensure that they are able to create and maintain the data necessary to transact with the MO successfully.

7.3 Company systems and processes

7.3.1 Why is this issue important?

Wholesalers and retailers may find it necessary to enhance their internal systems and processes in order to accommodate the following:

- communication with other wholesalers and retailers using a variety of systems including portals, and the MO using the MO systems;
- wholesale businesses to operate and communicate with multiple retail businesses;
- retail businesses to operate and communicate with multiple wholesale businesses.
- retail businesses to undertake a number of processes currently operated by the wholesale business. Access and availability of relevant systems would therefore need to be carefully reviewed and enhanced as appropriate to ensure data integrity and satisfy the objectives of the level playing field and data protection requirements;
 - in this area, level playing field considerations may also affect the roles and responsibilities of resources currently employed in legally integrated businesses. Careful consideration would need to be given to reallocation of roles and responsibilities to avoid potential conflicts of interest and concerns in this area.

7.3.2 What are the possible consequences for companies?

The consequences of the inability to transact successfully with the MO may include:

- an inability to correctly register or transfer customers;
- an inability to apply meter readings to customer accounts;
- estimated meter readings for some customers owing to the lack of valid data;
- failure to produce accurate and timely bills for customers;
- a rise in customer complaints as a result of the above; and

• intervention by the governing bodies triggered by a rise in complaints.

All of this may lead to extra costs both in cash and time, and potential damage to the reputation of wholesalers and retailers.

There are major organisational and cultural changes associated with market opening that will affect how internal and external interfaces operate. Issues that may arise for a previously integrated company include the following.

- systems and processes previously jointly owned and operated may need reconfiguration to help achieve the objectives of the level playing field;
- careful consideration needed in relation to privacy of data and the Data Protection Act:
- wholesale businesses will need to communicate and trade with multiple retail businesses in a consistent manner, and vice versa. As a result, previously established relationships with colleagues in the integrated business may need to be removed, consistent with the objective of operating on a level playing field.

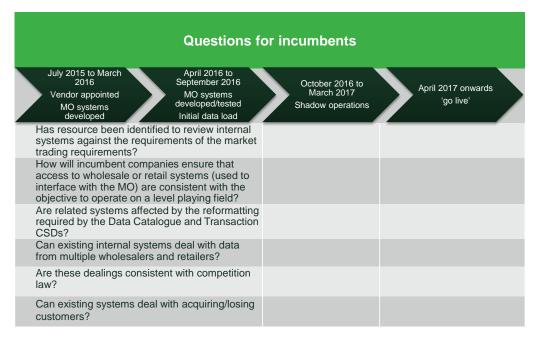
New entrants are likely to be required to establish systems and processes to enable communication and trading with incumbent wholesalers and the MO.

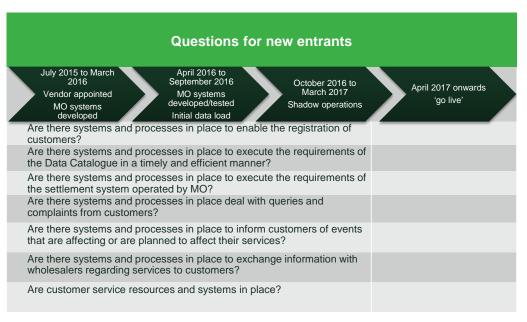
There is a potential risk that customer data currently available to both wholesale and retail operations of an integrated company may continue to be available to both parties after market opening, contrary to the requirements of operating on a level playing field. Attention would need to be given to this by wholesalers and retailers to ensure consistency with the objectives of a level playing field and the requirements of the Data Protection Act. The implications of operating on a level playing field are discussed in detail in section 3.5 in the context of information management.

7.3.3 Questions for companies to consider

Figure 7.1 summarises some of the key questions in this area.

Figure 7.1 Questions: interfaces





Note: The questions should be interpreted as issues for consideration rather than an exhaustive or definitive list.

As discussed in section 6, it is currently expected that a more detailed timetable for establishing the interfaces with the MO systems will be determined following the vendor selection process (the vendor selection process is expected to be completed in August 2015).

7.3.4 What do the questions mean in practice?

In practical terms, wholesalers and retailers should consider reviewing existing systems, processes and resources against the requirements of the new ways of working. A number of participants may decide to use this time as an opportunity to introduce replacement systems—indeed, this was the case for a number of electricity and gas companies during their period of change (i.e. to facilitate retail competition in those sectors). This brought with it the added complications of introducing replacement systems in an already changing environment. It meant that some companies encountered additional difficulties and some failed to meet the regulator's requirements, as shown in the case study in Box 7.2 below.

Box 7.2 Billing problems in the electricity and gas market

In August 1999 the energy regulator of Great Britain, Ofgem, proposed to restrict the future retail business of Northern Electric because of major problems that the company was encountering.

What was the issue?

- Meter readings were not flowing through the interfaces correctly, resulting in a number of deemed reads being used for billing.
- Internal systems were generating incorrect transactions into the central settlement systems and rejects were not being processed in a timely manner.

How did the issue manifest itself?

- Customer complaints rose significantly and became an issue with the regulator.
- A large backlog of customer enquiries remained unresolved.

Why did the problem occur?

• A significant number of customers had not been billed for over 12 months.

What were the consequences?

- The regulator intervened and demanded immediate improvement from the retailer.
- Significant resource was diverted to resolve the issue, at a large cost to the retailer.

Note: Ofgem (1999), 'Consultation on proposed enforcement actions against Northern Electric and Gas Limited', August.

It is important to note that because there are many different companies operating in the water industry in England, there are also many different systems and ways of working. This manifested itself in electricity and gas industries in many ways, but most significantly in the reduced interaction between newly separated businesses that previously operated in a homogeneous environment. It was particularly noticeable how quickly the relationships between wholesalers and retailers became much more formal and in some cases disappeared entirely. An example from the electricity and gas sector is provided in Box 7.3.

Box 7.3 Cultural change in the electricity and gas market

Background

Distribution and Retail working together in a homogeneous business on a daily basis.

Change

In a matter of weeks after market opening, communication channels that were previously open and free from restrictions became less and less active and eventually completely closed. The distribution businesses were tightly controlled and risk-averse, as their demands were based around maintaining existing services in their existing geographical areas. Retail businesses found themselves in a competitive market place, however, with the objective of retaining and growing their customer base.

Impact

The impact on information flow was considerable. Distribution businesses became protective of their data, and references to the Data Protection Act soon became commonplace. Retail businesses had to change their culture and adapt to the new competitive arena.

Wholesalers and retailers may encounter similar problems and should expect similar behavioural and cultural changes. Companies may want to consider the ongoing requirements of their internal systems and processes to accommodate these changes.

8 Interactions with the DWI and the EA

This section has been developed by Open Water. It is intended to provide an overview of the importance being attached to developing a set of rules and processes that are consistent with the policy intent of the 2014 Act but also allow the other regulators to fulfil their role fully and appropriately.

8.1 Introduction

A principle underpinning the development of the wholesale-retail code has been that it should sit alongside the statutory obligations and duties applying to companies and that it does not seek to interfere with these—for example, in matters relating to public health or the environment. Undertakers will also continue to discharge their regulatory functions, such as complying with water fittings regulations or granting trade effluent consent. However, as customers will exercise choice and contract with retailers, the former ways of dealing with certain communications or obtaining information need to be reviewed and may change.

The establishment of the market means that the roles and responsibilities of undertakers and retailers need to be clarified in these crucial areas.

This section considers the approach taken in the development of the wholesaleretail code to ensure that Defra, the DWI and the EA (and National Resources Wales) can continue to fulfil their statutory duties in the competitive market; that incumbent companies continue to meet their statutory obligations; and that retailers are clear about their roles and responsibilities.⁵⁵

8.2 The role of the statutory wholesale-retail code and interactions with Defra, the DWI and the EA

As discussed in MAP2, the statutory wholesale-retail code covers the terms of trade between each wholesaler and each retailer, including the necessary operational interactions. This covers the following broad areas.

- Water quality monitoring and assurance (e.g. water-quality sampling and water-fitting regulations): setting out the processes to investigate water-quality complaints and to monitor compliance with applicable water-quality rules and water-fitting regulations.
- Procedures for dealing with unplanned events affecting or potentially affecting water supplies: processes to deal with emergency planning, the declaration of an emergency and the implementation of emergency plans.
- Trade effluent controls: agreeing the processes for obtaining and modifying trade effluent consents, trade effluent monitoring, pollution incidents and the termination of trade effluent consents.
- Drought planning and processes for dealing with situations where water is scarce.

The DWI, the EA and Defra (in the context of the Security and Emergency Measures Directions, SEMD) are responsible for setting and enforcing the appropriate regulations in each of these areas.⁵⁶ Thus, it is important that the

⁵⁵ Natural Resources Wales is the environmental regulator responsible for Severn Trent's operational area in Wales

⁵⁶ The SEMD guidance requires companies to set out plans to mitigate the likely or actual disruption to water supply and sewerage services arising from any civil emergency, as described in Section 208(7) of the Water Industry Act 1991 or national security event.

wholesale-retail code provides clarity on the roles and responsibilities of wholesalers and retailers in the competitive market.

8.3 Process to date: the work through the task and finish groups

The current draft of the statutory wholesale-retail code was developed following work undertaken by the Open Water team with incumbent companies, new entrants, Defra and other stakeholders. This collaborative process continued after the publication of MAP2 through the task and finish groups hosted by Water UK between December 2014 and April 2015 (see Box 8.1).

Box 8.1 Approach in the task and finish groups

The approach in the task and finish groups was to identify 'real-life' scenarios and consider how the processes in the operational terms of the wholesale-retail code cope with those scenarios. Looking at water quality, the group considered scenarios ranging from an interruption to supply, low pressure, a water quality incident, through to a full-scale incident under command procedures. A similar approach was taken to the review of environmental scenarios, which ranged from widespread flooding through to unconsented discharges and pollution incidents.

The relevant sections of the wholesale-retail code have been developed to take account of the comments coming from these discussions.

A key element discussed was the customer journey and the customer experience. Questions posed have included: who will the customer call and will they know whom to call? The outcome from those discussions has been reflected in the draft operational terms.

Another important point of discussion was the arrangements for the exchange of information between undertakers and retailers to ensure that wholesalers, in particular, can discharge their responsibilities and that retailers understand their part in this. Again, the arrangements in the market terms and operational term support the outcome of those discussions such that the need for information can be identified and exchanged between wholesalers and retailers.

Source: Open Water.

8.4 Ensuring the statutory wholesale-retail codes meet the requirements of Defra, the DWI and the EA

The task and finish groups will continue beyond MAP3. This will involve Open Water working closely with Defra, the DWI, the EA and water companies, again hosted by Water UK, over the coming period (i.e. by holding the workshops), and the process will continue for as long as is necessary.

Ultimately, the statutory wholesale-retail code will be finalised only when the DWI, the EA and Defra (as regards the SEMD) are satisfied that they can meet their statutory duties in the competitive market.

Similar questions have been considered by companies in the other sectors where competition has been introduced, and arrangements have been put in place to ensure that public interest matters are managed effectively, and are relevant to the demands of the sector and the obligations applying.

In the context of the discussions in the stakeholder workshops and the task and finish groups, companies are invited to consider the following issues.

 For both wholesalers and retailers, companies will wish to give further consideration to the message to customers advising them what to do in the event of incidents, ensuring that the message is clear and unambiguous.

- The appropriate level of staff awareness training in this area, recognising that incoming calls from customers on such matters will not be treated as other types of calls from the non-household customer.
- The information that undertakers will need to ensure they can continue to meet all their statutory obligations and how it is kept up to date.
- The information that retailers will need to provide to wholesalers.
- The information that wholesalers need to discharge their regulatory monitoring and reporting duties.
- How wholesalers will work with retailers to ensure that they can achieve
 inputs to the various plans they are required to maintain, to the extent that
 they contain elements addressing customer communications, having as
 inputs customer-related information or other customer-related information that
 wholesalers will need from retailers.
- How wholesalers will work with retailers in a practical way when an unplanned event does occur, such as one affecting water quality or the environment.

