Appendix 8.3.E – Economic Insight report on household retail margins at PR19

Wessex Water

September 2018

Wessex Water
YTL GROUP

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Economic Insight

September 2017

Economic Insight Ltd

Household Retail Margins at PR19

A report for Bristol Water and Wessex Water

CONTENTS

1. Introduction and executive summary

This report sets out an assessment of the appropriate level of household retail EBIT margin to assume for PR19, on behalf of Bristol Water and Wessex Water. Based on a range of evidence, we find that the appropriate margin lies between 0.7% and 3.1%. Whilst, on balance, our view is that Ofwat's determination of a margin of 1.0% at PR14 was perhaps conservative, for reasons of practicality (coupled with the CMA's recent energy market analysis, which suggests a margin of 0.9%) we consider it reasonable to continue to assume a margin of 1.0% at this time.

1.1 Introduction

At PR14, allowed revenues for the household retail control consisted of: (i) a cost allowance, which included an efficiency challenge based on the industry average cost to serve (ACTS); and (ii) an allowed net retail margin (set on a % EBIT basis). No automatic pass through of general inflation was allowed for. With regard to the net EBIT margin, Ofwat set this at 1.0% *for household customers.* The primary source of evidence Ofwat relied upon was a report by PWC[1], which drew on both a comparative and return on capital approach - although more weight was placed on the former (primarily regulatory precedent).

The approach to setting the household retail control at PR19 is yet to be determined in detail. However, in its draft methodology consultation, published in July, Ofwat confirmed that a net EBIT margin approach would be retained as the means for setting allowed returns, stating that the: "*household retail price control will be set by reference to a margin that covers earnings before interest and tax (EBIT)".*[2] However, there were not any specific indications from Ofwat regarding the likely *level* of margin.

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1 *'Water retail net margins.' PWC (February 2014).*

2 *'Delivering water 2020: Consulting on our methodology for the 2019 price review'. Ofwat (July 2017). Page 192.*

Other features of Ofwat's proposed approach to setting the household retail control at PR19 contained in the regulator's July draft methodology consultation include:

- That the *form* of the control will remain an average revenue one (Ofwat is leaving open for now whether this will be set on a weighted, or unweighted, basis).
- The *duration* of the control will be three years.
- *Allowed costs* will be set using econometric benchmarking (rather than the ACTS).
- There will continue to be *no automatic indexing for inflation* (although the regulator has left open the possibility of inflation being allowed for within totex allowances).

Following from the above, Pelican Business Services (Pelican), a joint venture providing retail billing services to domestic customers on behalf of Bristol Water (Bristol) and Wessex Water (Wessex), asked Economic Insight to conduct an assessment of the appropriate level of household retail EBIT margin at PR19.

Accordingly, this report sets out our analysis, findings and recommendations regarding net retail margins; and is structured as follows:

- **Chapter 2** provides a description of the key issues relevant to setting net retail margins. This specifically addresses the need for margins in water and sewerage retail markets; and, in particular, what economic and regulatory functions the margins should fulfil. Relatedly, this section also sets out our method and approach which we have used to assess the appropriate level of household retail margins. We use: (i) a comparator analysis; (ii) a review of regulatory precedent; and (iii) return on capital employed (ROCE) modelling, to inform our assessment.
- The results of our comparator analysis are presented in **Chapter 3**. This includes both an assessment of actual margins earned by comparator firms, but also a consideration of regulatory determinations.
- Our ROCE modelling analysis is contained in **Chapter 4**. This shows what retail margins would need to be in order for the projected retail ROCE to be equal to an assumed weighted average cost of capital (WACC).
- Finally, **Chapter 5** outlines our key findings and recommendations with regards to the level of household retail margins Bristol and Wessex should assume for PR19.

1.3 Summary of our key findings

Overall, our analysis is consistent with an appropriate EBIT margin for household retail at PR19 lying in a range between 0.7% and 3.1% - as summarised in the table below.

Table 1: Summary of evidence on retail % EBIT margins

Approach	Implied household retail EBIT margin (%)
Comparator analysis	3.1%
Analysis of regulatory precedent	0.9% (CMA energy) - 2.6% (average of relevant precedent)
ROCE modelling	0.7% - 1.8% (with a medium case scenario of 1.5%)

Source: Economic Insight

Further to the above, we find the following:

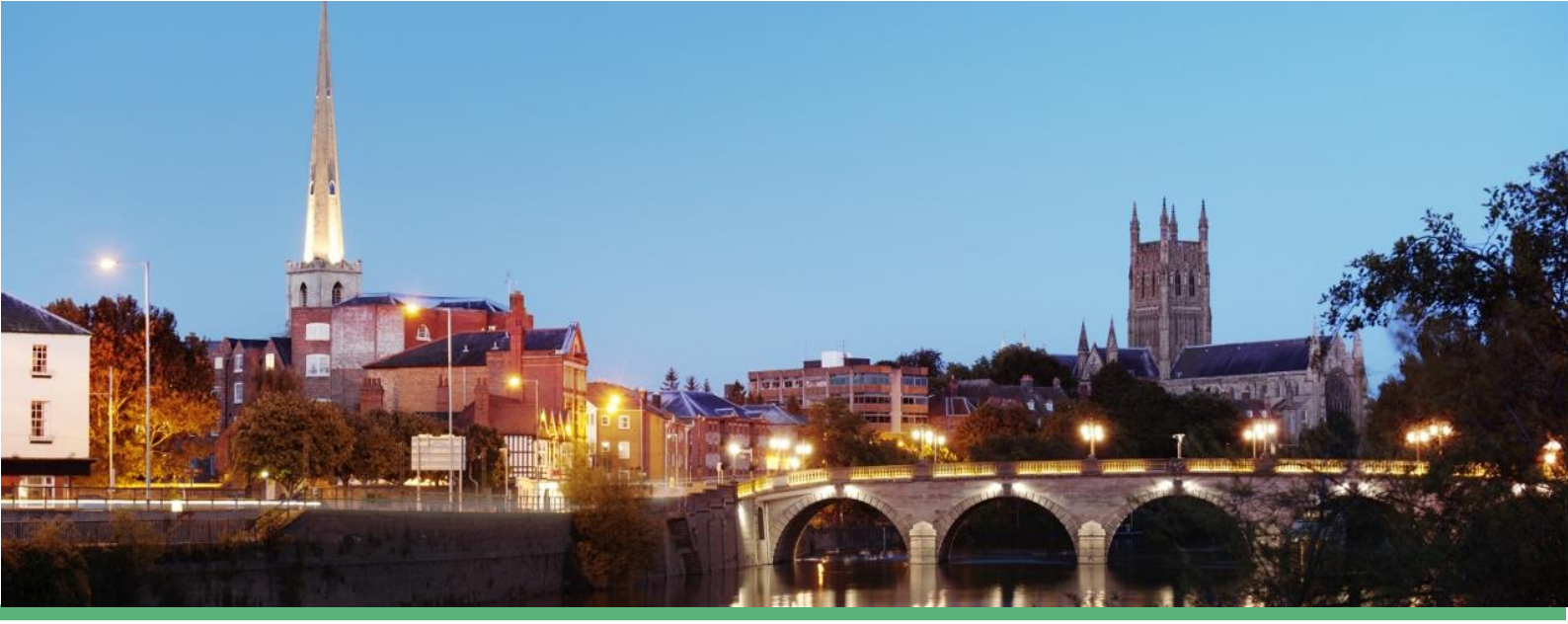
- The assessment of an appropriate retail household EBIT margin is inherently subjective. Whilst we think that the evidence we have provided is sufficiently robust to 'narrow' the potential range to between 0.7% and 3.1%, a credible case could be made for figures along this spectrum.

- That said, on balance we think the evidence here suggests that the 1.0% EBIT margin set at PR14 is perhaps somewhat conservative – if set with reference to the margin required by a standalone retailer in a competitive market. Key points underpinning this view are that:

  - One would typically place 'more' weight on the actual margins being earned by suitably comparable retailers in competitive markets (i.e. our comparator approach) – which tends to point to an EBIT at the upper end of our range.
  - Even using a ROCE modelling approach, somewhat conservative assumptions are required in order to imply a margin at or below 1.0% (noting our medium scenario implies a margin of 1.5%).
  - The regulatory precedent, once reviewed with care to ensure that only relevant comparators are included, implies an average of 2.6%.

- It should, however, be kept in mind that, for so long as the household retail market is not open to competition, the level of retail margin has no direct impact on customers (i.e. it is a 'zero sum game', as it simply determines how value is allocated between wholesale and retail). Consequently, at this time, there are no obvious welfare concerns associated with inadvertently setting the margin "too low".

- Therefore, for practical purposes (but also in light of the CMA's recent energy market analysis, which is consistent with a lower level of margin, at 0.9%) we consider it reasonable for Bristol and Wessex to continue to assume a household retail EBIT margin of 1.0%.



2. Key issues and method relating to retail margins

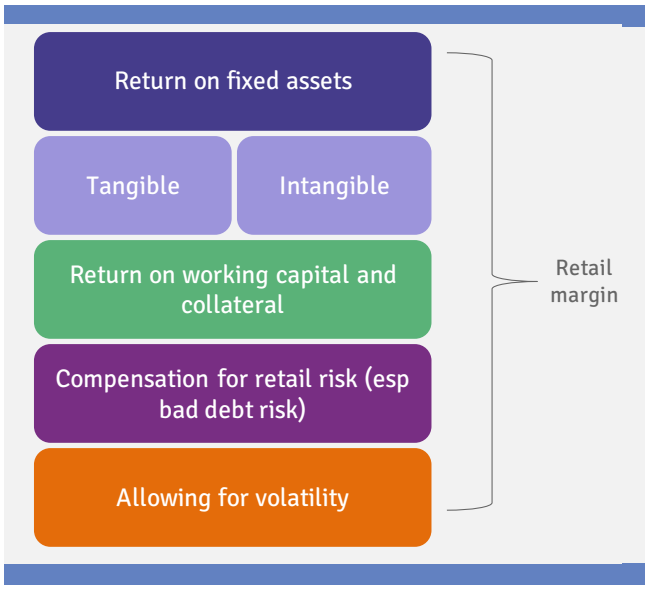
This chapter sets out: (i) a description of the key conceptual issues that should be considered when assessing margin levels; and secondly (ii) a description of the methodology and approach we have applied to provide Bristol and Wessex with recommendations regarding the appropriate household retail margin for PR19.

2.1 Key economic factors

The net retail margin must provide a return on retail investment and compensate companies for relevant retail risks. This does not imply, however, that the retail margin should necessarily be determined 'bottom-up', based on an assumed cost of capital (as otherwise a WACC * RCV approach to regulating this part of the value chain could have been retained). Indeed, precisely because the retail business tends to be asset light, comparator type approaches are often favoured when setting margins. It is therefore important to distinguish between: (a) how the margin is set from a methodical point of view; from (b) what economic and regulatory functions the margin is intended to fulfil.

Figure 1 (overleaf) provides an overview of the key economic factors that we consider should be taken into account when setting retail margins. These are discussed further below.

Figure 1: Economics components of net margins



Source: Economic Insight

2.1.1 Return on fixed assets

Although the retail businesses for water and sewerage companies are relatively asset light, the retail margin is nonetheless in part to provide a return on investment in fixed assets.[3] These will primarily relate to *tangible assets,* such as retail billing systems, associated IT and, potentially, call centres. Such retail assets generally have short operational lives.

It is also appropriate to consider the need for *intangible assets* – and what element of the margin is required to allow for a return on these. For example, it is non-contentious that there are intangible investment requirements relating to software (e.g. to support billing systems) as outlined in the Water UK report on retail margins.[4] In relation to brand and marketing intangibles, we do not consider these to be relevant to the household retail market at present. This is because, absent domestic market opening, the inclusion of these would seem to risk capitalising monopoly rents, which would unduly reward retailers.

2.1.2 Return on working capital and collateral requirements

Working capital is defined as 'current assets less current liabilities' and provides a measure of the net liquid assets a company has. Working capital forms part of a businesses' total capital employed and so, conceptually, in competitive markets firms need to earn a return on it. For retailers of *services* in particular, working capital often forms a major component of total capital employed – due primarily to billing cycles and the inherent time lapse between services being provided and payments being received from customers. Indeed, in the case of Business Stream, the WICS found that

[3] *Note, here we are referring to investment occurring from PR14 onwards, as no RCV was allocated to retail at the PR14 price control.*

[4] *See 'Setting the Allowed Margin for Retail Price Controls: a report prepared for Water UK.' First Economics (2013), which states: "there will also be upfront investments in software to support a number of the activities that a retail business undertakes. These monies are best thought of as intangible assets, which to all intents and purposes are to be financed in the same way as fixed assets."*

the retailer's working capital was the most material component of the overall allowed margin.[5]

In practice, the size of the working capital requirement for water and sewerage retailers will depend on the contractual arrangements between the retail and wholesale business units; and specifically, the payment terms and whether the retail business is paying the wholesale business 'in advance' or 'in arrears' and, if so, by how much.

Collateral refers to credit held against the possibility of a retailer entering into default. Again, in retail service industries, this can form a material proportion of capital employed – although this varies depending upon: (i) the probability of default; and (ii) the recovery rate in the event of default.

There are two key points to note regarding the above:

- Firstly, that in competitive markets, both payment and credit terms are ultimately determined by the outcome of negotiations between wholesalers and retailers (although, as is the case in the non-household retail market, they may also be subject to certain regulatory conditions and / or market codes).

- Secondly, the two are interrelated. For example, in the event that a wholesaler negotiated payment terms that included *pre-payment in full* from the retailer, it is doubtful that any additional 'collateral' would be required.

Clearly, as the household market is not open to competition, it is not possible to 'observe' the outcomes of commercially negotiated payment terms that reflect a competitive market directly. However, as the purpose of the EBIT margin is to reflect what would occur in a competitive market outcome, we think the appropriate way to approach the issue of working capital and collateral is to consider how payment and credit terms might be agreed *'at arms' length'.*

One way of informing the above is to examine the evidence and analysis developed by Ofwat in determining its approach to credit terms in the non-household market.[6] Here, Ofwat identified six possible credit models, as follows:

- *Cash* – whereby the retailer places a defined amount of cash into a secure bank account, established by the wholesaler.

- *Letter of credit* – a financial instrument in which an issuing bank agrees to make payment to the wholesaler if certain conditions are not met by the retailer.

- *Third party guarantee* – whereby a parent company (or other third party) guarantees payment to the wholesaler in the event that the retailer cannot fulfil its obligations.

- *Insurance* – this involves a surety bond being issued by an insurance company on behalf of a retailer.

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[5] *For example, see 'The retail/wholesale split.' Alan Sutherland (2012).*

[6] *''Credit terms between wholesalers and retailers in the new retail market – a consultation.' Ofwat (June 2016); and 'Credit terms between wholesalers and retailers in the new retail market.' Ofwat (September 2016).*

- *Unsecured credit* – whereby retailers are given an unsecured allowance as a proportion of collateralised charges and liabilities.
- *Pre-payment* – whereby the retailer pre-pays the wholesaler in full to cover the entirety of any working capital and credit risk.

As noted above, because collateral and working capital requirements are connected, the precise requirements for each depend on the specific credit model deployed. Accordingly, based on the assumptions laid out in Ofwat's consultation and decision documents for non-household, we have calculated the associated requirements, which are summarised in the table below.

A STANDALONE RETAILER IN A COMPETITIVE MARKET WOULD NEED BETWEEN 65 AND 82 DAYS OF WORKING CAPITAL / COLLATERAL, DEPENDING ON THE FUNDING MODEL.

Table 2: Working capital and collateral requirements for retailers implied by alternative credit models

	Collateral requirement (days)	Working capital requirement (days)	Total (days)
Credit option	50	15	65
Cash	50	15	65
Letter of credit	50	15	65
Guarantee	50	15	65
Insurance	50	15	65
Unsecured credit	0	15	15
Pre-payment	0	82	82

Source: Economic Insight – derived from Ofwat

Consistent with the principle that (for the purpose of setting an appropriate margin) one should be seeking to reflect outcomes that might be negotiated *at arms' length,* we do not think the 'unsecured credit' model is realistic. Specifically, under this approach almost all risk (82%) would be borne by wholesalers. However, clearly in an arms' length negotiation, one would expect wholesalers to have a relatively strong negotiating position. Consequently, for the purpose of reaching a view of an appropriate retail margin for PR19, we think it appropriate to assume that retailers will need to hold / provide between 65 and 82 days' worth of working capital and collateral (combined).

From a practical perspective, it is also important to take into account the working capital and collateral requirements for household retail in the water industry when benchmarking margins in other sectors. In particular, when applying comparative methods for informing margin levels one should ideally: (i) use comparator companies for whom working capital / collateral requirements are similar to those indicated above; and / or (ii) make adjustments to the margins of comparators, so that they are stated on a like-for-like basis, allowing for differences in working capital and collateral.

2.1.3 Compensation for retail risk

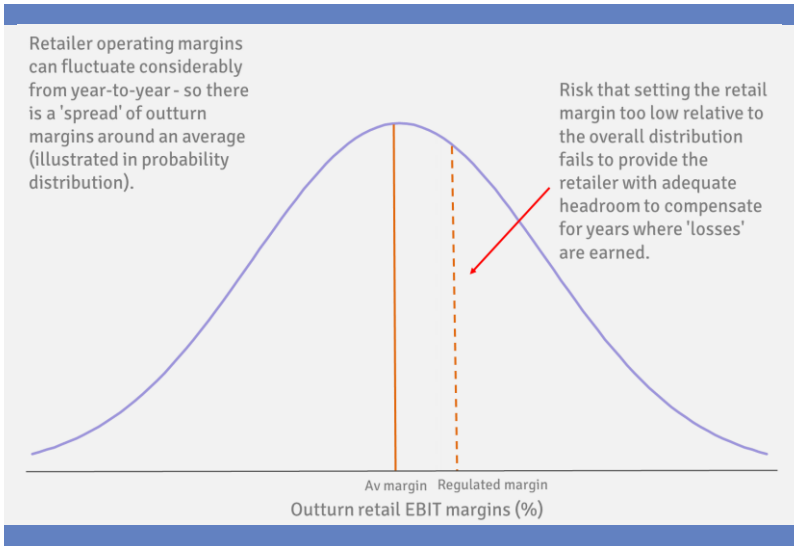
It is also critical that any allowed net retail margin in the water and sewerage industry adequately rewards companies for the associated risks of running those businesses (specifically, forms of systematic risk, as it is assumed that other forms of risk could be diversified away).

The retail component of the water and sewerage supply chain is likely to have relatively limited exposure to most forms of systematic risk (in particular, low exposure to most macroeconomic related shocks due to the low-income elasticity of water). However, exposure to bad debt risk is often an important factor for retailers and this is likely to be especially true for water and sewerage retailers, given the regulatory constraints relating to disconnections.

2.1.4 Dealing with volatility

Retail profits (especially operating margins) can be extremely volatile from year-to-year. Consequently, retailers need to earn a sufficient profit in 'good years' to compensate them for years in which they make losses (as otherwise those businesses might not be investable long term). As a result of this, in a regulatory context there is a risk that setting 'too tight' a margin might artificially truncate the normal distribution of returns, as illustrated below.

Figure 2: Illustration of truncated returns



Source: Economic Insight

In the above diagram, suppose that there is an 'average' level of operating margin – consistent with a retailer being investable in the long term (orange line). In any given year, profit could be higher or lower than this amount. Were a regulator to 'cap' the maximum level of margin at 'too low' level (the dotted orange line) then this would truncate the distribution of profits and could, in principle, reduce average outturn profits below the investable level.

2.2 Our approach to retail margin assessment

OUR APPROACH IS TO CONSIDER WHAT MARGINS WOULD BE CONSISTENT WITH A STANDALONE RETAILER BEING FINANCEABLE IN A COMPETITIVE MARKET.

Our overall approach is to consider what margins would be consistent *with a standalone retailer being financeable in a competitive market* – and this objective has underpinned the methodology we have applied. The specific measure we have sought to assess is a net EBIT margin (expressed as a percent of end retail revenue).

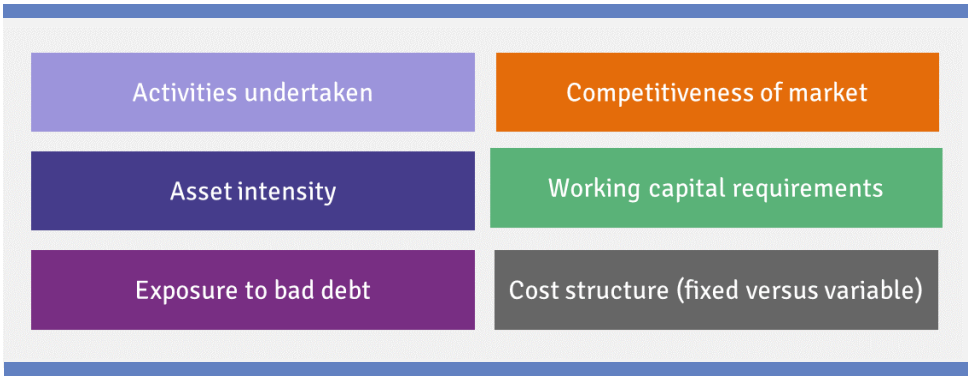
In practice, it should be acknowledged that the benchmarking of operating margins is inherently subjective. This is because economic theory does not provide a strong basis for determining an appropriate 'level', as similar levels of economic profit can translate into very divergent levels of margin over time, across industries and firms. As a result, a robust approach requires collating a wide range of information and then applying a clear set of criteria in order to evaluate that information to arrive at a reasonable view. We consider that a best practice methodology should incorporate a:

- comparator based approach (which relies on identifying evidence regarding EBIT margins for an appropriate comparator set of companies);
- review of regulatory precedent relating to the setting of net retail margins; and
- ROCE modelling approach.

2.2.1 Our comparator methodology

Our first approach is to review both: (i) EBIT margins earned by comparator companies in markets; and (ii) margins set by regulators in relevant determinations. The robustness of the approach rests on the similarity of the comparators to Bristol and Wessex's retail businesses, both in terms of overall risk profile and asset intensity (the latter being relevant because the 'return' is being set on an operating margin basis, where – as indicated in our discussion of the conceptual issues – a key role is to provide a return on retail capital investment). It is therefore important to have a transparent framework with which to identify and evaluate comparators. Our view is that there are six important criteria to consider here, as summarised in the following figure.

Figure 3: Criteria for assessing comparators



Source: Economic Insight

To inform our advice to Bristol and Wessex, we have undertaken a 'top down' assessment of comparators against the criteria described in the above framework. In total, we have reviewed the financial performance of 35 comparators, which are as follows:

- **Business stream**. The retail arm of Scottish Water.
- **Other water retailers**. Companies included are: Commercial Water Solutions; Aimera; Bluewater; Cobalt Water; Castle Water and Water Scan. (We have excluded the retail arms of incumbent companies in England, as these will be subject to the overall non-household default margin level).
- **Mobile Virtual Network Operators** (MVNOs). These are firms such as Virgin Mobile, who purchase bandwidth wholesale from Mobile Network Operators (MNOs) such as Vodafone or Everything Everywhere; and then sell mobile retail contracts to end customers. Our analysis includes: Tesco Mobile; Virgin Mobile; Lebara Mobile; Lyca Mobile; Mundio Mobile Ltd; and 20:20 Mobile.
- **Energy retailers.** Firms such as British Gas, who buy energy from wholesalers and offer retail tariffs to end customers. Our analysis includes: (i) 'The Big Six' – E.on, British Gas, EDF, Npower (RWE), Scottish Power, and SSE, and (ii) independent energy retailers – First Utility, Ovo Energy, Utility Warehouse, and Opus Energy.
- **Mobile phone retailers**. Firms that retail mobile phone handsets and contracts (typically from physical stores, but also online) on behalf of MNOs and MVNOs. Our analysis includes Phones4U and Carphone Warehouse.
- **Retail internet service providers** (ISPs). Firms that retail internet (and telephony) services, reliant on purchasing network access wholesale from firms such as BT. Our analysis includes: Talk Talk; Plusnet; Zen Internet; Newcall Telecom; and KCOM Group.
- **Supermarket retailers.** Major grocery retail multiples. Our analysis includes: Tesco; Sainsbury; Morrison's; Marks and Spencer; and Waitrose.

Clearly some of these comparators are likely to be more relevant than others. It is important, therefore, to understand that the above list represents our 'start point', from which we subsequently apply our framework to identify those of most relevance (and eliminate those of low relevance). Consequently, the purpose of this initial list is to include a wider range of firms / sectors that *may* merit consideration. For example, mobile phone retailers need to operate a network of physical stores, which might indicate that they will be a poor comparator. On the other hand, their revenue model is not so dissimilar from water retailers (in the sense that their income typically comes through a commission on the underlying value of a customer's phone contract).

In completing our comparator analysis, we have made two methodological steps.

- Firstly, we have aggregated (i.e. averaged) the comparator EBIT margins – and other financial metrics – within each of the categories listed above and also over time. This is to reflect the fact that retail margins can vary substantially across firms and over time. This volatility means that, as noted in our discussion of the key conceptual issues, firms need to generate a sufficient return in profitable years to compensate them for losses in other years to remain investable.

- Secondly, in calculating the EBIT margins for the comparators, we have excluded exceptional items (both costs and income) as we consider it appropriate to focus on the underlying operational profitability of those comparators. This is based on a detailed review of the notes to those companies' statutory accounts.

Finally, within our comparator approach, we have also included a review of regulatory determinations and precedent relating to the setting of net retail margins.

2.2.2 Our ROCE modelling analysis

Whilst water retail businesses are 'asset light' (and hence it is inappropriate to explicitly set allowed profit based on retail WACC) it is important to check that the allowed EBIT operating margins are sufficient to provide an adequate return on retail capital employed (or indeed, that returns are not 'excessive'). Our approach, therefore, is to determine what level of % EBIT margin would be consistent with Bristol and Wessex's retail businesses earning a ROCE equal to an assumed WACC. We do this by translating the % EBIT into a £m, then dividing this by retail capital employed in order to determine ROCE.

To reflect the fact that the historical RCV (as of PR14) was ring-fenced within the wholesale business, we have developed our analysis on a forward-looking basis, starting from PR19. Key elements of our approach include:

- As a start point, we project forward end revenues for PR19 (an underlying trend of 0% is assumed).
- The % retail EBIT margin is "solved for", so that ROCE = WACC (on average, over the modelling time-period).
- Our analysis is primarily based on regulatory accounting information.
- We developed the analysis on an assumed asset life of 5 years - and depreciation is applied on a straight-line basis.
- We have identified and solved for a "low case"; a "medium case"; and a "high case", whereby we vary key assumptions. These are set out fully in the ROCE section below.

We have not sought to independently estimate a retail WACC for the purpose of our work here. Instead, we have reviewed a range of existing evidence, which is summarised in the following table (see overleaf).

Table 3: Summary of existing retail WACC evidence

Source	Year	Retail WACC (pre-tax nominal %)
First Economics report for PR14 – water retail WACC	2013	9.1%
PWC retail margin report for PR14 – water retail WACC	2014	7.6%
The CMA – estimated WACC for a standalone energy retailer	2015	9.3% - 11.0%
Ofwat credit terms between wholesalers and retailers	2016	4.0% - 8.0%[7]
Frontier Economics PR16 assurance report for Affinity Water – NHH water retail WACC	2016	7.0% - 15.0%
The IPART – WACC for gas retail in Australia	2017	7.2% - 8.1%

Sources: 'Setting the Allowed Margin for Retail Price Controls: a report prepared for Water UK.' First Economics (2013); 'Water retail net margins.' PWC (February 2014); 'Energy Market Investigation – Analysis of the cost of capital of energy firms.' The CMA (2015); 'Credit terms between wholesalers and retailers in the new retail market.' Ofwat (2016); 'PR16 Non-household price control: Assurance report prepared for Affinity Water.' Frontier Economics (2016); 'WACC Biannual Update.' The IPART (January 2017)

Regarding the above, clearly arguments could be made as to how much weight should be placed on the various precedent. For example, one might argue that more weight should be placed on *more recent* WACC determinations, as they may more closely reflect market conditions at the time of PR19. Similarly, one could suggest that determinations relating to the *water* sector should be preferred over others – or equally, that determinations relating to *domestic customers* (or domestic and business customers combined) are superior to determinations relating only to business customers.

We note the following:

- That, the overall average retail WACC implied by the above is 8.6%. If one excludes the older determinations from 2013 and 2014, this increases to 8.7%.
- However, a number of the determinations include a range and - in some cases, either relate to business customers, or a combination of domestic and business customers. We consider it plausible that systematic risk could be higher in relation to non-household customers – and so, where ranges are proposed, arguably figures toward the lower end are more relevant.
- Therefore, for our purposes, we have assumed a nominal pre-tax WACC of 4.0% and 8.0% for our "low" and "high" cases respectively, in our ROCE modelling.

'We have assumed a nominal pre-tax WACC of 4.0% and 8.0% for our "low" and "high" cases respectively, in our ROCE modelling.'

[7] *Ofwat used a range, starting from 4.0%, which it described as the "retail cost of debt" and 8.0%, which it described as the "retail cost of equity."*

3. Comparator analysis

In this chapter we set out the results of our comparator approach and review of regulatory precedent. We find that MVNOs and energy retailers represent the most suitable comparators for Bristol and Wessex's retail businesses – implying an EBIT margin of 3.1%. Our review of precedent implies an average retail EBIT margin of 2.6% - although the CMA's assessment of the energy retail market is consistent with a lower EBIT of 0.9%.

This chapter sets out our comparative analysis and is structured as follows:

- We firstly set out the range of EBIT margins implied by the range of comparators (we have reviewed 35 companies in total).
- We then provide our assessment of the comparators against our evaluation criteria, examining in turn:
  - the similarity of their activities;
  - competitive intensity;
  - asset intensity;
  - working capital;
  - bad debt (which, as we explain, cannot be directly observed); and
  - cost structure.
- We then set out an 'overall scoring' to identify which firms are objectively 'most similar' to household retail in the water industry.
- We subsequently provide a review of the relevant regulatory precedent relating to the setting of allowed retail margins.
- Finally, we set out our conclusions regarding what inferences we think should be drawn from the above comparative analysis.

A note on the treatment of energy retailers

Our analysis of energy retailers is separated into two groups:

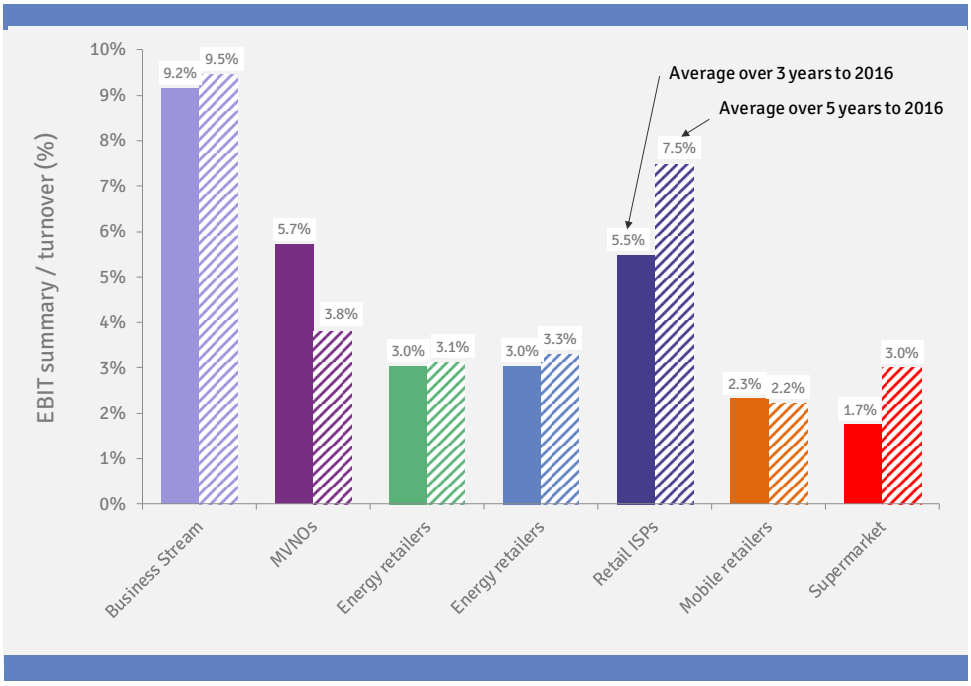
- **energy retailers** - included here is the 'big six' energy companies (SSE, Scottish Power, EDF, Npower, British Gas, and E.On); and
- **energy retailers (independents)** - these are independent retail only energy companies (Opus Energy, Utility Warehouse, Ovo Energy, and First Energy).

The motivation for examining these two groups separately is one of data availability. Namely, the 'big six' companies remain part of vertically integrated firms. While Ofgem requires some financials to be reported at the segment level (i.e. retail) these are limited to the profit and loss account - and exclude detailed balance sheet breakdowns. As such, whilst we can calculate retail margins for these companies, we cannot analyse their comparability to water retail in relation to asset intensity, and so on. In contrast, the statutory accounts of independent energy retailers allow us to analyse *both* profit and loss and balance sheet data relating specifically to retail.

3.1 Retail EBIT margins earned in other markets

Figure 4 shows the average EBIT margins for each of our comparator groups (within which there are a total of 35 comparator companies) described previously. These have been averaged across firms and over time (both 3 years and 5 years up to and including 2016[8]) and are expressed as a % of end retail revenues.

Figure 4: Comparator EBIT margins



Source: Economic Insight analysis

The results show that, of our comparators, Business Stream has the highest EBIT margin at 9.2% and 9.5% in the 3 and 5 years to 2016 respectively. Retail ISPs have the second highest margins at 5.5% and 7.5%. The remaining comparator groups are generally within a fairly narrow range – with MVNOs, energy, and mobile retailer's

[8] *For MVNO's, data over 3 and 5 years to 2015.*

average EBITs varying from 2.2% to 5.7% over the 3 and 5-year period. Additionally, we also note that both the independent and 'big six' energy retailers have similar levels of EBIT margin.

It is also worth noting that, in the CMA's energy market review, the competition authority's analysis found that the average EBIT margins earned on sales to domestic customers were 3.5% over the period 2009-2014 (which is broadly consistent with our analysis).[9]

3.1.1 Assessment of water retailers

In light of the recent NHH market opening in England, we have also conducted an assessment of independent water retailers' EBIT margins (i.e. in addition to Business Stream above). However, we found that only limited information is available (for example, many retailers are so small that they do not have to file full accounts and so P&L data is not available in many cases). In addition, we have only been able to calculate EBIT margins for one year (2016). As such, limited inferences can be drawn. The following table sets out the EBIT margins of NHH water retailers for whom we have been able to obtain information.

Table 4: EBIT margins for independent water retailers

Company	EBIT (%)	Notes
Commercial Water Solutions	3%	Operates in Scotland only
Aimera	8%	Operates in Scotland only
Bluewater	-14%	Operates in Scotland only
Cobalt Water	7%	Operates in both Scotland and England
Castle Water	-1%	Operates in both Scotland and England
Water Scan	-4%	Provides predominately water efficiency services, consultancy and systems to commercial water users.
Average	-0.21%	1 year average

Source: Economic Insight analysis of company statutory analysis

[9] *'Energy Market Investigation – summary of final report'. Competition & Markets Authority (2016).*

The above shows that, on average, independent water retailers are loss-making. This is not surprising, given they are all likely to be incurring material costs relating to marketing and promotional activities in the near-term, in order to build both a brand and a customer base, in due course.

3.2 Assessment of comparators against criteria

Having calculated the EBITs earned by our comparators over time, we need to consider which ones provide the most suitable reference point for determining an appropriate HH water retail margin at PR19. In the remainder of this section therefore, we evaluate the comparators against our framework – as set out earlier. This includes both qualitative and quantitative evidence. We consider in turn: activities undertaken; the competitiveness of their markets; asset intensity; working capital requirements; bad debt exposure; and cost structures.

3.2.1 Activities undertaken

The activities Ofwat includes within its definition of retail series are: customer services (billing, payment handling, enquires and complaints etc.); debt management; meter reading; decisions and administration of disconnections and reconnections; demand-side water efficiency initiatives; customer-side leaks; general support; and providing developing information.

With the above in mind, the following table provides an overview of the activities undertaken by comparator groups - and our assessment of their similarity to HH retail in the water industry.

IN TERMS OF THE SIMILARITY OF ACTIVITIES UNDERTAKEN, BUSINESS STREAM, WATER RETAILERS, MVNOs AND ENERGY RETAILERS, ARE THE CLOSEST COMPARATORS.

Table 5: Comparison of activities

Comparator	Description of activities	Similarity to Pelican
Business stream	Retailer of water and sewerage services for business customers, primarily in Scotland. Key activities include: purchasing of wholesale inputs; design and setting of retail tariffs; customer billing, payment handling; call handling; debt management; and meter reading.	Very high (with respect to business customers only).
Other water retailers	Providers of water and sewerage retail services across the UK (England and Scotland) to non-household customers. Activities include: customer billing; payment handling; call handling; debt management and meter reading.	Very high
MNVOs	Retailers of mobile phone services in the UK. Activities include: purchasing airtime 'wholesale' from network operators; design and setting of retail tariffs; sales and marketing; customer billing; payment handling; and managing bad debt risk.	High
Energy retailers	Retailers of electricity and gas services in the UK. Activities include: contracting with wholesale suppliers; retail pricing / marketing; customer billing; payment handling; and managing bad debt.	High
Retail ISPs	Retail internet (broadband) services, which are primarily provided through BT's infrastructure. Firms therefore contract with BT on a wholesale basis to provide services to end customers.	Medium
Mobile retailers	Revenue primarily from commission on contracts sold on MNO networks based on expected customer value. Key activities include: contracting with MNOs; managing retail estate for physical outlets; purchasing and managing handset stock; and end customer's sales and payment handling.	Low
Supermarket retailers	Retail of wide variety of physical produce through both bricks & mortar and online channels to end customers – key activities include: site acquisition and estate management; supplier sourcing; supply chain management; distribution; proposition and price design; marketing; end sales; and payment handling.	Very low

Source: Economic Insight

3.2.2 Competitiveness of the market

In identifying suitable benchmarks, it is important to ensure that the profit margins being earned are not in part due to a lack of competition. In the following therefore, we set out our assessment of the relative competitiveness of the markets in which our comparators operate in.

- **Business Stream**. The evidence on the effectiveness of competition in the Scottish retail market is mixed. The WICS has published a range of information indicating that competitive pressure has resulted in improved

/ tailored service offerings and lower prices (relative to the counterfactual of default tariffs).[10] In addition, Business Stream claims that it has delivered material efficiencies as the direct result of competitive pressure.[11] However, evidence also suggests that customer switching has been very limited. For example, as of April 2012, (some four years after market opening) Business Stream was reported to retain 95% market share.[12] This appeared to have remained the case in 2013, where an Open Water discussion paper indicated that only 5% of customers had switched in total since the introduction of competition.[13] The loss of the public sector supply contract in later 2013 is likely to have reduced its market share by around 20% - however, whether this is indicative of increased wider customer engagement and switching is unclear. Relatedly, Business Streams margins have risen markedly since market opening, peaking in 2014 at an EBIT margin of 10.5%. However, since then, margins have started to trend downwards, albeit marginally. **Assessment: Limited competition in the past but potentially increasing.**

- **Other water retailers (non-household water market in England and Wales)**. While there has been a significant number of new entrants to the market, with 25 retailers holding water supply / and or sewerage licenses,[14] this market is relatively immature. Further to this, given limited information exists, we cannot draw a conclusion on the competitiveness of this market at this time. **Assessment: Unknown.**
- **MVNOs**. There are good reasons to suppose that competition at the retail level between both MNOs and MVNOs is strong and effective. In particular, there is considerable consumer choice, a variety of available tariffs and substantial price and service transparency to enable comparisons to be made. Relatedly, since around 2008, revenues have generally been falling and around 30 operators compete for business, ensuring that prices are among the lowest amongst developed countries (see following figure). **Assessment: Highly competitive.**

10 *For example, see: 'Competition in the Scottish water industry achieving best value for water and sewerage customers 2009-10.' The WICS (2010).*
11 *'Scotland's businesses reap the rewards of five years of water competition.' Business Stream press release (April 2013).*
12 *As quoted in 'Water company hopes to flow across Border.' The Herald, Scotland (April 2012).*
13 *'The New Retail Market for Water and Sewerage Services.' Open Water (2013). Page 13.*
14 *http://www.ofwat.gov.uk/regulated-companies/ofwat-industry-overview/licences/*

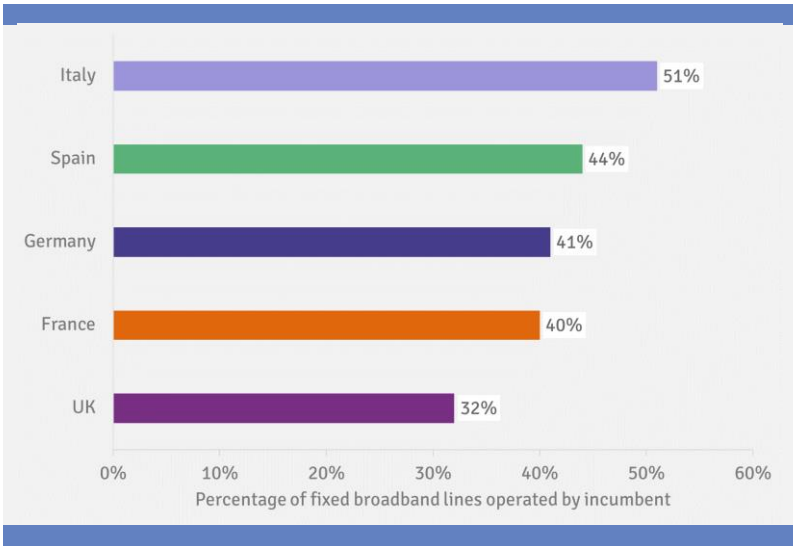
Figure 5: International comparison of mobile prices, 2016[15]

Source: Ofcom, 2016.

- **Energy retail markets**. The competitiveness of retail energy markets is currently an issue of considerable debate. Nonetheless, evidence suggests that they are *reasonably* competitive. For example, annual customer switching rates "*have increased among domestic and business customers but overall engagement remains largely unchanged",* with domestic switch rates in 2015 rise to 12% for electricity and 13% for gas – an increase of two percentage points respectively on 2014.[16] Also in its Retail Market Review, Ofgem found that new suppliers are entering the market at an increased rate, while existing small and medium-sized suppliers continue to expand. However, there have been some concerns surrounding the market, as raised by the CMA Energy Market Investigation, specifically "*we have identified a combination of features of the market for domestic retail supply of gas and electricity in Great Britain that give rise to an AEC through an overarching feature of weak customer response, which, in turn, gives suppliers a position of unilateral market power concerning their inactive customer base".*[17] **Assessment: relatively competitive.**
- **Retail ISPs.** In 2005**,** Ofcom – as part of establishing a wider set of undertakings – required BT to establish its Openreach division to supply wholesale services to rivals. BT was also required to provide 'local loop unbundling'; and in combination these measures have seen rapid increases in retail broadband competition. As part of its overall regulatory function, Ofcom monitors and publishes a range of data and information regarding the competitiveness of the market. In its 2016 European Broadband Scorecard, Ofcom specifically found that the UK had the second cheapest price per unit for fixed broadband data consumption, when compared with Europe. It further found, as shown by the following figure, that the UK market was generally less concentrated than European comparators.[18] **Assessment: Competitive.**

[15] *Connection type 200mins, 200 SMS, 2GB 4G data.*
[16] *'Retail Energy Markets in 2016'. Ofgem (2016). Page 2.*
[17] *'Retail Energy Markets in 2016'. Ofgem (2016). Page 37.*
[18] *' International Communications Market Report 2016: EU5 Broadband Scorecard', Ofcom (2016).*

Figure 6: Percentage of fixed broadband lines operated by incumbent



Source: 'Market Report 2016: EU5 Broadband Scorecard.' Ofcom (2016). Page 12

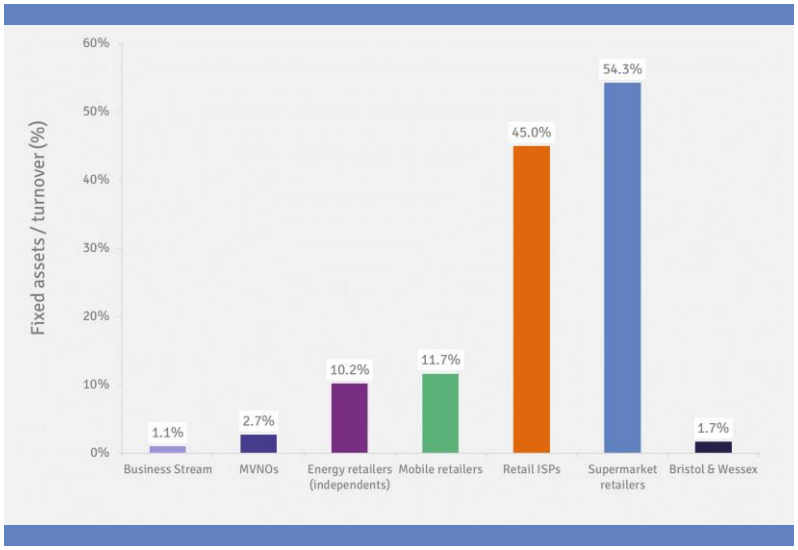
- **Mobile retailers**. Consumers have a wide variety of choice when considering where to purchase a mobile phone / mobile phone contract. This includes both direct for MNOs or MVNOs, or via mobile retailer outlets, such as Phones4U or Carphonewarehouse. It also seems likely that there will be a high degree of price transparency. **Assessment: Competitive.**
- **Supermarket retailers**. Evidence suggests that consumers face considerable choice in relation to supermarket retail and are willing and able to switch supplier readily. Previous competition authority referrals have also tended to support this view, with the Competition Commission concluding that: "*competition in the UK groceries industry is effective and delivers good outcomes for consumers*"[19] (although it had some concerns regarding local concentration and risk transference to suppliers). **Assessment: Highly Competitive.**

3.2.3 Asset intensity

Given the 'asset light' nature of water retail, it is important to ensure that our comparators are also relatively capital non-intensive. To assess this, we calculate both the ration of fixed assets to turnover; and capital employed to turnover, for our comparators and Bristol / Wessex's retail business, the results of which are shown in the following figures (metrics averaged over 5 years to 2016[20]).

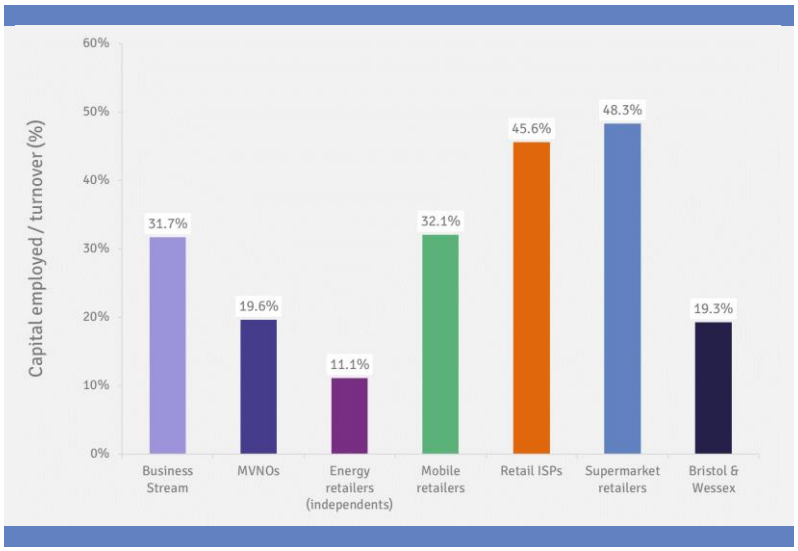
[19] *See 'Groceries Market Investigation – Final Report.' Competition Commission (2008).*
[20] *For MVNO's, data over 3 and 5 years to 2015.*

Figure 7: Fixed assets / turnover



Source: Economic Insight analysis

Figure 8: Capital employed / turnover



Source: Economic Insight analysis

Our analysis indicates that, with respect to 'asset intensity', the MNVOs and independent energy retailers represent the closest comparators to Bristol and Wessex's retail businesses. Both mobile and supermarket retailers are significantly more asset intensive, indicating that they are less close comparators. It is notable that ISPs are relatively capital intensive – there are a number of reasons for this, including: (i) under local loop unbundling, retailers must often still invest in their own assets and equipment, which are installed within BT's exchanges; and (ii) in some cases there are material intangibles reported on balance sheets relating to investment in customer acquisition.

In addition to considering the overall asset intensity of our comparators, it is also informative to examine the typical 'useful lives' of those assets. In particular, water and sewerage retail assets will primarily consist of billing systems and related software, which are likely to have relatively short asset lives. For reference, therefore,

the table below shows the assumed asset lives as reported in the notes to accounts of our comparators.

Table 6: Asset lives of comparators

Comparator	Asset lives
Business Stream	2 – 5
Other water retailers	2 – 5
MNVOs	2 – 8
Mobile phone retailers	3 – 5
Retail ISPs	1 – 50
Supermarkets	1 – 50

Source: Economic Insight based on statutory accounts

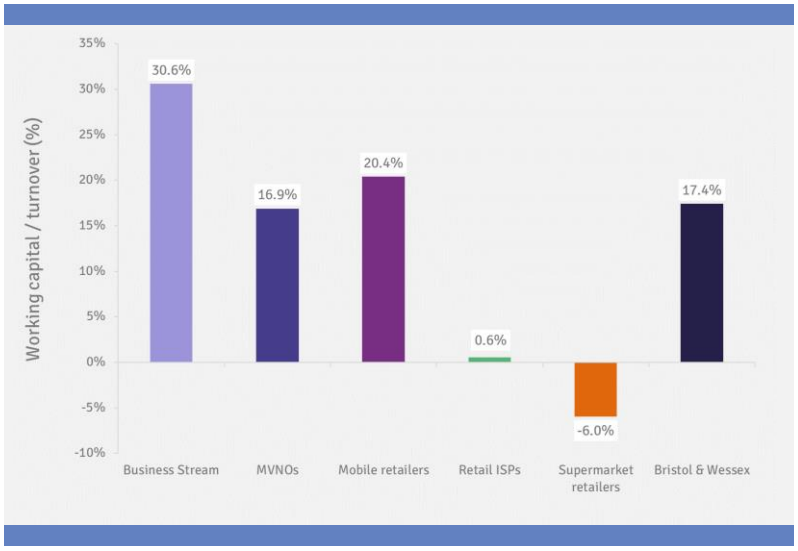
This shows that water retailers (including Business Stream), MVNOs and mobile phone retailers all typically utilise assets with relatively short lives (which are thus broadly comparable to those likely to be utilised by HH water and sewerage retailers). Retail ISPs and supermarkets, however, can utilise assets with much longer lives (for example, supermarkets will have material investment in freehold buildings).

A COMPARISON OF WORKING CAPITAL LEVELS SUGGESTS THAT MVNOs ARE THE CLOSEST COMPARATOR TO WATER RETAIL.

3.2.4 Working capital

We have also examined the ratio of working capital to turnover for our comparator groups. Working capital is calculated as the difference between current assets and current liabilities.

Figure 9: Working capital / turnover



Source: Economic Insight analysis

Our analysis shows that MVNOs, Mobile retailers and Business Stream all have significantly 'positive' working capital requirements that need to be financed (like Bristol and Wessex). Of the comparators with positive working capital – MVNOs are the most similar to Bristol and Wessex's retail businesses. Retail ISPs and supermarket retailers have very low or negative working capital – indicating that they are likely to be a poor comparator to water retail in this regard.

The above analysis excludes energy retailers from this analysis, as we have some concerns with the financial reporting regarding this information. However, we would expect energy retailers to have relatively large, positive working capital, due to the fact customers tend to pay for services in arrears – typically up to 90 days. Phil Bentley, managing director of British Gas, has commented in the past that other competitors haven't entered the market partly because "*the working capital is huge*".[21] As per the quotation above, Ofgem recognises that the majority of capital employed by energy retailers is in the form of working capital.

3.2.5 Bad debt

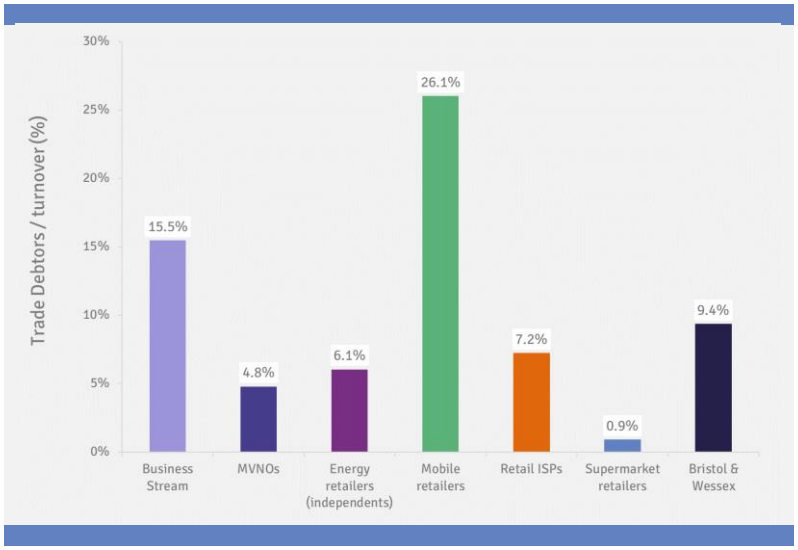
Bad debt is a particularly important issue for water retailers – partly because bad debt volatility might materially impact returns (given the asset light nature of the business) but also because of the legal restrictions on disconnecting domestic users in arrears. However, a comparison of the relative exposure to bad debt is complicated by a number of factors including: (i) the fact that bad debt provisions are often not stated in company accounts and so are not always available for comparators; (ii) the fact that there is uncertainty as to where, in fact, bad debt risk will ultimately sit in the water value chain.

Notwithstanding the above, we have calculated the ratio of trade debtors to turnover of our comparators, as this provides an *indication* of the total potential exposure to bad debt, if not the actual bad debt costs incurred (metrics averaged over 5 years[22] – see the following figure).

[21] *See statements in Daily Telegraph article: http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/9119224/Your-bills-are-low-British-Gas-boss-Phil-Bentley-tells-stomers.html The Telegraph (2012)*

[22] *Pelican Water (which is the average of Wessex and Bristol) is averaged over 3 years to 2015.*

Figure 10: Trade debtors / turnover



Source: Economic Insight Analysis

In terms of trade debtor / turnover ratios, Business Stream and retail ISPs are closest to Wessex and Bristol's retail business, followed by energy retailers. Supermarkets on the other hand have limited trade debtors (as there is limited scope for payment in arrears) consistent with their negative working capital. Which suggests they are a poor comparator to water HH retailers.

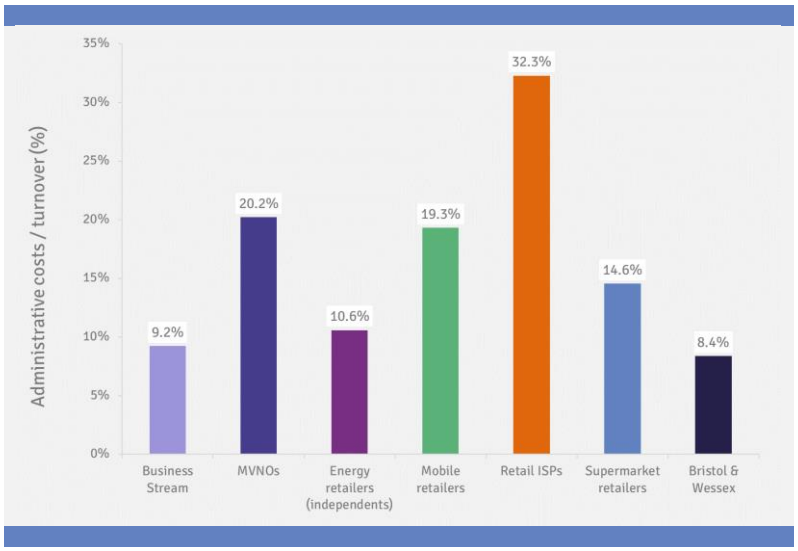
The restrictions on discounting domestic water customers means that, compared to other sectors, water retailers are likely to be more exposed to bad debt risk.[23]

[23] *Note: While energy retailers can disconnect domestic customers for non-payment, there is a detailed legal process that must be adhered to and, additionally, a safeguard for vulnerable customers that prevents them from being disconnected.*

3.2.6 Cost structure

Lastly, we examined the 'cost structure' of our comparators. As accounts typically differentiate between 'costs of goods sold' (costs that vary with sales) and 'administrative costs' – or indirect costs – it is possible to generate comparisons across firms and sectors. Accordingly, the following figure shows the ratio of administrative (i.e. fixed) costs to turnover across the comparators (averaged over 5 years[24]).

Figure 11: Administrative costs / turnover



Source: Economic Insight Analysis

The above analysis shows that Business Stream and energy retailers have cost structures that are most similar to that of Bristol and Wessex's retail businesses.

[24] *Wessex and Bristol, and MVNOs are averaged over 5 years to 2015.*

OVERALL, MVNOs ARE THE CLOSEST COMPARATOR, BASED ON THE CRITERIA WE HAVE REVIEWED.

3.2.7 Summary of assessment

Table 7 below summarises the results of our evaluation of the comparators against our framework. This is based on the evidence set out in the preceding section. For each criterion, we have scored the comparator category out of 5, where 5 is most similar to Bristol and Wessex Water's retail businesses.

Based on our assessment, we find that MVNOs, represent the best comparator for Bristol and Wessex, followed by energy retailers and Business Stream.

Table 7: Summary of scoring framework

Criterion / Comparator	Business Stream	MVNOs	Energy retailers	Mobile retailers	Retail ISPs	Supermarket retailers
Activities	✓✓✓✓✓	✓✓✓✓	✓✓✓✓	✓✓	✓✓✓	✓
Competitiveness of the market	✓✓	✓✓✓✓✓	✓✓✓✓	✓✓✓✓	✓✓✓✓	✓✓✓✓✓
Asset intensity	✓✓✓✓	✓✓✓✓✓	✓✓✓	✓✓	✓	✓
Working capital	✓✓✓	✓✓✓✓✓	✓✓✓✓	✓✓✓✓	✓	✓
Bad debt	✓✓	✓✓✓	✓✓✓✓	✓✓✓	✓✓✓✓✓	✓
Cost structures	✓✓✓✓✓	✓✓	✓✓✓	✓✓✓	✓	✓✓✓
Overall score (30)	**21**	**24**	**22**	**18**	**15**	**12**

Source: Economic Insight

3.4 Regulatory determinations and precedent

'We have reviewed the net retail margins set in a number of regulatory determinations, precedents and analyses.'

To further our comparative margin approach, we have reviewed the net retail margins set in a number of regulatory determinations, precedents and analyses. Generally, our view is that the actual margins being earned in competitive markets within comparative industries perhaps represent a better source of evidence. This is for two reasons. Firstly, by definition, regulatory determinations may themselves have referenced relevant market and comparator data at the time (and so, to some extent, referencing historic precedent might be considered somewhat inferior to contemporaneous assessment of market and comparator data). Secondly, each regulatory decision will reflect a range of policy objectives and issues that will be unique to each case. Given these factors, an over reliance on regulatory precedent would seem to run the risk of creating a circularity (in the sense that any new decision based primarily on precedent merely creates more precedent consistent with historic determinations).

Notwithstanding the above, we have reviewed a total of 12 regulatory determinations of net retail margins across a range of sectors. We have also sought to make an assessment of their relevance to the setting of retail margins for PR19 in the water and sewerage industry for England and Wales. The following table (see overleaf) summarises our findings.

Table 8: Summary of retail margins in regulatory determinations[25]

Regulator	Sector & country	EBIT retail margin (%)	Year	Relevant?
The WICS	Water & sewerage retail (Scotland)	3.2%	2005	Yes
Ofgem	Electricity & gas retail (UK)	2.7%	2011	Yes
The IPART	Electricity retail (Australia)	4.4%	2013	Yes
The IPART	Gas retail (Australia)	5.5%	2016	Yes
NIUR	Electricity retail (Northern Ireland)	1.7%	2011	Yes
NIUR	Gas retail (Northern Ireland)	1.5%	2011	Yes
The MMC	Hydro-Electric retail (Scotland)	0.5%	1995	Yes
Ofcom	Post (UK)	7.5%	2012	No
CER	Electricity retail (Ireland)	1.3%	2010	Yes
CER	Gas	2.0%	2013	Yes
CMA[26]	View of competitive market	0.93%	2016	Yes
ICRC	Supply of electricity to small customers (Australia)	5.03%	2017	Yes
Average		**3.0%**		
Average (excluding those of low relevance)		**2.6%**		

Source: Economic Insight

[25] *Note: in some cases, figures shown represent a mid-point of a range or are inferred from other elements of regulatory determinations. Please see details in the relevant sections of the annex.*

[26] *The CMA, in its appendix on energy retail supply cost of capital, suggests that the cost of capital (of a competitive market) is between 9.3% and 11.5%. Therefore, to calculate the % EBIT we have taken the midpoint cost of capital and multiplied this by the capital employed for the energy retailers and divided by the £s turnover.*

The results summarised above indicate that the overall average net EBIT retail margin allowed in regulatory determinations (or analyses) is 3.0%.

In relation to Ofcom's determination of a reasonable EBIT margin for Royal Mail Group (the mid-point of which was 7.5%) we note that unlike water retail markets, the postal industry is: (i) in structural decline; (ii) has a very high level of operation leverage; and (iii) is relatively exposed to macroeconomic shocks. We therefore considered it not to be relevant to the benchmarking of retail margins in the water and sewerage industry. Excluding this therefore, we find the average EBIT margin allowed for in regulatory determinations and analyses to be 2.6%.

Given that: (i) the determination is relatively recent; and (ii) our prior comparative analysis indicates that energy retail is likely to be a relatively good comparator, arguably some weight should be placed on the CMA's implied competitive EBIT margin in energy retail of 0.9%.

3.5 Conclusions from comparator approach

Our assessment of comparators indicates that MVNOs, energy retailers and Business Stream represent the most appropriate benchmarks for Bristol and Wessex water's retail business. However, as a reference point for HH retail in particular, we have some concerns relying on the actual margins earned by Business Stream. This reflects: (i) the fact that the evidence regarding the strength of competition in the Scottish retail market is somewhat mixed; and (ii) the fact that the risk profile may differ between HH and NHH.

Consistent with the above, we consider it appropriate to focus on MVNOs and energy retailers. Given the inherent volatility in retail operating margins, we consider that taking the 5-year average represents the most robust reference point. **This provides a range of 3.1% (energy) to 3.8% (MVNOs). The midpoint of this is 3.4%**. In addition, it is possible to adjust the implied EBIT margins for MVNOs, such that their working capital matches that we assume is required in water retail. Once this adjustment is made, the MVNO EBIT (averaged over 5 years) reduces to 3.1%. A lack of data availability prevents this adjustment being made for energy retailers. **Consequently, in the round, we consider that an EBIT margin of 3.1% represents a reasonable interpretation of the comparator evidence.**

Our review of regulatory precedent is consistent with an EBIT margin of 2.6% - but as we noted previously, arguably some more weight should be placed on the **CMA's energy market analysis, which implies an EBIT margin of 0.9%.**

4. ROCE modelling analysis

In the following we set out the results of our ROCE modelling analysis. This is presented as an additional piece of evidence to complement our comparator approach. Here our modelling determines the margin levels consistent with Bristol and Wessex Waters' household retail businesses earning a ROCE equal to their WACC. Ultimately this modelling suggests a range for the EBIT margin of between 0.7% and 1.8%, with a 'medium case' scenario of 1.5%.

4.1 Summary of results

As described in Chapter 2 of this report, it is important to ensure that any % EBIT margins are sufficient to remunerate future investment (or, conversely, to ensure that they are not excessive).

In order to assess this, we have developed a forward-looking ROCE model of Bristol/Wessex's retail businesses (using the methodology set out previously). We have identified a "low"; "medium"; and "high" case, using a range of assumptions – where our ROCE model 'solves for' the net EBIT margins that would be consistent with the projected retail ROCE being equal to an assumed WACC (pre-tax nominal). The result being a range of appropriate EBIT margins.

The following table (see overleaf) sets out our underlying assumptions for our three scenarios.

Table 9: ROCE modelling assumptions

	Low case	Medium case	High case
Underlying revenue trend (% pa)	0.0%	0.0%	0.0%
Working capital (% of end revenue)	17.8%	17.8%	22.5%
Average retail asset lives (years)	5	5	5
Retail household nominal WACC (%)	4.0%	8.0%	8.0%
Modelling period	5 years	5 years	5 years

Source: Economic Insight, Ofwat

Regarding the above assumptions, the key points to note are as follows:

'We further note that the implied ranges [from our analysis] of 17.8% to 22.5% (working capital as a % of turnover) compare to a working capital to turnover ratio of 16.8% for MVNOs, which we consider to be a good comparator.'

- An assumption regarding the underlying revenue trend is needed because the EBIT margin is set as a % of end revenues (and therefore, in absolute terms, is a function of the outcome of the wholesale price control determinations). In all three cases, we assume a underlying trend of 0%.

- Working capital is a key driver of the total capital employed requirements of retailers. Our low and medium cases assume a total working capital requirement of 65 days. As we set out previously, this is consistent with the majority of retailer / wholesaler funding models previously assessed by Ofwat (specifically the credit option; cash; letter of credit; guarantee; and insurance models). In our high case, we assume that 82 days of working capital are required (this is consistent with the retailer 'pre-pay' model previously analysed by Ofwat). As we explained previously, we do not think that the 'unsecured credit model', under which retailers' working capital requirements could be lower, is credible. We further note that the implied ranges of 17.8% to 22.5% (as a % of turnover) compare to a working capital to turnover ratio of 16.8% for MVNOs, which we consider to be a good comparator – and are materially lower than Business Stream's working capital requirements.

- In all three scenarios, we assume an average asset life of 5 years, which appears to be consistent with companies' actual depreciation charges for retail and their stated depreciation policies.

- In terms of the nominal WACC, we have assumed a figure of 4.0% in our "low case" and a figure of 8.0% in both our "medium" and "high" cases. These figures reflect Ofwat's assumed low and high cases for a WACC, as used in its analysis of credit terms in the non-household market.[27] The 4.0% reflects Ofwat's assessment of the cost of debt. In light of other evidence referenced in this paper,

[27] *'Credit terms between wholesalers and retailers in the new retail market.' Ofwat (September 2016).*

these figures are probably somewhat conservative. However, we have not undertaken our own assessment of an appropriate retail WACC.

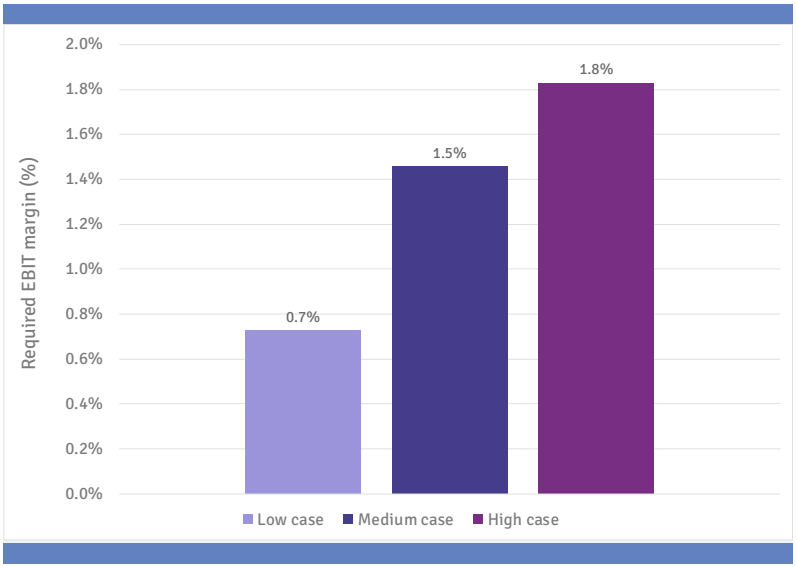
- Our model solves for an EIBT such that the ROCE = WACC averaged over a pre-defined time-period. For our purposes, we have assumed a 5-year time horizon, starting from the beginning of PR19, consistent with average asset lives. We have assumed a 5-year horizon for all three scenarios. This assumption does not materially impact any results.

OUR ROCE MODELLING IMPLIES AN EBIT MARGIN OF BETWEEN 0.7% AND 1.8%, WITH A 'MEDIUM' CASE OF 1.5%.

4.1.1 Net retail EBIT margins implied by ROCE modelling approach

The following figure shows the results of our analysis. We find that, using the above assumptions, our ROCE modelling implies a range for the required EBIT margin of 0.7% to 1.8%. Our medium case, which on balance we think represents the most credible view, indicates a required margin of 1.5%.

Figure 12: EBIT margins implied by ROCE modelling



Source: Economic Insight

Following from the above, the figure below shows the 'profile' of returns implied by our medium case. The EBIT margin, which is solved for is (by definition under our approach) constant in each year. The ROCE trends upwards very slightly because capital employed reduces marginally over time in our modelling (i.e. depreciation and disposals are greater than additions).

Figure 13: "Medium case" net EBIT margin required for ROCE = WACC

Source: Economic Insight

It is worth comparing our ROCE modelling results to those implied by our 'comparator' analysis and our review of regulatory precedent. Here, recall that:

- Our comparator analysis implied an appropriate EBIT margin of 3.1%.
- Our review of regulatory precedent implied an appropriate EBIT margin of 2.6% (although if we focus on the CMA's energy market investigation, we note that its assessment of a competitive WACC for a standalone energy retailer implied an EBIT margin of 0.9%).

In the round, our ROCE modelling analysis therefore tends to imply a somewhat *lower* margin than the other evidence reviewed here. This could be due to a range of factors – including:

  - » Differences between the risk profile and asset intensity of our comparators relative to that of Bristol and Wessex's retail business (i.e. no comparison is perfect).
  - » The ROCE modelling could understate the *true* level of tangible and intangible investment that the retail businesses will require on a forward-looking basis.
  - » The ROCE modelling could understate the risk profile of the retail businesses (i.e. there could be relevant *residual retail risks* captured in the comparator analysis, but omitted from the ROCE approach.

Our overall view is that – given that the regulatory framework for retail is to set allowed profit on a net margin rather than WACC * RCV basis – typically more weight should be attached to the comparator analysis. Put another way, if one put most

weight on ROCE modelling approach, it would call into question why a WACC * RCV approach was not retained for retail, which would somewhat undermine the rationale for this element of the regulatory framework.

5. Conclusions and recommendations

Our analysis is consistent with the appropriate household retail EBIT margin at PR19 lying in a range between 0.7% and 3.1% (and a credible case can be made for any figure along this spectrum). However, on balance, an objective assessment of the evidence suggests that the EBIT margin of 1.0% set at PR14 was conservative. As the household market is not currently open to competition, the implications of the specific level of margin are limited. Therefore, given practical considerations – coupled with the CMA's analysis of retail energy markets (which points to an EBIT margin of just below 1.0%) we consider it reasonable for Bristol and Wessex to continue to assume a 1.0% level of EBIT margin for PR19.

5.1 Summary of our findings

This report sets out three complementary approaches to informing the appropriate level of household retail EBIT margin for PR19. As described previously, the following table summarises the results of our analysis.

Table 10: Summary of evidence on retail % EBIT margins

Approach	HH
Comparator analysis	3.1%
Analysis of regulatory precedent	0.9% (CMA energy) - 2.6% (average of relevant precedent)
ROCE modelling	0.7% - 1.8% (with a medium case scenario of 1.5%)

Source: Economic Insight

Overall therefore, our analysis is consistent with an appropriate EBIT margin for household retail at PR19 lying in a range between 0.7% and 3.1%.

5.2 Conclusions and recommendations

Following from the above, we now set out our conclusions and associated recommendations for Bristol and Wessex Water.

- The assessment of an appropriate retail household EBIT margin is inherently subjectively. Whilst we think that the evidence we have provided is sufficiently robust to 'narrow' the potential range to between 0.7% and 3.1%, a credible case could be made for figures along this spectrum.

- That said, on balance we think the evidence here suggests that the 1.0% EBIT margin set at PR14 is perhaps somewhat conservative – if set with reference to the margin required by a standalone retailer in a competitive market. Key points underpinning this view are that:

  - One would typically place 'more' weight on the actual margins being earned by suitably comparable retailers in competitive markets (i.e. our comparator approach) – which tends to point to an EBIT at the upper end of our range.
  - Even using a ROCE modelling approach, somewhat conservative assumptions are required in order to imply a margin at or below 1.0% (noting our medium scenario implies a margin of 1.5%).
  - The regulatory precedent, once reviewed with care to ensure that only relevant comparators are included, implies an average of 2.6%.

- It should, however, be kept in mind that, for so long as the household retail market is not open to competition, the level of retail margin has no direct impact on customers (i.e. it is a 'zero sum game', as it simply determines how value is allocated between wholesale and retail). Consequently, at this time, there are no obvious welfare concerns associated with inadvertently setting the margin "too low".

- Therefore, for practical purposes (but also in light of the CMA's recent energy market analysis, which is consistent with a lower level of margin, at 0.9%) we consider it reasonable for Bristol and Wessex to continue to assume a household retail margin of 1.0%.

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