

# **Commentary on the Ofwat Consultation on *Putting the sector back in balance***

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## Executive summary

### Proposals for new regulations

The financial structures adopted by water companies and the realised financial returns have come under scrutiny recently with concerns raised about: high leverage; ‘excessive profits’ and high dividend payments ‘undermining the trust of consumers’; complex financial structures, including securitisations; and off-shore financial arrangements. Ofwat’s April 2018 Consultation “Putting the sector back in balance: Consultation on proposals for PR19 business plans” sets out a number of proposals to make amendments to the PR19 price setting process to try to respond to these concerns by proposing fundamental changes to the regulatory framework for the sector.

First, the Regulator identifies financial resilience, defined as ‘the extent to which an organisation’s financial arrangements enable it to avoid, cope with and recover from disruption’, as a key theme for PR19. This is hypothetical, given that no ‘disruption’ events resulted in financial distress of any water company to date (even in the case of the collapse of Enron when, Wessex Water, a subsidiary, was at risk, financial ring fence obligations protected the business and ensured that customers saw no disruption to their services). Still, the implicit premise is that companies might struggle to withstand potential shocks in the future. The assumption is that such events could result in financial difficulty or distress, which, in turn, could negatively affect customers. This might be a justified concern, if regulatory and financial mechanisms already in place can be shown to be ineffective at protecting customers in the case of financial distress of any of the licenced undertakers.

This ‘precautionary’ regulation appears well intended to prevent negative outcomes before they occur—the companies need to prove their financial resilience under a set of challenging stress-tests covering ‘severe, plausible and reasonable’ scenarios. If the stress-tests indicate that a company’s finances are not sufficiently resilient, robust mitigating actions will have to be set out up front. However, the Consultation does not consider whether the mechanisms already in place might be effective in addressing these concerns, nor does it set out a cost-benefit analysis, or assess potential trade-offs between the benefits of stronger resilience and the costs of securing it.

Second, the Consultation proposes a ‘gearing outperformance sharing mechanism’, which will carve out a share of the core ‘allowed’ return, as determined the Regulator itself, thereby reducing the *de facto* allowed return on the circa £120 billion of private capital currently employed in the industry. This ‘carve out’ is proposed to be calculated as a percentage of the difference between the notional cost of equity and the actual cost of debt (which means the widest possible difference) on the capital employed, financed with debt above a certain gearing level, also to be determined by the Regulator.

This is the first time that an explicit, sector-wide adjustment to differentiate allowed returns depending on the adopted financial structure is to be implemented by a UK regulator—in the past, the notional level of gearing was set as a reference point, not as a regulatory determination of what type of a financial structure might be appropriate or desirable.

The Consultation does not consider the question of the overall appropriate level of returns, nor does it suggest any explicit limits on returns above allowed returns (as e.g. Ofgem has done in its recent consultation on RII02), but instead partitions the core ‘allowed return’ depending on the adopted financial structure.

The implied premise of the Consultation is that gearing above a certain level is a market failure, which needs to be explicitly regulated. However, the Consultation does not consider whether any such form of sharing of higher required returns to equity due to leverage is actually observed as an efficient outcome in competitive markets.

The Consultation also calls for companies themselves to propose mechanisms to reduce the allowance for the cost of debt, depending on their actual cost of financing. This is a further mechanism to reduce returns, but, in this case, not for companies with higher leverage, but for those who managed to achieve a more efficient cost of debt. There is also a requirement for companies to justify variations in dividends, above what the Regulator has now found to be the ‘reasonable’ level of 5 per cent, to be ‘in customer interest’.

### **The ‘problem’ of leverage**

In economic terms, the rationale for the Regulator’s proposals must be the identification of market failures that require regulation in the first place. The appropriate starting point is, therefore, to consider whether the observed financing arrangements for water companies, and gearing levels in particular, are consistent with what would be expected in competitive markets as efficient economic outcomes. To start with, this can be considered from three different perspectives: (1) Whether the observed mix of different types of capital would be expected given the sector’s characteristics? (2) Are these consistent with comparable market evidence? and (3) Is it possible to identify specific market failures that need to be addressed?

The capital structures of water companies have evolved considerably from the point of privatisation—while equity capital invested in the regulatory capital value (RCV) has remained broadly constant, debt funding has increased. The result has been an increase in leverage at book values (but less so at market values), then stabilisation, and most recently a slight decrease. Importantly, Ofwat has also progressively increased its notional gearing assumption used to estimate the sector-wide allowed return up to 62.5 per cent at PR14, in line with market developments.

Securing this significant funding for investments from debt capital markets has been possible because debt providers themselves have been satisfied that equity capital provided sufficient security so as not to significantly increase the risk of

default, given the nature of the assets in the sector and the form of regulation. While the average credit rating in the sector has decreased somewhat, it has remained well within the investment grade level. The increase in leverage has meant that shareholders have taken on the additional risk of underwriting greater debt payment obligations, and losing control of the business in case these payments cannot be met.

The increase in gearing can be seen as a 'catch up' given the sector's characteristics and available financial structures. In general, gearing varies significantly across industries—e.g. financial institutions feature highly leveraged financial structures with gearing well above that in utilities, whereas more volatile technology sectors with short term, and often intangible, assets are low geared. The infrastructure sector in general, given its nature, features relatively high levels of gearing. For example, in contestable infrastructure market segments such as toll roads, off shore transmission, waste to energy plants, or other stand-alone infrastructure projects, gearing levels have been in the range of c70–90 per cent, or sometimes even higher, i.e. generally above the levels observed among the licenced water companies (despite the fact that singular assets might be perceived as more risky than diversified network portfolios of assets).

This catch up has not been surprising and is, in fact, in line with corporate finance research, which suggests that the debt capacity of a business depends on the business risk of the asset and volatility of the operating cashflows. All else equal, businesses with (1) lower elasticity of demand, (2) less cyclical costs, and (3) lower operating leverage (or cost fixity), and hence less volatile cashflows, can support higher fixed payments required by debt contracts. Compared with other sectors, higher leverage in the asset-heavy, regulated monopoly networks might be seen as expected and consistent with the nature of these businesses, given their capital-intensity, high collaterals of fixed, long-term assets, and relatively stable cashflows underpinned by a transparent and mature regulatory framework.

Moreover, certain features of the regulatory framework, as set by Ofwat, have themselves limited water companies' business/cashflow risk and hence financial risk, which, in turn, enabled them to achieve higher gearing, while still ensuring that they can finance their activities at investment grade credit rating. These features include: absence of volume or demand risk (given the revenue correction mechanism); sharing of cost risk; limits on variations in ROREs (given the design of rewards and penalties on output and quality incentives); provisions for interim determinations (IDoKs) allowing companies to apply for reopeners in case of material shocks; a substantial effect clause allowing for potential revisions of price limits for a change in circumstances etc.

At the same time, these features are generally not perceived to be a 'free lunch' because they are well known and expected to be 'priced in' the sector's low cost of capital. These features are also among the key reasons why the water sector has been able to raise such large amounts of private capital for investments at a low cost to customers and without the burden on the UK plc balance sheet. All of this resulted in an apparent equilibrium of low risk and low allowed return.

## Efficiency of capital markets financing utilities

It is difficult to see how the proposals can be justified by any problems with raising or efficiency of financing. The market for financing of utilities has been arguably one of the most liquid and efficient, as well as being highly competitive and dynamic, including significant innovation. The capital market for RCV-based networks is generally considered to be deep, in terms of quantum of issuance and capacity to fund new investments, characterised by high demand and providing constant access to financing in different market conditions; it has also allowed for some of the longest tenures among all corporate debt financing.

There has been no evidence of restricted investor appetite for UK water corporate debt and companies have continued to have unrestricted access to both debt and equity capital, as evidenced by continuous corporate debt issuance and equity transactions.

There has been also no suggestion that the cost of debt paid by companies is inefficient (e.g. higher than an index benchmark of equivalent credit rating). In fact, regulators have argued that UK utilities continue to access debt markets at a lower cost than benchmarks (the 'halo' effect). This in itself suggests that debt issuance has been efficient, allowing for variations over time.

## Ensuring financial resilience

Ofwat's statutory duty is to act in the benefit of customers and it is justified to intervene where there is evidence of market failure that could harm customers. The Consultation implies that such potential harm does exist due to leverage—i.e. that increasing the level of debt of regulated entities increases the risk of financial distress from shocks, which, in turn, imposes a contingent cost on customers. This is used to justify the proposed 'carve out' of the allowed returns to equity in case of higher leverage.

However, the Consultation does not attempt to demonstrate that companies with higher leverage are in fact less financially resilient—this is assumed as given—nor does it consider whether the existing features of the regulatory regime, the performance of the sector, or companies' adopted financial structures, make such a possibility of harm likely. Instead, the Consultation outlines requirements for companies to demonstrate that this is, in fact, *not* the case—i.e. to prove that they *are* financially resilient.

The only way these requirements can be seen as consistent is if one *assumes, a priori*, that companies with higher leverage cannot demonstrate resilience. It is not clear whether, if companies successfully demonstrate that they are financial resilient, the allowed equity returns would not be reduced.

If it is assumed that there is, nevertheless, potential harm to customers, an important question from a regulatory perspective is whether the embedded protections in the existing regulatory framework and in companies' financial structures, designed to strengthen financial resilience, limit financial distress and default risk and therefore, prevent the risk from being transferred to customers.



The present regulatory arrangements require companies to achieve a (comfortable) investment grade rating, which poses a clear limit as to how much financial risk companies can bear before breaching credit metrics. This might not provide a perfect protection, but ensures a degree of security, and, importantly, consistent and professional active monitoring of financial risk.

The fact that the cost of debt has not been a pass-through item for UK water companies during each AMP period to date also provides an incentive for companies to reduce their debt finance costs and to maintain, if not outperform, their level of credit risk. In practice, in order to achieve or outperform the cost of debt allowance, companies have to ensure that they maintain healthy financial ratios and limit their financial risk.

The regulatory (financial) ring fencing arrangements provide further protections—they require companies to conduct business as if the regulated business were the sole endeavour and operate as a separate entity, confirm every 12 months that the company has adequate financial, facilities and management resources, ensure that the dividend policy does not affect the company's financeability, maintain an investment grade credit rating, and not to allow for cross-defaults by increasing or accelerating financial liabilities because of default of another related entity. In addition, companies are subject to cash lock-up licence conditions, which prevent the transfer of funds outside of the regulated business. Regulators also typically conduct scenario analysis and stress-testing to ensure that companies' business plans are comfortably financeable at the allowed return.

Ofwat has described the ring-fencing arrangements in place as helping to *“reassure the regulator and customers that companies remain in a position to finance their functions and that consumers' interests are not adversely affected by a company's capital structure”* and these mechanisms have not failed so far.

The financial structures adopted by some more highly geared water companies also have features that increase resilience, given embedded protections in such structures. In particular, securitisations act as a 'disciplining device' ensuring structured and 'tight' cash management, and put in place restrictions on management discretion, limiting what any available cash flow can be spent on, in terms of, for example, acquisitions or expansion into non-core business areas.

At their core, securitisations include numerous provisions limiting the risk borne by lenders by placing security over cash flows to ensure that debt is serviced and financial distress is avoided, e.g. through financial and operational covenants linked to maintenance of financial ratios above certain thresholds, standby liquidity facilities, cash lock ups that act as a buffer to ensure that potential disruptions to normal operations do not affect debt payments, and hence do not result in distress. However, these benefits of securitisations for lenders and for customers have not been properly explained or discussed against potential counterfactuals, allowing for negative connotations to stand unchallenged.

All of the above act as protection mechanisms that help limit the level of financial risk that regulated business are able to take on. Ofwat so far has accepted these arrangements as sufficient protection mechanisms. It is not clear what conditions have changed and why these arrangements are no longer sufficient.

In general, it is difficult to determine whether all these protections are sufficient to prevent financial distress in all reasonable circumstances; there might be reasonable concerns about their effectiveness in particular cases. But without clear analysis and evidence that they are, in combination, insufficient, especially in light of additional proposed requirements for companies to demonstrate financial resilience, it is difficult to see how this can be used as a justification for assuming that there is a clear transfer of risks to customers from higher leverage that has to be then reflected in adjustments to returns.

It could be also argued that potential harm to customers might result from behavioural effects, e.g. that with less retained earnings, more highly leveraged companies would prioritise dividends over capital investments leading to under-investment, which, over time, would result in a lower quality of service to consumers. However, high level evidence does not suggest that companies with highly leveraged structures systematically underinvest, have lower performance metrics, or behave in a particularly risk averse manner.

### **Equity returns commensurate with risks**

The second set of arguments used in the Consultation to justify adjustments to returns for higher geared companies is that retained earnings may be shared as dividends over a smaller equity base, resulting in equity holders benefiting from higher returns without any corresponding 'benefit' to customers.

The realisation of 'benefits' from certain business decisions, cannot, on its own, constitute a justification for new regulation. There are benefits to innovation, good management, optimal allocation of resources etc, but their mere existence does not justify a need for additional regulation as long as they are consistent with efficient economic outcomes. Re-redistributions of benefits are typically addressed by social policy, not by economic regulation.

A slightly different potential justification for the proposed measures, alluded to in the Consultation, could be that increased returns on equity due to leverage come without any corresponding increase in risk exposure, and, therefore, without a requirement for higher returns. The argument could be that higher equity returns are not accompanied by increased risk, or that such increased risk does not exist, or that it exists but is borne by someone else.

The Consultation does not explore how such situations might arise, but given that equity risk increases with leverage by definition and in line with Modigliani and Miller (MM), the argument relies on the assumption that some other factors are at play, e.g. that equity might avoid this risk by sharing some of this additional risk with customers or third parties.

The proposed new regulations are based on the premise that risk to equity and hence the required equity returns from companies with higher gearing do not fully increase with leverage. If they did, then it would not be justified to reduce equity returns at higher leverage because that would be inconsistent with required remuneration to ensure financeability and with Ofwat's financeability duty.

The proposals need to be considered, therefore, in light of the relationship between equity risk, required returns to equity and leverage, and any potential factors affecting this relationship. These should also be considered in light of regulatory precedents, in terms of how regulators have reflected the relationship between gearing and required equity returns in regulatory determinations to date.

The work by Modigliani and Miller first showed that firms in fact cannot lower their cost of capital by simply increasing leverage, because the required return on equity increases with leverage as equity risk becomes more concentrated. The MM Capital Structure Irrelevance Proposition stipulates that under certain circumstances including no taxes, the cost of capital is invariant to the level of gearing, and instead, is determined by the riskiness of the firm's cashflows.

Overall, it is well established that as leverage increases, both the cost of debt and the cost of equity increase, which is contradicted by the proposed mechanisms, and means that they are inconsistent with finance theory. The lender protection mechanisms in structured finance do not change this relationship in practice—while they might lower the cost of debt, they imply a corresponding increase in the cost of equity, since features such as reserve requirements and liquidity buffers have the effect of locking up cash which could otherwise be available to equity. These provisions, therefore, have the effect of further concentrating equity risk, which leads to higher required equity returns.

Importantly, even if structured finance reduced the cost of debt in some circumstances, this would not be relevant for these proposals, since the proposed mechanisms target the allowed rate of return on equity, which is solely linked to systematic risk, which would not change.

It has also been recognised that when the assumption of no taxes is relaxed, firms may be able to realise benefits from higher leverage since interest is a tax deductible expense, and as such it creates a tax saving benefit ("debt tax shield"). However, in the water sector, regulation already includes a clawback mechanism such that the debt tax shield benefit from leverage is largely allocated to customers. Therefore, companies are not able to drive returns by leveraging up to outperform against their tax allowance.

All UK regulators, including Ofwat to date, have recognised the basic MM principle. The proposals, as drafted, constitute a significant departure from this principle and from how Ofwat have been setting the cost of capital allowance in the water sector (and other UK regulators in other sectors) since privatisation.

The cost of capital determinations in UK Regulation have so far followed the following two principles: regulators typically set a cost of capital based on a notional capital structure, but companies are then responsible for determining their actual capital structure which is not required to be in line with the notional

Specifically, Ofwat's policy so far has been that of capital structure neutrality, thus neither incentivising nor penalising any particular deviations from notional gearing. Ofwat has done this by setting a 'notional' gearing and the WACC on that basis, which the companies would earn regardless of how they chose to finance their operations in practice. The Consultation does not provide any conceptual justification for the departure from these well-established principles.

## Impact of gearing on the cost of capital

The third potential justification for the proposed measures is that certain financial structures effectively lower the WACC and hence the allowed returns should also be lower under such structures. The Consultation argues that companies enter into business securitisation arrangements, which enable them to increase their level of gearing without an increase in risk of debt or equity. Ofwat states that covenants in such financial arrangements allow companies to achieve both a lower cost of debt and a lower cost of equity at higher leverage, thereby lowering the WACC.

In this context, it is important to distinguish between, on the one hand, benefits to a company as a whole, and, on the other hand, reallocations of risk to one group of capital providers at the cost of another group. A variety of financial mechanisms including securitisations could change the allocation of risk across different types of capital. In fact, seniority of debt over equity itself creates a pecking order of risk exposure. Securitisations increase equity risk exposure by offering additional protection to debt through covenants, cash lock ups etc. Debt structuring can change the allocation of risks between debt and equity investors, or across different tranches of debt, in order to meet differing risk/return appetite of investors in different market segments, but this does not mean that the company 'benefited' from such arrangements with a lower cost of capital.

Ofwat's argumentation seems to go a step further than this, suggesting that the overall company (asset) risk is reduced as a result of securitisation—this is the only way in which both the cost of debt and the cost of equity could be lower at a given level of gearing. This could be the case in certain specific circumstances, e.g. to the extent securitisations might prevent wasteful spending, or limit certain more risky business options that would be otherwise open to management, but it is not clear why this would be a problem for customers. In fact, this appears to be helpful to address the first problem identified by Ofwat, that of potential risk of financial distress and the need to ensure financial resilience.

There are also other situations where securitisation might create value. One such example is through market segmentation, i.e. the delineation of different tranches of capital with different risk profiles, which in turn would allow a wider range of capital providers to participate. Securitisation could create further benefit through creating a platform from which companies are able to issue debt more efficiently. This could provide benefits in terms of minimising issuance costs as well as reducing agency costs, which could have some effect on reducing the cost of capital. Finally, in some situations, securitisations could lower the overall risk of the assets, e.g. through restricting management discretion, providing tighter control of cash and reducing the risk of wasteful use of resources. But this comes with a reduction in option value for the companies so there is a clear risk versus value trade-off, which companies and investors themselves should be able to choose.

If it is assumed that securitised companies are, in fact, lower risk and hence have a lower actual cost of capital, then it could be argued that customers pay too much because they pay for higher risk, i.e. the same as in the case of other

companies without such structures, who have a higher cost of capital. This argument is in fact the opposite of the first potential rationale for intervention discussed earlier—i.e. instead of higher risk of financial distress, the risk is in fact lower, and customers are overpaying for it.

If it can be shown robustly that more highly leveraged companies achieve a lower overall cost of capital (i.e. require a lower return and hence a lower normal profit), then there is an argument that the Regulator should only allow this return because that would be more in line their true cost of capital (assuming this doesn't harm customers as discussed earlier). However, aside from the fact that this effect is hard to prove or quantify—and the Consultation makes no attempt to do either—this would imply that, in a competitive setting, all companies would be driven out of the market unless they adopted these efficient financial structures. The appropriate regulation in this case would be then to set a lower cost of capital, consistent with high leverage, for *all* companies (to avoid customers' overpaying), which would then become a self-fulfilling prophecy of everyone adopting higher leverage to be able to secure capital at this lower cost.

It might be argued that this is, in fact, exactly what has been observed in the water sector since privatisation, with a steady migration towards higher leverage, not only because the latter is in line with the nature of the assets, but also because it secures a lower cost of capital, in light of progressive reductions in the allowed WACC by the Regulator. The low cost of capital has been a direct and significant, sector-wide benefit to customers, who are paying less for the very large amount of private capital employed in the sector.

However, given that the Consultation does not attempt to demonstrate that the WACC falls with leverage in theory or in practice, or by how much, this justification for proposed regulations appears to be speculative. If this cannot be proven, then a more targeted regulation should focus exclusively on ensuring resilience rather than amending returns.

### **Public trust**

The Consultation also states that public trust has been undermined by companies paying high dividends, particularly those who are doing so through increasing gearing, without demonstrating any benefits to customers. This has clearly been a feature of the public debate to date.

Such a justification for intervention is focused on perceptions and changing social norms of what is acceptable, rather than economic or financial analysis, but nevertheless important. Ofwat suggests that higher equity returns and higher dividend payments have to be explained to customers. Although this is not what typically happens in competitive markets, the argument is that utilities have additional public obligations given the essential nature of their services.

Elsewhere in the Consultation, Ofwat proposes that companies will have to explain higher dividend payments if they are above a certain level. It is not clear, however, whether such an additional explanation of the dividend policy would

imply that this argument is no longer relevant for justifying sharing outperformance from higher leverage.

When considering Ofwat's proposals, it might be important to separate the specific mechanisms set out in the Consultation from the general outcomes the Regulator is seeking to achieve. The driver for the proposals appears to be the desire to strengthen transparency and public trust. In which case, it is valuable to consider what the sector has already committed to in this area and what more it could potentially do to achieve the same outcome without the problems associated with some of the proposed regulatory interventions.

On the issue of transparency, there is much that can be achieved through better quality reporting, including a much better explanation of the drivers of out- and under-performance. If performance could be better communicated and scrutinised, the perception of transparency might increase and it is also likely that trust would follow.

It should also be noted that many companies have already made some commitments to help further improve the perception of opacity and alleged lack of trust in the sector. There have been commitments to ensure that the financial resilience of companies remains robust and, in addition, from some of the more highly geared companies, plans to reduce leverage over the next price control period, a process which has already started in this AMP. Some additional regulatory intervention might be justified, but should be chosen carefully from a wide range of options. In reality, the negative public perception appears to be more focused on the past extraordinary or special payments, rather than the allowed core return targeted by the proposals.

### **Potential impact and implementation**

The proposals, if implemented, might result in a short term, relatively small reduction to bills of around £3 per annum for some customers. However, as companies de-lever, bills will likely increase to higher levels than before in real terms as the additional risk is priced in and the benefits of the tax shield dissipate and tax allowances have to be increased. If the assumptions about the impact of leverage on the overall cost of capital is correct, then the cost of capital in the sector must rise in the medium term with a corresponding cost to customers in a sustainable, steady state. Therefore, it appears difficult to justify the implementation of these proposals in terms of their impact on customer bills as for the most part customers might be actually worse off (especially if financial resilience can be ensured either way).

The key aspect of implementing proposals in the Consultation would be the importance of setting precisely the notional capital structure, which would now have very real consequences for actual financial structures and returns. This carries with it a number of significant risks.

In the past, and in other regulated sectors, the role of the notional gearing determination has not been fundamental. Ofwat, like other regulators, has determined the notional capital structure based on a wide range of benchmarks,



which means its estimates of the efficient capital structure have not needed to be particularly precise, and did not directly translate into the level of return.

Under the new proposals, Ofwat's determination of the 'notional' capital structure will suddenly become very important—it will directly influence financing choices and will significantly reduce the incentive to find the most efficient capital structure. It will also penalise deviations from the Regulator's view of what the optimal leverage looks like.

Placing the determination of a single appropriate, efficient and optimal capital structure for all water companies in the hands of the Regulator could also lead to increased financing risk, in that companies and customers will have to bear the risk that the Regulator may not end up selecting the most optimal level, given asymmetry of information, the lack of relevant experience, and inability to tailor it to each company's individual circumstances (business characteristics, embedded financing etc).

The final point on implementation relates to timing of this Consultation. Irrespective of the merits or justification for particular solutions, the proposed mechanisms constitute a major departure from the approach of the regulatory framework that has been in place for over 30 years.

The proposals put forward by Ofwat in early May have not been reflected in the Final Methodology for PR19 published by Ofwat in December 2017 and are subject to a 3-week consultation period for stakeholder engagement, substantially shorter than for other consultations. The Consultation will leave the sector with just a couple of months to reflect its conclusions in the business plans.

The required amendments will include revising financing plans, re-working pricing, providing detailed evidence on financial resilience and incorporating the impact of the above on financial projections and revenue requirements, all in a very short space of time. This raises significant concerns about the process and feasibility of addressing Ofwat's proposals, if unchanged post consultation, by the submission deadline.

## 1 Introduction

The capital structures of water companies have evolved considerably from the point of privatisation in 1989, where little debt financing existed, to present day where debt has become a key source of financing water and wastewater infrastructure investments in line with the business characteristics of the water sector and, more generally, financing structures observed in the infrastructure space.

While equity capital invested in the RCV has remained broadly constant, debt funding has increased. The result has been an increase in leverage at book values (but less so at market values), then stabilisation, and most recently a slight decrease. Importantly, Ofwat has also progressively increased its notional gearing assumption used to estimate the sector-wide allowed return up to 62.5 per cent at PR14, in line with market developments. Ofwat is currently proposing a slightly lower value of 60 per cent for PR19.

While there has been an overall trend of increasing notional gearing by the Regulator, there still remains some diversity in the observed capital structures in the water sector, with gearing ranging from circa 55 per cent to just over 80 per cent. This range reflects, inter alia, the specific timings of debt issuance and the choices made by companies to move towards their target capital structures, including the adoption of structured finance and securitisations, providing additional protection to debt providers, with some risk consequently transferred to equity.

The financial structures adopted by water companies and the realised financial returns have come under scrutiny recently with concerns raised about: high leverage; 'excessive profits' and high dividend payments 'undermining the trust of consumers'; complex financial structures, including securitisations; and off-shore financial arrangements.

In January 2018, in a letter addressed to Jonson Cox, Chairman of Ofwat, the UK water regulator, Michael Gove, Secretary of State at the Department for Environment, Food and Rural Affairs (DEFRA), raised concerns about the "excessive profits" of water companies and certain behaviours "undermining the trust of consumers".<sup>1</sup> The behaviours listed include the off-shore financial arrangements, securitisation, high gearing, high levels of executive pay, and high dividend payments.

In correspondence since this initial letter, Ofwat set out an initial plan of action to address what it perceived as companies' "excessive returns", for which it sought potential further powers from the government to support its approach.

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<sup>1</sup> Letter from Michael Gove (DEFRA) to Johnson Cox (Ofwat), January 31<sup>st</sup> 2018, see here: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/678320/water-companies-letter-SoS-to-Ofwat-180131.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/678320/water-companies-letter-SoS-to-Ofwat-180131.pdf)



The key steps in Ofwat's proposed programme "to improve the fairness and reliability of the sector for customers" were first detailed in the annex to the letter by Jonson Cox to Michael Gove, dated April 2018.<sup>2</sup>

Later that month, Ofwat published a formal Consultation "Putting the sector back in balance: Consultation on proposals for PR19 business plans" (hereafter "the Consultation")<sup>3</sup>, including the following proposed actions for the UK water sector (hereafter "the proposals"):

- A new mechanism requiring companies to share perceived financing outperformance from gearing above the notional level with customers (sharing "gearing outperformance" or "financing outperformance");
- Enforcement of transparent dividend policies and executive pay policies in companies' five year plans; and
- Increased focus on financial resilience of complex capital structures.

The proposed actions constitute a major departure from the established principles of economic regulation of the water sector that have been in place for over 30 years since privatisation. In particular, the proposal on sharing "gearing outperformance" constitutes a significant departure from the principle of setting the allowed return irrespective of the actual adopted financial structure for UK water companies, effectively introducing regulation of leverage in the sector.

The proposals put forward by Ofwat were not reflected in the Final Methodology for PR19 published by Ofwat in December 2017.

The proposals are subject to a short 3-week consultation period for stakeholder engagement which is substantially shorter than for other consultations including, for example, the recent consultations on cost modelling (which followed on a year-long process of engagement), or the updated guidance for Trading and Procurement Codes.

The conclusions from the Consultation, expected to be published by Ofwat sometime after the end of the Consultation, will constitute requirements on the companies to amend their PR19 business plans that they have been developing over the past 2 years or so, and which are due for submission in approximately 3 months' time. The required amendments will include designing new pricing mechanisms, revising financing plans, providing detailed evidence on financial resilience and incorporating the impact of the above on financial projections and revenue requirements, all in a short space of time.

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<sup>2</sup> Letter from Johnson Cox (Ofwat) to Michael Gove (DEFRA), April 9<sup>th</sup> 2018, see here: <https://www.ofwat.gov.uk/wp-content/uploads/2018/04/Letter-from-Jonson-Cox-to-Secretary-of-State.pdf>

<sup>3</sup> Ofwat (April, 2018), *Putting the sector back in balance: Consultation on proposals for PR19 business plans*, see here: <https://www.ofwat.gov.uk/wp-content/uploads/2018/04/Putting-the-sector-back-in-balance-consultation-on-proposals-for-PR19-business-plans.pdf>

From the process point perspective alone, this raises significant concerns about the feasibility of addressing Ofwat's requirements carefully and in detail (if they stand as proposed) by the submission deadline.

## 1.1 Scope of work

This independent Report was commissioned by a group of investors in the UK water sector to comment on the proposals in Ofwat's Consultation focused on the proposed mechanism for sharing of "gearing outperformance", and to examine the potential impact of the proposed changes to regulation on both water companies and their customers.

This Report examines five principal considerations:

- 1 Whether there is evidence that the existing financing structures are inefficient, therefore potentially requiring an intervention by the Regulator;
- 2 Whether Ofwat has made the case for intervention, i.e. whether it has been shown that customers are harmed by higher leverage;
- 3 Whether the proposals are consistent with economic theory and corporate finance principles, as well as wider regulatory precedent;
- 4 Whether the proposals lead to incentives that will produce long term value for money for customers; and
- 5 Whether the proposals are consistent with and constitute robust, and well targeted regulatory design.

The scope of this work does not include any company-specific analysis, or consideration of impact of these proposals on financial viability of water companies overall or any individual company in the sector.

## 1.2 Structure of report

The structure of the following Report is outlined below:

- Section 2 examines the key features and rationale for Ofwat's proposal;
- Section 3 examines whether there is evidence that the observed levels of gearing in the industry are consistent with efficient market outcomes;
- Sections 4 examines whether there is evidence that highly leveraged companies engage in behaviour that harms consumers;
- Sections 5 examines whether the proposals are consistent with financial theory and regulatory precedent;
- Section 6 comments on the design, incentives and likely effectiveness of the proposal;
- Section 7 discusses potential implications of the proposed mechanism on customer bills in the short and long term; and
- Section 8 provides an overview of measures taken by the sector to date to strengthen transparency and public trust.

## 2 Key features and rationale for Ofwat’s proposal

### 2.1 Summary of Ofwat’s proposals

Ofwat’s April 2018 Consultation sets out a number of proposals to make amendments to the PR19 price setting process, which are discussed in the sections below.

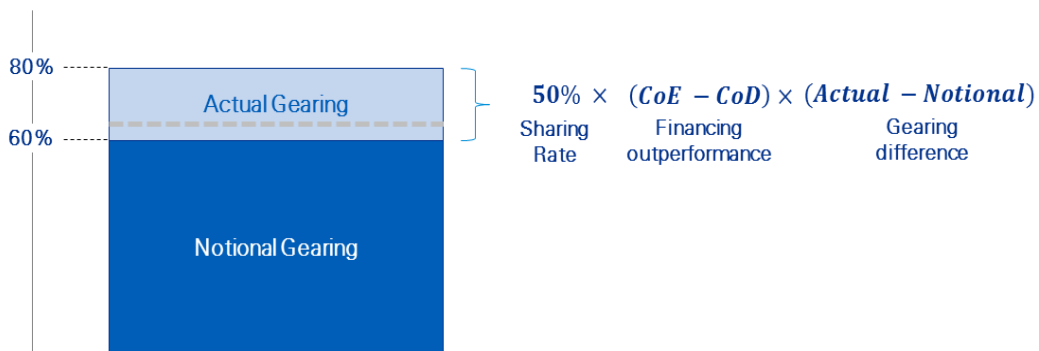
#### 2.1.1 Outperformance sharing mechanism

First, Ofwat proposes a mechanism for sharing “gearing outperformance” (or “financing outperformance”), which will claw back a certain percentage of the difference between the cost of equity (CoE) and cost of debt (CoD) on RCV financed with debt above the notional gearing level.

This is the first time that an explicit, sector-wide adjustment to differentiate allowed returns depending on the adopted financial structure of companies has been proposed since privatisation.

The proposed “financing outperformance” claw back mechanism would be calculated as shown in Figure 1, where 50 per cent is the Sharing Rate, (CoE – CoD) is the “financing outperformance”, and (Actual – Notional) is the difference in actual and notional gearing.<sup>4</sup>

**Figure 1: Outperformance sharing mechanism for highly geared companies**



The calculation will likely be defined on a nominal basis, with the cost of equity calculated based on long term inflation, and the cost of debt taken as the actual cost of debt, as reported by the companies.<sup>5</sup>

Ofwat also proposes variations on this calculation, including the possibility that the calculation is performed using the allowed instead of actual cost of debt, and performing the calculation on real (instead of nominal) basis.<sup>6</sup>

If Ofwat remains of the view that the actual cost of debt should be used in the calculation, it is not clear how the mechanism will work in practice because the

<sup>4</sup> Ofwat (April, 2018) Consultation, Page 17.

<sup>5</sup> Ofwat (April, 2018) Consultation, Page 18.

<sup>6</sup> Ofwat (April, 2018) Consultation, Page 18.

actual cost of debt is dependent on many factors, including: whether debt is issued at par, discount or premium to the notional value; profile of payments over time; the coupon being index-linked; potential options to delay or capitalise interest; whether derivatives are linked to debt to convert coupon stream, etc.

All of the above factors could result in complex incentives influencing the choice of financing and financial engineering to achieve the most favourable outcome.

Additionally, Ofwat proposes a ‘deadband’ above or around the notional level of gearing to ensure that operational variations in gearing do not trigger the sharing mechanisms for companies whose gearing falls within this range.<sup>7</sup> The Consultation, as set out, does not clearly explain how this proposed ‘deadband’ would work in practice, and whether it would result in a cliff-edge adjustment.

### 2.1.2 Requirement to demonstrate financial resilience

Ofwat also identified financial resilience as a key theme for PR19, and defines it as “the extent to which an organisation’s financial arrangements enable it to avoid, cope with and recover from disruption”.<sup>8</sup>

Ofwat sets out that companies will need to prove financial resilience going forward through challenging stress-test scenarios covering severe, plausible and reasonable scenarios for key variables including, but not limited to: Totex under-performance; inflation; and bad debt.

In the event that stress-tests indicate the company’s finances are not resilient, the company will need to clearly set out mitigating actions to address the situation(s).

### 2.1.3 Further measures

In addition to the outperformance sharing mechanism and the requirement to demonstrate financial resilience, Ofwat proposes the following measures:

- Companies voluntarily to propose a sharing mechanism on cost of debt outperformance relative to allowance, which is effectively another mechanism to differentiate the weighted average cost of capital (WACC) across the companies;
- Requirement for companies to provide reasons “in customer interest” if base dividends are higher than the “reasonable” nominal dividend yield it calculates, of 5 per cent; and
- New data reporting requirements for “financial flows”, requiring companies to report/compare: notional return on notional equity; actual return on notional equity; and actual return on actual equity base.

## 2.2 Ofwat’s stated rationale for proposals

One key proposed change in the April 2018 Consultation is the proposed sharing of “gearing outperformance”, which is a significant departure from the established regulatory approach for setting the WACC using a notional capital structure,

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<sup>7</sup> Ofwat (April, 2018) Consultation, Page 17.

<sup>8</sup> Ofwat (April, 2018) Consultation, Page 33.

leaving companies to choose their own capital structures. This Report focuses on the proposal for sharing “gearing outperformance”.

Ofwat suggests the following rationale in support of its proposed “gearing outperformance” sharing mechanism.

It should be noted that Ofwat’s justifications are not explicitly delineated or discussed in the Consultation, but can be inferred from different statements made by Ofwat in the Consultation:

### **1 High gearing implies lower financial resilience which could harm customers**

Ofwat’s first rationale appears to be that increasing the level of debt in the company capital structure increases risk of financial distress from cost shocks or underperformance. Specifically, Ofwat notes:

*“[Highly geared] companies are less able to avoid, cope with or recover from performance disruption”<sup>9</sup>*

The rationale suggests that higher leverage reduces a company’s ability to withstand shocks, and given that leverage increases residual equity risk, it results in increased risk of a downside event which the company might not be able to withstand.

There is, however, some apparent inconsistency in the implications of this explanation in the Consultation—it appears to acknowledge the presence of higher equity risk in some sections where it discusses that gearing reduces financial resilience, but not in other parts, where it discusses remuneration of equity risk.<sup>10</sup>

The Consultation does not present analysis on the extent to which leverage impacts financial resilience, nor does it appear to factor in the existing protective features of the current regulatory regime, past performance of the sector, or companies’ adopted financial structures, in the discussion of lack of financial resilience as a result of higher leverage.

The Consultation does, however, outline requirements for companies to demonstrate that financial resilience will not be an issue over the next AMP. The tougher financial resilience requirements could be an indication that Ofwat assumes that companies with higher leverage might not be able, at present or without mitigating measures, to demonstrate financial resilience.

It is not clear whether, if companies successfully demonstrate that they are financially resilient, equity returns would no longer have to be shared.

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<sup>9</sup> Ofwat (April, 2018) Consultation, Page 11.

<sup>10</sup> For example, Ofwat note: “Higher levels of gearing can also expose equity investors to greater downside impacts, for example where a company underperforms, or in the event of cost shocks.” And “...companies with high levels of gearing have potentially lower levels of financial resilience, as the impact of cost shocks or poor performance is magnified to a smaller equity base.”

## **2 Equity investors earn ‘excess’ returns as a result of higher leverage which do not correspond to higher risk.**

Ofwat’s second rationale for the proposed adjustment appears to be that for higher geared companies, retained earnings may be shared as dividends over a smaller equity base, resulting in equity holders benefiting from higher returns relative to their base without any corresponding benefit to customers.

The Consultation appears to be referring to returns on the book value of equity (rather than market value), not risk-adjusted.

Ofwat’s justification appears to be that this increased return on equity comes without any corresponding risk, requirement or justification for such returns. Specifically, Ofwat notes:

*“Equity investors can generate higher returns for a given level of performance by replacing equity with debt (resulting in increased gearing).”<sup>11</sup>*

Given the generally accepted theory that equity risk increases with leverage, this implies some additional factors would need to be at play for this to be true, e.g. that equity might be able to avoid this additional risk, for example by sharing some of the additional risk with customers or third parties.

The Consultation also does not consider or discuss whether such sharing with customers, of higher returns to equity due to leverage, might be actually observed in competitive markets.

## **3 Higher leverage and securitisations lower the WACC and hence customers pay too much by paying the same WACC as for other companies.**

A third rationale for the proposed adjustment appears to be the suggestion that companies are able to enter into business securitisation arrangements, which enable them to increase their level of gearing and lower their cost of capital. The implication would be that the covenants in such securitisation arrangements allow companies to achieve both a lower CoD and CoE, thereby lowering the WACC. Specifically, Ofwat note:

*“The covenants in [securitisation] arrangements allow companies to achieve a lower cost of debt (and lower cost of equity) than would otherwise be the case for a given level of gearing”<sup>12</sup>*

This suggests that the overall company (asset) risk is significantly reduced as a result of securitisation, since this is the only way in which both the cost of debt and the cost of equity could be lower at a given level of gearing.

## **4 Public trust is undermined by high payouts and negative perception of financial engineering.**

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<sup>11</sup> Ofwat (April, 2018) Consultation, Page 11.

<sup>12</sup> Ofwat (April, 2018) Consultation, Page 15.

Finally, Ofwat's fourth justification appears to be that public trust has been undermined by companies paying high dividends, particularly those who are doing so through increasing gearing, without demonstrating any benefits to customers. Specifically, Ofwat notes:

*"The legitimacy of the system has been challenged by high dividends...on the basis of returns from high levels of gearing, without demonstrating any corresponding benefits to customers"<sup>13</sup>*

This rationale is focused on the current perceptions of the sector, and in particular that there is a view that high leverage is a vehicle through which investors are able to extract higher dividends from companies than would otherwise be the case, leaving consumers worse off.

This implies that dividend policies and dividend payouts are areas that are not well understood by the general public, and that there is a lack of clarity about how these are set or can be challenged.

The rest of this Report comments on the points above in more detail.

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<sup>13</sup> Ofwat (April, 2018) Consultation, Page 4.



### 3 **Is there evidence that the observed levels of gearing and returns in the industry are not consistent with efficient market outcomes?**

The key consideration for any potential regulatory intervention has to be the identification of a market failure that the proposed regulation aims to remedy, and the consumer harm that would potentially ensue from that market failure, such as customers paying more than they should for a given level of service or risk.

The appropriate starting point is therefore to consider whether outcomes observed in the financing of water utilities are consistent with what would be expected in a competitive and efficient market, and/or whether any market failure can be identified in practice.

This section considers the existence of a potential market failure from the following perspectives:

- (1) Is the observed approach to financing consistent with what would be expected given the sector characteristics?
- (2) Is the observed approach to financing consistent with market evidence (where available)? and
- (3) Is it possible to identify specific market failures that need to be addressed?

The next section discusses the broader set of justifications for the proposal as advanced by Ofwat, assessing the extent to which there is evidence of market failure and potential consumer harm offered in those justifications.

#### 3.1 **Expected gearing levels in the water sector**

The issue of leverage in the water sector has to be considered, in the first instance, in light of the business characteristics of the sector.

Standard finance theory stipulates that the debt capacity of an asset depends on the business risk of that asset, i.e. the cyclical nature of the expected operating cashflows of the business. All else equal, businesses with (1) lower elasticity of demand; (2) less cyclical costs; and (3) lower operating leverage (or Capex intensity / cost fixity), compared with other sectors, will have less volatile cashflows, leading to higher debt capacity, and vice versa.

Compared with other sectors, higher leverage in the regulated utilities sector can be expected, and is generally consistent with the nature of the business and its assets: utilities are capital-intensive businesses that invest in long-term assets, and have relatively stable and predictable cashflows, specifically in the UK underpinned by a transparent and mature regulatory framework. This implies higher debt capacity and higher expected leverage relative to other sectors, consistent with what is observed in the market.

Certain features of the economic regulation for UK water companies further limit the business/cashflow risk of these assets, which in turn enables water



companies to achieve higher gearing levels and, at the same time, ensure investment grade credit ratings. These features include:

- Absence of volume or demand risk, implemented through a revenue correction mechanism which ensures that water utilities' revenues are not exposed to fluctuations in demand.

The revenue correction mechanism was introduced at PR09, effectively removing demand risk for water companies, one of the key risk factors contributing to cashflow volatility in the sector. Consistent with standard finance principles, all else equal, this should lead, and has led, to higher debt capacity in the UK water sector.

- Shared exposure on cost (Totex) risk, through inclusion of sharing factors of cost out/ under-performance (typically around 50 per cent);
- Limits on return on retained earnings (RoRE) variation due to rewards and penalties on output and quality of service incentives (ranging from approximately the cost of debt to double digit returns);
- Other potential limits on risks, such as Interim determinations (IDoKs), allowing companies to request within period reopeners for specific items, with a materiality threshold of 10 per cent of turnover; and a substantial effects clause allowing revisions of the price limits for change in circumstances, with a materiality threshold of 20 per cent of turnover.

All of these features have enabled UK water utilities to support higher levels of leverage, while maintaining the ability to access debt capital at a low cost.

The important observation is that these features are generally expected to be fully reflected in the low cost of capital of the sector compared with other industries, and therefore benefit consumers through lowering financing costs. They are, among other, some of the key reasons why the sector has been able to raise private financing at a very low cost.

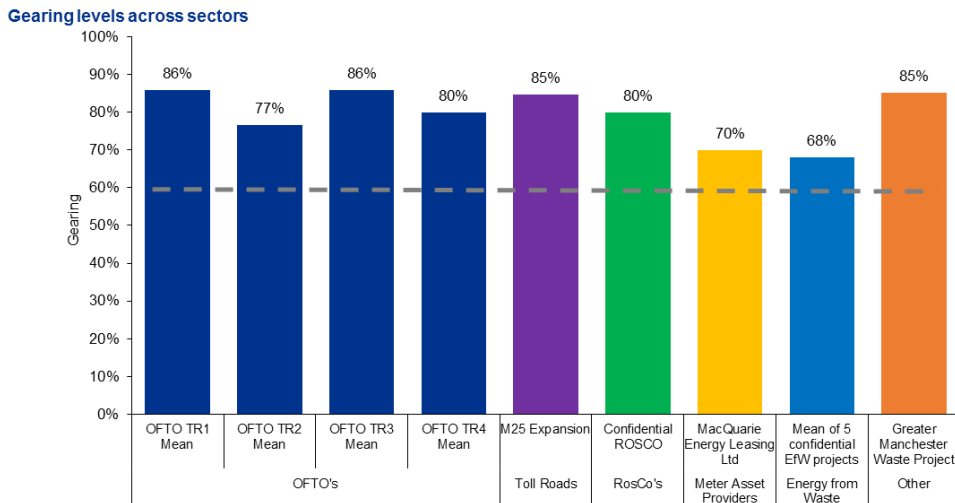
### 3.2 **Comparison with contestable infrastructure market segments**

Comparably high levels of leverage have been observed in financing investments undertaken in competitive or contestable infrastructure market segments, namely:

- Offshore Transmission Owners (OFTOs): Offshore transmission assets have been financed through project finance structures, which feature gearing levels in the range of from more than 75 to almost 90 per cent;
- Road infrastructure: for example, the M25 expansion was a PFI project financed with 85 per cent debt finance;
- Meter Asset Providers: the largest Meter Asset Provider, finances its operation with around 70 per cent debt finance;
- Rolling Stock Companies (ROSCOs): featuring gearing level of e.g. 80 per cent;

- Many other infrastructure projects (energy from waste, the Greater Manchester Waste project) further indicate that gearing levels in the range of circa 70–80 per cent are adopted in the infrastructure finance market.

**Figure 2: Gearing levels observed in competitive or contestable infrastructure market segments**



Source:

1. OFTOs: *Inframation Deals*
2. Toll Roads: *NAO, Financing PFI Projects in the credit crisis and the Treasury's response, 2010*
3. RosCos's: *KPMG Analysis*
4. Meter Asset Providers: *Thompson Reuters Eikon*
5. EFW: *KPMG Analysis*
6. Other: *NAO, Financing PFI Projects in the credit crisis and the Treasury's response, 2010*

Notes:

1. OFTOs: *Average observed gearing across all OFTO transactions. Inframation Deals.*
2. Toll Road: *NAO report - Financing PFI projects in the credit crisis and the Treasury's response; <https://www.nao.org.uk/wp-content/uploads/2010/07/1011287.pdf>; page.25.*
3. ROSCOs: *Gearing level assumes new stock procured through debt financing.*
4. Meter Asset Provider: *Based on reported actuals and analyst estimates.*
5. Energy from Waste: *Based on information gathered from 5 EFW PPP projects.*

It should be noted, however, that there are also examples of utilities that adopt less highly geared structures, including some GB utilities, although the differences are generally relatively small compared with variations in gearing across sectors.

The above demonstrates that, in practice, in semi-competitive or contestable market settings, where financing is determined by market forces rather than an economic regulator, higher leverage is prevalent and typically adopted as a market outcome.

### 3.3 Is there a market failure in financing of utilities that could justify a regulatory intervention?

Regulation is generally justified where there is a clear market failure. Market failure can be characterised by an inefficient allocation of resources, goods or

services in the economy, reflected through sub-optimal prices and quantities of the good or service in question. In the utilities financing market, the presence of such market failure would present itself in the form of: (1) inefficient pricing (e.g. higher cost of debt than for investments of comparable risk), or (2) sub-optimal quantity (e.g. restricted access to capital for water utilities). It does not appear, however, nor has it been suggested by Ofwat, that such issues occur specifically in the market for financing of utilities:

- The market for financing of utilities is deep in terms of quantum of issuance, high demand and constant access in different market conditions, including throughout the Global Financial Crisis;<sup>14</sup>
- There is no evidence of restricted investor appetite for UK water corporate debt, and companies continue to have unrestricted access to capital, as evidenced by corporate debt issuance and equity transactions;<sup>15</sup>
- UK water companies are able to access different segments of capital markets (short and long term tenure, fixed and index-linked, senior and junior tranches, etc.) at a comfortable investment grade credit rating, despite relatively high leverage compared with other sectors;<sup>16</sup>
- Ofwat (and other regulators) have argued that UK utilities continue to access debt markets at cheaper cost than relevant benchmarks. This suggests that the utilities debt market is liquid and efficient, because utilities continue to attract a broad field of debt investors, and sufficient level of capital overall to be able to finance their operations, at cost which is not above market benchmarks for the given level of risk in the sector (i.e. by comparison to index benchmarks with the same credit rating).<sup>17</sup>

All of the above suggests that the market for utilities financing is competitive, liquid and efficient, resulting in constant dynamic optimisation and a low cost of raising capital.

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<sup>14</sup> For example, based on Eikon data, KPMG calculate that the volume and value of issuances by water companies over the past 15 years has remained broadly within the same boundaries, subject to some fluctuations as a result of normal investment cycles. For example, the total value of debt issued in 2003 was c.£3bn, broadly similar to that in 2017, demonstrating continued investor appetite for infrastructure debt (note, includes 12 of the 17 companies, representing c90 per cent of the industry RCV in 2017).

<sup>15</sup> See *ibid*. In addition, over the last 15 years, there have been 25 instances of investors acquiring (partly or fully) water companies, as recently reported by Ofgem (RIIO 2 Consultation), see here: [https://www.ofgem.gov.uk/system/files/docs/2018/03/riio2\\_march\\_consultation\\_document\\_final\\_v1.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/03/riio2_march_consultation_document_final_v1.pdf) figure 8

<sup>16</sup> For example, NAO (2015) shows that the average credit rating for higher geared companies is equivalent to that of the lower geared companies, suggesting issuance of debt above the notional gearing does not put companies at much of a disadvantage. See here: <https://www.nao.org.uk/wp-content/uploads/2014/07/The-economic-regulation-of-the-water-sector.pdf>

<sup>17</sup> For example, Ofwat recently argued: "Halo-effect': regulated utility companies may benefit from lower debt costs relative to a company of the same credit rating through perceptions of lower relative risk. The size of this effect will depend on the characteristics of the respective company and the benchmark index that is used." See Page 13 here: [https://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap\\_con20160906costofdebtv2.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2016/09/pap_con20160906costofdebtv2.pdf)

Additionally, the financial crisis resulted in many central banks including the Bank of England injecting unprecedented levels of liquidity into capital markets (through Quantitative Easing programmes and other unconventional purchase schemes), leading to a particularly low interest rate environment, which has further lowered the cost of debt finance across the fixed income market spectrum, at a time when “flight to quality” (or flight away from risky assets into fixed income) may have also led to increased Equity Risk Premia.<sup>18</sup> The relatively low cost of debt would be expected to efficiently and rationally lead to increased debt levels.

Overall, there appears to be no evidence put forward to suggest market failure that could justify regulatory intervention in the specific market for financing of water utilities. The sector is able to attract sufficient capital to finance its operations at market prices, and in line with market benchmarks for the given risk in the sector (e.g. in line with index benchmarks of comparable credit rating).

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<sup>18</sup> For example, the Bank of England noted: “...elevated macroeconomic uncertainty is likely to have been one factor behind the rise in the ERP during the financial and euro-area crises.” Bank of England (Q2, 2017), Quarterly Bulletin, Page 93, see here: <https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2017/an-improved-model-for-understanding-equity-prices.pdf>

## 4 **Is there evidence that highly leveraged companies engage in behaviour that harms consumers?**

Ofwat's statutory duty is to "*further the consumer objective to protect the interests of consumers*",<sup>19</sup> and therefore to intervene where there is evidence of market failure that could harm customers. Generally, in such circumstances, regulators might be justified to intervene to ensure efficient economic outcomes and value for customers in line with those efficient economic outcomes.

The existence of 'benefits' from a certain business activity, e.g. from adopting a different financial structure, do not constitute, on their own, a justification for regulation. For example, there are benefits to innovation, good management, optimal allocation of resources etc, but the mere existence of such benefits does not justify or imply a need for economic regulation. The relevant criterion to justify economic regulation is whether it can be shown that there is a market failure, and a departure from an outcome that one would expect to observe in a competitive market, which would result in harm to customers, if not remedied by regulation.

This section discusses the extent to which there might be evidence of consumer harm from higher leverage.

### 4.1 **Is there potential harm to customers due to low financial resilience of high leverage?**

One justification for the proposed mechanism is that increasing the level of debt in the company capital structure increases risk of financial distress from cost shocks or underperformance. This is on the basis of an assumption that companies with higher leverage might be less financially resilient, which could harm consumers, given that this results in increased risk of a downside event which the company might not be able to withstand.

Theoretically, companies with higher levels of gearing may be less able to withstand financial shocks than companies with lower gearing. Therefore, at a conceptual level, as companies gear up, they might take measures to reduce their risk. This, in turn, could, in principle, have a negative impact on services they provide to customers, if, for example, it leads to reduced investment or quality of service to reduce the risk of default.

From a regulatory perspective, the important test in this context is whether in the water sector the risks of default are significant enough to affect companies' behaviour, whether companies actually engage in such behaviour, and, if they do, whether there is any evidence that it has or could have a material impact on customers.

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<sup>19</sup> Ofwat, *Our Duties*, see here: <https://www.ofwat.gov.uk/about-us/our-duties/>

Given that such a possibility exists, the need to ensure financial resilience is a valid issue to consider by the Regulator, and reasonable stress tests for financial resilience could be a valid tool for that aim.

The need to ensure financial resilience may be particularly relevant if there is a genuine potential downside risk that, if it materialises, could restrict or in other way affect company performance, and ultimately the ability to deliver an uninterrupted service provision of an essential commodity to consumers. For this reason, it is important that companies are able to demonstrate financial resilience, and the ability to withstand plausible downside risk scenarios.

The Regulator might be also concerned whether, as a result of higher gearing and potentially lower financial resilience, there may be increased risk of financial distress, which may need to be ultimately borne by customers.

In the case of the UK water sector, under the present regulatory arrangement, downside risk and generally risk sharing with customers for UK water companies is limited only to specific types of risks, as stipulated by mechanisms put in place by the Regulator.<sup>20</sup> These risks can be explored and tested through analysis of financial resilience.

The risk that is left in the business, reflecting the relevant risk protections and risk sharing mechanisms already embedded in the regulatory mechanism (as discussed in section 3.1), is priced through the low cost of capital i.e. in the low asset beta of the water sector, determined by Ofwat (currently at 0.3, the lowest across the regulated UK utilities space), which benefits customers through lower required returns.

Finally, Ofwat may be concerned with informal ways of risk transfer (e.g. through requests for reopeners where downside scenarios play out) that may provide the basis for possible 'risk leakage', or other potential transfers of risk to customers. However, this is largely under the Regulator's control, and the appropriate response to this concern might be to tighten the 'regulatory contract' in terms of gateways for risk sharing, as the Regulator has been doing, rather than to limit the incentive for companies to choose efficient financing levels.

In any case, it is important to note the embedded protections in the existing regulatory framework already in place, designed to strengthen financial resilience, limit financial distress and default risk and therefore prevent that such risk is transferred to customers. These features and their effectiveness has to be carefully analysed before it can be concluded that they are inadequate or insufficient.

### **Requirement to achieve “comfortable” investment grade rating**

One of Ofwat's statutory duties is to ensure that companies are “financeable”, i.e. are able to access capital markets at a reasonable cost reflected in the allowed rate of return. Ofwat, and other regulators, have generally interpreted this to

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<sup>20</sup> For example, see discussion in section 3.1 above.

mean that companies should be able to achieve a “comfortable” investment grade rating, typically defined as rating above BBB.

The present regulatory arrangement requires companies to achieve a (comfortable) investment grade rating, which poses a natural limit to how much financial risk companies can bear before breaching credit metrics that could result in a downgrade, which would be an indicator of increased default risk.

Moreover, the fact that the cost of debt is not a pass-through item for UK water companies, but rather is determined based on a market index with blended A/BBB credit rating (IBoxx corporate non-financials A/BBB), provides a strong incentive for companies to minimise their debt finance costs and maintain, if not outperform the credit rating of the index allowance. In practice, in order to achieve or outperform the cost of debt allowance based on the A/BBB rated IBoxx, companies would need to ensure that they maintain financial ratios and limits to financial risk such that they can preserve (and be at the top range of) the investment grade index allowance.

The fact that more leveraged companies are able to access debt capital markets freely and achieve the required investment credit ratings, demonstrates comfort in the efficient functioning of the debt market and limits to financial risk, at least to the extent credit ratings can be seen as a good reflection of such risk, at the adopted levels of gearing.

### Regulatory ring-fencing requirements

The regulatory (financial) ring-fencing arrangements in place include further mechanisms that protect regulated companies’ ability to access financing.

Ofwat has described the ring-fencing arrangement it puts in place as helping to “reassure the regulator and customers that companies remain in a position to finance their functions and that consumers’ interests are not adversely affected by a company’s capital structure.”<sup>21</sup>

Amongst other things, the regulatory ring-fencing arrangements, as described by Ofwat, require companies to ensure the following protections of the regulated business are put in place:<sup>22</sup>

- Conduct business as if the regulated business were the sole endeavour; and operate the regulated business as a separate entity;
- Confirm every 12 months that the company has adequate financial, facilities and management resources for the regulated business;
- Ensure that dividend policy does not affect the company’s financeability;
- Maintain an issuer investment grade credit rating;

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<sup>21</sup> Ofwat (March, 2011), *Financeability and financing the asset base – a discussion paper*, see here: [https://www.ofwat.gov.uk/wp-content/uploads/2015/11/prs\\_inf1103fpl\\_financeability.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2015/11/prs_inf1103fpl_financeability.pdf)

<sup>22</sup> Ofwat (March, 2011), *Financeability discussion paper*.



- Not allow cross-defaults, by increasing or accelerating financial liabilities because of default of another company.

In addition to this, companies are subject to a cash lock-up licence condition, which prevents the transfer of funds outside of the regulated business in the event that the issuer credit rating falls to BBB- or equivalent and is put on review for possible downgrade.<sup>23</sup>

All of the above provisions act as protection mechanisms that help limit the level of financial risk that UK regulated business are able to take on, thereby limiting any potential risk exposure to customers.

Ofwat has so far accepted the ring-fencing arrangements as sufficient protection mechanism (together with the rest of the mechanism described in this chapter), and where companies have sought to adopt highly leveraged structures (e.g. through whole business securitisation), Ofwat has sought to further strengthen the ring-fencing arrangements through licence modifications to ensure financial resilience, rather than to constrain companies' actual financial structure *per se*.<sup>24</sup>

Ofwat has not indicated what conditions have changed, and why the ring-fencing arrangements previously accepted as sufficient protection mechanisms of financial resilience (together with the remaining suite of protection mechanisms described here), are now no longer sufficient.

### Financeability and stress testing

Ofwat's financeability assessments and stress-tests have the dual role to: (1) ensure that the regulatory settlement allows companies to achieve the investment grade credit rating consistent with the WACC allowance, and (2) to ensure financial resilience, i.e. that companies can withstand economic shocks without substantive deterioration in credit metrics which could restrict or in other ways affect their ability to access capital markets.

Ofwat (and other UK regulators) typically conduct scenario analysis and stress-testing to ensure that credit metrics – and so the ability of companies to raise debt finance at comfortable investment grade credit rating – will not be breached over the regulatory period, with high degree of confidence (e.g. with some acceptable level of probability X, under e.g. a Monte Carlo risk simulation). This mechanism ensures that Ofwat can satisfy its duty to ensure financeability and test financial resilience by checking that companies can achieve appropriate financial metrics with a high degree of confidence (probability threshold which it has the discretion to determine).

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<sup>23</sup> Ofwat (March, 2011), Financeability discussion paper.

<sup>24</sup> For example, Ofwat has explicitly stated this in 2015: "...We have observed that highly geared structures are potentially less flexible and more vulnerable to cost shocks ... *Despite these observations, we have not sought to prevent any such market-led structures.* But we have sought to modify the licences of those companies that have wanted to introduce such structures to strengthen the ring-fencing provisions. These conditions are designed to enable us to regulate companies within larger groups effectively. It has also enabled us to provide reassurance that the companies remain able to finance their regulated activities." See para 118, Page 38, here: [https://www.ofwat.gov.uk/wp-content/uploads/2015/11/prs\\_inf1103fpl\\_financeability.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2015/11/prs_inf1103fpl_financeability.pdf)



Ofwat is also proposing, as part of this Consultation, that companies should meet tough stress tests to prove financial resilience at PR19.<sup>25</sup> The test for more highly geared companies is, therefore, whether they are able to withstand a similar level of shock.

If these existing mechanisms are designed to achieve the objectives implicit in the Consultation, then it is difficult to see how the case for further intervention can be made.

### **Protections in the existing financial structures**

Existing financial structures also have features that increase resilience, given embedded protections in such structures.

Specifically, securitisations act as a 'disciplining device' ensuring structured and 'tight' cash management, and put in place restrictions on management discretion, limiting what any available cash flow can be spent on, for example, acquisitions and expansion into risky non-core business areas, etc.

These benefits are realised through numerous protections which limit the risk borne by lenders by placing security provisions in place to ensure that debt is serviced, through for example:

- Financial (and operational) covenants, linked to for example maintenance of certain financial ratios above certain thresholds;
- Standby liquidity facilities, which lock up cash that acts as a buffer to ensure that potential macro-economic shocks and/ or other potential disruptions to normal operations can be withstood;
- Various limitations on management discretion e.g. in terms of acquisitions, expansion into risky non-core business areas etc.

However, it should be considered that while lender protection mechanisms in securitisations lower the cost of debt, they also have a corresponding increase in the cost of equity, thereby limiting the ability of lowering overall financing costs, since:

- Reserve requirements / liquidity buffers have the effect of locking up cash in the business, which could otherwise be available to equity. These provisions, therefore, have the effect of further concentrating equity risk, which leads to higher required equity returns, all else equal; and
- While limitations on management actions e.g. in terms of acquisitions or expansion into new business areas, can restrict the overall cashflow risk of a given securitised business and can reduce the risk the risk of default, these restrictions are not relevant for the required returns of the regulated, ring-fenced water businesses as they do not alter the systematic risk.

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<sup>25</sup> Ofwat (April, 2018) Consultation, Page 37.

## 4.2 **Is there evidence that highly geared companies engage in business behaviour that could harm customers?**

There is a possibility that with less retained earnings in the business, highly levered companies would prioritise dividends over capital investments leading to under-investment in the assets which over time would result in a lower quality of service to consumers. This should be borne out in performance metrics.

However, the data below does not suggest that there is evidence of this in the UK water sector, and specifically that the highly leveraged companies have lower performance metrics, behave in a risk averse manner, or underinvest.

The series of scatter plots shown in Figure 3 below show how company performance on a number of performance metrics (y-axis) varies with gearing (x-axis), using data from the Discover Water Dashboard website:

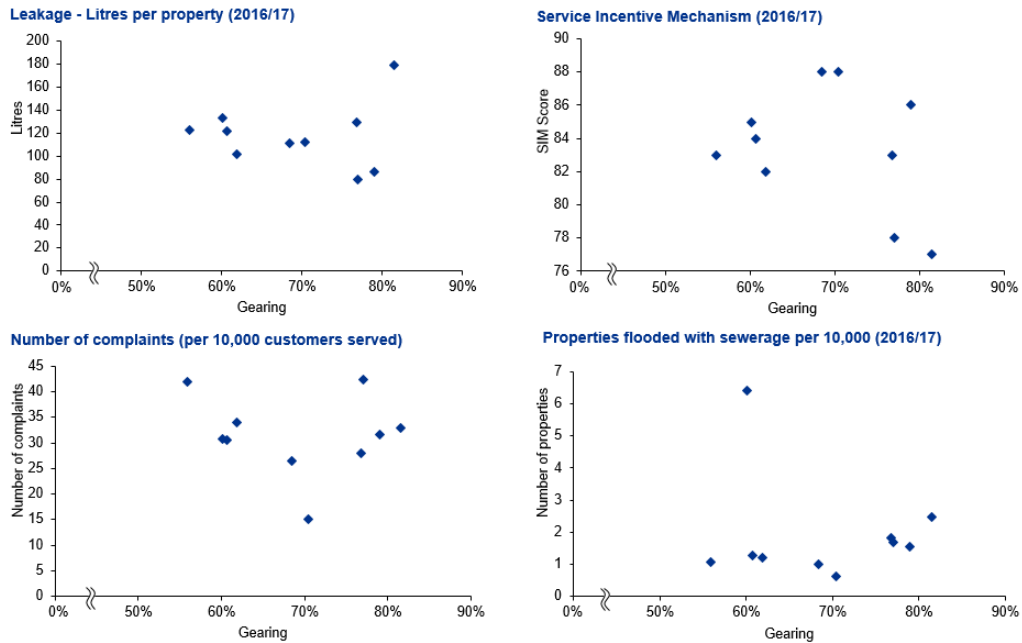
- The first scatter plot (top, left) sets out the number of litres of water lost per property in 2016;
- The second scatter plot (top, right) shows the latest SIM scores for 2016/2017 for each company;
- The third scatter plot (bottom, left) sets out the number of complaints each company received per 10,000 customers in 2016/17; and
- The fourth scatter plot (bottom, right) sets out the number of properties per 10,000 that were flooded with sewerage in 2016/17.

The scatter plots in Figure 3 below show no correlation between gearing and performance metrics.<sup>26</sup> For example, on leakage, or on sewerage flooding, companies with higher gearing feature across the performance spectrum. The same can be said about the relationship between customer bills and leverage (see Figure 4).

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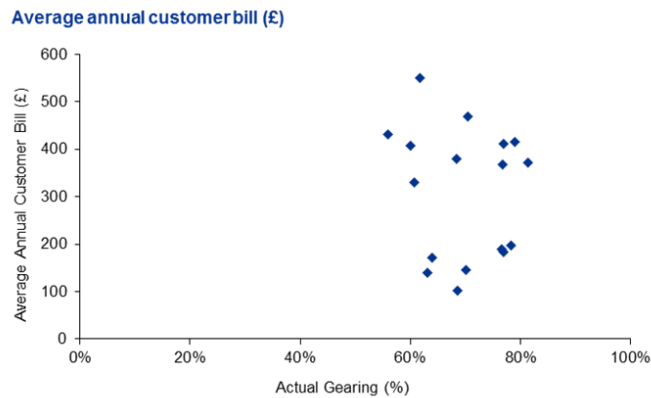
<sup>26</sup> There are many other factors that would explain company performance which are outside the scope of this Report.

**Figure 3: Water company performance does not vary systematically with gearing levels**



Source: KPMG Analysis using data from Discover Water Dashboard.

**Figure 4: Water company bills do not vary systematically with gearing levels**



Source: KPMG Analysis using data from Discover Water Dashboard.

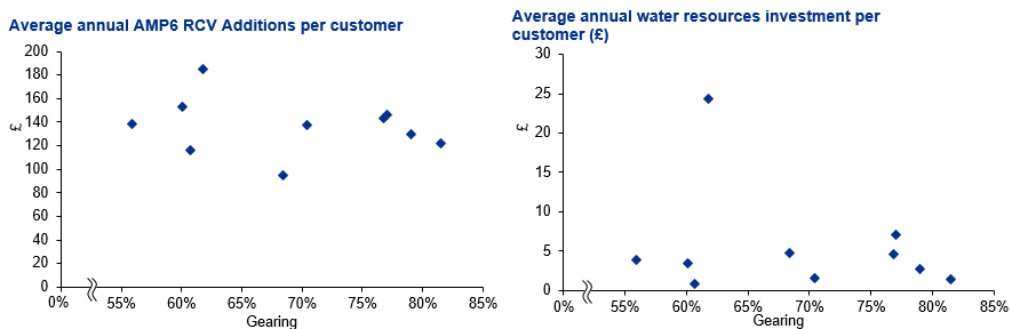
Separately, Figure 5 compares allowed and realised investment per customer for water companies and shows how it varies with leverage:

- The first scatter plot (left) sets out the average annual AMP6 RCV additions per customer across each of the WaSCs.

- The second scatter plot (right) sets out the actual average annual expenditure incurred between 2012 and 2017 on water resource infrastructure and non-infrastructure assets across the water companies networks.

Figure 5 does not demonstrate a systematic trend, or correlation, between companies' investment per customer, and their capital structures.

### Figure 5: Water company investment does not vary systematically with gearing levels



Source: 1. Average annual APM6 RCV additions chart (left): Customer number data is taken from the companies individual APRs, whilst the gross forecast RCV additions have been taken from companies individual PR14 Final Determinations. 2. Average annual water resources investment per customer (right): Customer number data is taken from the companies individual APRs, whilst the expenditure data has been taken from Ofwat's Stata Master wholesale water database.

In summary, this high level analysis suggests, based on this evidence, that water companies' capital structure—and specifically high leverage—do not negatively affecting either companies' investment or service performance.

## 4.3 Are customers overpaying if served by companies that are highly leveraged?

Finally, Ofwat appears also to justify its proposed sharing mechanism on grounds that there is some 'excess' return or unjustified benefit to equity holders from increasing leverage (see section 2.2 above).

If more highly leveraged companies were able to achieve a lower cost of capital (i.e. require a lower return and hence a lower normal profit for whatever reason as long as it does not harm customers), then there is an argument that this WACC is what they should be allowed by regulation because that is their true cost of capital (assuming this doesn't come at the expense of customers).

However, unless it can be shown that the allowed return changes with actual gearing, customers are not paying more for higher leverage compared with what they would paid if the company was geared at the notional level.

Ofwat has not demonstrated that the WACC falls with leverage, and that therefore shareholders in water companies are able to earn excess return from higher leverage. In any case, this would be in contradiction to established

corporate finance principles that regulators (including Ofwat to date) observe in practice.

A slightly different form of this justification for the proposed measures could be that increased returns on equity due to leverage come without any corresponding increases in risk exposure, and, therefore, without a requirement for higher returns. The argument here could be that higher equity returns are not accompanied by increased risk, or that such increased risk does not exist, or that it exists but is borne by someone else.

The Consultation does not explore how such situations might arise, but given that equity risk increases with leverage by definition and in line with Modigliani and Miller (MM), the argument relies on the assumption that some other factors are at play, e.g. that equity might avoid this risk by sharing some of this additional risk with customers or third parties.

The proposed new regulations are based on the premise that risk to equity and hence the required equity returns from companies with higher gearing do not fully increase with leverage. If they did, then it would not be justified to reduce equity returns at higher leverage because that would be inconsistent with required remuneration to ensure financeability and with Ofwat's financeability duty.

Overall, it is well established that as leverage increases, both the cost of debt and the cost of equity increase, which is contradicted by the proposed mechanisms, which are inconsistent with the finance theory.

The lender protection mechanisms in structured finance do not change this relationship in practice—while they might lower the cost of debt, they imply a corresponding increase in the cost of equity, since features such as reserve requirements and liquidity buffers have the effect of locking up cash which could otherwise be available to equity. These provisions therefore have the effect of further concentrating equity risk, which leads to higher required equity returns.

It has also been recognised that when the assumption of no taxes is relaxed, firms may be able to realise benefits from higher leverage since interest is a tax deductible expense, and as such it creates a tax saving benefit ("debt tax shield"). However, in the water sector, regulation already includes a clawback mechanism such that the debt tax shield benefit from leverage is largely allocated to customers. Therefore, companies are not able to drive returns by leveraging up to outperform against their tax allowance.

In this context it is important to distinguish between, on the one hand, benefits to a company as a whole, and, on the other hand, reallocations of risk to one group of capital providers at the cost of another group.

A variety of financial mechanisms including securitisations could change the allocation of risk across different types of capital. In fact, seniority of debt over equity itself creates a pecking order of risk exposure. Securitisations increase equity risk exposure by offering additional protection to debt through covenants, cash lock ups etc. Debt structuring can change the allocation of risks between debt and equity investors, or across different tranches of debt, in order to meet differing risk/return appetite of investors in different market segments, but this

does not mean that the company 'benefited' from such arrangements with a lower cost of capital.

There are also some situations where securitisation could create value. One such example is through market segmentation, i.e. the delineation of different tranches of capital with different risk profiles, which in turn would allow a wider range of capital providers to participate. For example, segmenting debt into tranches of highly rated, low risk senior debt and junior debt ensures that debt investors with different risk appetites could participate in the investment. Increasing the pool of investors with different risk appetites could create value, by allowing the company to access finance at the lowest cost, through creating a complete financing market. This avoids a situation where the quantity of overall risk in the investment excludes certain investor segments (e.g. with low risk and required return profile), thereby removing a cheap source of capital from the pool of investors, and thus requiring that the full capital is sourced from more expensive sources. While such 'tranching' in itself does not change the total business risk and hence the true cost of capital of the business, it could create value by ensuring market completeness and therefore that the realised cost of capital is in line with the true cost of capital (and risk of the business).

Securitisation could also create further benefit through creating a platform from which companies are able to issue debt more efficiently going forwards. This could provide benefits in terms of minimising issuance costs as well as potentially reducing agency costs, which could have some effect on reducing the cost of debt.

The key point here is that even if securitisations reduce the cost of debt in some circumstances, these are company-specific factors, which are not relevant in this context, because the proposed reduction in equity returns concerns the required return to equity based on *systematic risk*.

## 5 Are the proposals consistent with financial theory and regulatory precedent?

Ofwat's proposed regulation appears based on the premise that gearing is not fully reflected in the risk to equity. Ofwat's proposals need to be considered therefore in light of the relationship between equity risk, required returns to equity and leverage, and any potential factors affecting this relationship. These should also be considered in light of regulatory precedent, in terms of how regulators treat the determination of the capital structure for companies, and how they have reflected the relationship between gearing and required equity returns in their regulatory determinations to date.

### 5.1 Basic relationships between equity risk, equity returns and leverage

The question of whether the capital structure affects the overall cost of borrowing of a firm, and therefore its value, has been much scrutinised in corporate finance research. Since the cost of debt is lower than the cost of equity by contract (as equity sits lower in the capital structure hierarchy), substantial research has been carried out to assess whether firms can in fact lower their WACCs by increasing leverage.

The work by Modigliani and Miller (MM) first showed that firms in fact cannot lower their cost of capital by simply increasing leverage, because the required return on equity increases with leverage as equity risk becomes more concentrated. The MM Capital Structure Irrelevance Proposition stipulated that under certain circumstances including no taxes, the cost of capital of a firm is invariant to the level of gearing, and instead, is solely determined by the riskiness of the firm's cashflows.

The basic MM model assumes zero bankruptcy costs and hence a flat cost of debt, but insight has been extended to include the presence of risky debt. In this version of the model, at higher leverage levels, the increased risk of debt is reflected in an increased cost of debt, but there is an equal and offsetting effect on the cost of equity, as the effect is to transfer some risk from equity holders back to debt holders. The important implication is that absent a tax advantage to debt, the WACC remains constant whatever the level of leverage.

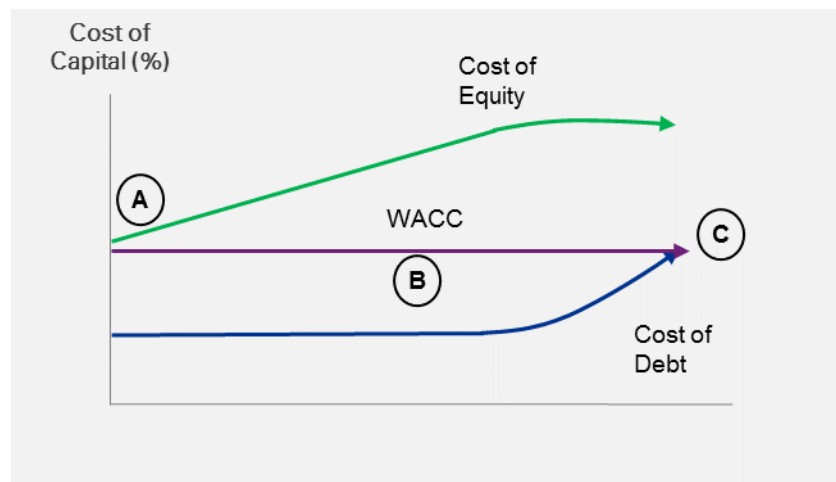
The effects of these observation are shown in Figure 6 below:

- In the absence of debt finance, the unlevered cost of equity of a firm is equivalent to the WACC, which in turn is fully driven by the riskiness of the cashflows of the business (see point A in Figure 6);
- The WACC of the firm does not change as cheaper debt finance is introduced, because equity risk - and therefore required return on equity – increases with leverage (point B in Figure 6). This is because debt has a priority claim on the firm's cashflows, and therefore introducing debt interest payments leaves

lower cashflows available to equity, which all else equal, makes equity cashflows more volatile.

- Finally, as the firm approaches 100 per cent debt financing, the required return on debt also increases as debt becomes more risky, up to the point where the required cost of debt is equivalent to the WACC where the firm is fully financed with debt capital (point C in Figure 6).

**Figure 6: The Capital Structure Irrelevance proposition by Modigliani-Miller**



*Note: for Illustration only, not drawn to scale.*

Subsequent research has recognised that when the assumption of no taxes is relaxed, firms may be able to realise benefits from higher leverage since interest is a tax deductible expense, and as such it creates a tax saving benefit (“debt tax shield”). In contrast, this benefit cannot be accrued under equity finance, as dividends are not tax deductible. This has led to the conclusion that 100 per cent debt finance may in fact be optimal.

Further research and analysis has shown that because increasing leverage leads to increased risk of debt default and bankruptcy costs, in practice it is not optimal for firms to adopt 100 per cent debt financed capital structures. Firms may be able to benefit from the debt tax shield as they increase gearing but only up to a point, following which the risk of bankruptcy, agency costs and default risk increase the cost of debt to the point it outweighs the benefit of the tax shield. For every business, there is some optimal capital structure which minimises the WACC, driven by this trade-off.

Irrespective of alternative theories of capital structure, including the trade-off theory and the “pecking order” theory (under which firms prefer internal finance followed by debt finance, with new equity issuance the last resort), regulators have always accepted that the basic MM theory is an adequate description of the relationship between risk and return at all normal gearing levels.



For the water sector, regulation is designed in such a way that the companies cannot benefit from leverage above the notional level since the *ex ante* revenue allowance for each company already includes an allowance for tax calculated based on the projected actual level of gearing (where this is higher than the notional level).<sup>27</sup> Therefore, companies are not able to drive returns by leveraging up to outperform against their tax allowance and, effectively, return this benefit to customers.

In summary, it is well established that as leverage increases, both the cost of debt and the cost of equity increase (in the absence of any other factors) but the cost of capital stays broadly constant. At the same time, in practice, the capital structure is not entirely invariant to gearing in the presence of taxes, but the basic intuition from the original MM work has been preserved in all subsequent work on the relevance of the capital for the WACC of the firm—namely that equity risk, and therefore the required return on equity, increases with leverage, which restricts a firm’s ability to lower its cost of capital through the use of cheaper debt finance.

Furthermore, while in theory a firm could capture benefits from additional leverage as a result of the debt tax shield, this benefit is: (1) limited, as increased bankruptcy risk prevents companies from boundlessly lowering the WACC through increased leverage (and in practice, the effect is further limited through the requirement to meet financial resilience stress tests; investment grade credit rating etc.); and (2) not appropriated by UK water companies in any case, since UK regulation currently requires companies to return the tax shield benefit to customers.

## 5.2 Regulatory precedent and approach to equity returns and leverage

All UK regulators, including Ofwat to date, have recognised the basic intuition behind MM, which is that firms are not able to capture financial benefits through changes in their capital structures (except via the debt tax shield, which current regulation ensures they cannot appropriate in any case).

The proposals as drafted constitute a significant departure from how Ofwat, and other UK regulators, have been setting the cost of capital allowance in the regulated infrastructure sectors since privatisation.

The cost of capital determinations in UK regulation have so far followed two principles of financial structure neutrality and the positive relationship between leverage and equity returns discussed below.

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<sup>27</sup> Ofwat sets the tax allowance on the basis of notional or actual level of gearing, whichever is higher. Furthermore, there is additional tax clawback for substantial step-change in leverage achieved through financial restructuring.

### 5.2.1 Financial structure neutrality

Regulators typically set the allowed cost of capital based on a notional capital structure, but companies are then responsible for determining their actual capital structure which is not required to be in line with the notional level of gearing.

Specifically, Ofwat’s policy has so far been that of capital structure neutrality, thus neither incentivising nor penalising any particular deviations from notional gearing. Ofwat has done this by setting a “notional” WACC, which reflects the cost of capital for an efficient company, and which in turn all companies are allowed to earn, regardless of how they chose to finance their operations in reality.

The recognition that company managers are better placed to manage balance sheet risk (optimising around the notional targets) than Ofwat as the economic Regulator, has been at the heart of this decision. For example, at PR14 Ofwat noted:

*“a notional gearing approach remains fit for purpose as an economic regulator has no better information on which to base detailed financing decisions, and companies are best placed to manage risk relating to structure, types and timing of financing”<sup>28</sup>*

Ofwat has been adopting this notional capital structure approach since privatisation, and therefore the current proposal marks a departure of 30-year regulatory precedent on treatment of the capital structure in the regulated UK water sector.

As recently as December 2017, in its Methodology paper for setting the cost of capital for PR19, Ofwat once again recognised that a notional approach to setting the cost of capital should be maintained for PR19. In that document, Ofwat lowered the notional gearing level from 62.5 per cent to 60 per cent, in recognition of the fact that companies have started to de-lever. Nevertheless, Ofwat argued that despite observed gearing levels being above this revised notional threshold for a number of companies, it did not plan to remove the incentive for companies to choose their own target gearing levels:

*“..We recognise that a number of companies (13, as of 31 March 2017) have gearing in excess of 60%. We maintain our view that that risks associated with capital structure should remain with the investors of each company.”<sup>29</sup>*

The subsequent proposal in the April 2018 Consultation to share “gearing outperformance” *removes the incentive* for companies to optimise their capital structures, and therefore transfers balance sheet risk, at least partly, to customers, simply due to the fact that the Regulator is proposing to affect

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<sup>28</sup> Ofwat (July, 2013), *Setting price controls for 2015-20 – final methodology and expectations for companies’ business plans*, Page 130, see here: [http://webarchive.nationalarchives.gov.uk/20150603214330/http://www.ofwat.gov.uk/pricereview/pr14/prs\\_web201307finalapproach](http://webarchive.nationalarchives.gov.uk/20150603214330/http://www.ofwat.gov.uk/pricereview/pr14/prs_web201307finalapproach)

<sup>29</sup> Ofwat (December, 2017), *Delivering Water 2020: Our methodology for the 2019 price review Appendix 12: Aligning risk and return*, Page 21, See here: <https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Appendix-12-Risk-and-return-CLEAN-12.12.2017-002.pdf>

financing decisions (as discussed in section 5.2.3 below). The proposal is therefore inconsistent with the notion that capital structure risk should remain with investors.

Ofwat continues to stipulate in the current Consultation that it “*consider[s] it is appropriate for companies to choose their financing structures*”<sup>30</sup>, and that it plans to continue its notional capital structure approach. However, in practice, for companies to want to optimise their capital structure, it is not sufficient that the *ex ante* WACC is set on a notional basis. The *ex post* adjustment that Ofwat proposes to apply for sharing “gearing outperformance”, will no longer mean that its allowed WACC *ex post* is capital structure neutral—the allowed WACC will now effectively depend on actual leverage. For that reason, the proposal effectively removes the incentive for companies to optimise their capital structures (and specifically, any incentive to move above notional leverage), because any deviations above notional will penalise equity investors, by not allowing them to realise the required return for bearing additional financial risk due to leverage (this is further discussed in the next section).

Therefore, while Ofwat may state that it plans to continue to allow companies to choose their financial structures, the proposal does not incentivise that behaviour in practice.

Finally, even though the issue of elevated financial distress and default risk arising from highly leveraged structures has been debated at previous AMPs, it has always been assumed that sufficient protections exist in the regulatory mechanism to ensure consumers are protected from such risk being passed on to them. For example, a 2006 joint discussion paper by Ofgem and Ofwat found that:

*“if a company ends up in financial distress either because of a relatively poor operating performance or because of its decision on financial structure then the regulator would regard these as costs that should be borne by the providers of debt and equity finance rather than consumers; in the event of a cost shock causing several companies to end up in financial distress (systemic failure) the Special Administration provisions should be expected to protect consumers from the effects of multi company failure.”*<sup>31</sup>

The current proposal limits a company’s discretion in terms of choosing optimal financing structure that it is comfortable to take responsibility for. This has a double impact on investor sentiment and could result in higher cost of capital going forward, given that a key management decision has effectively been taken away, with risk that the gearing level imposed by regulation ends up being sub-optimal.

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<sup>30</sup> Ofwat (April, 2018) Consultation, Page 4. And further on page 13 “To ensure companies bear risk around financing, at PR19 (as for previous price reviews) our price determinations will be set on the basis of a notional capital structure rather than each company’s actual financing structure.”

<sup>31</sup> Ofwat, Ofgem (February, 2006), *Financing Networks: A discussion paper*, Page 25, see here: [http://regulationbodyofknowledge.org/wp-content/uploads/2013/03/OFWAT\\_Financing\\_Networks\\_A.pdf](http://regulationbodyofknowledge.org/wp-content/uploads/2013/03/OFWAT_Financing_Networks_A.pdf)

## 5.2.2 The cost of equity increases with leverage

Ofwat has so far recognised that the cost of equity changes with leverage, and as a result, that the WACC remains largely invariant to gearing (subject to clawback of possible tax shield effects as discussed above).

In doing so, Ofwat has so far been setting levered CoE using a variant of the MM relationship, i.e. by taking a view on asset beta risk, and then calculating levered CoE by using a version of the MM equation which translates asset beta risk into equity risk given the level of leverage. For example, at PR14, Ofwat took the view that the asset beta risk in the water sector is 0.3, and as a result it allowed an equity beta of 0.8.<sup>32</sup>

As discussed in the following section, all UK economic regulators generally accept a version of MM, i.e. that equity risk, and therefore required returns on equity, increase with leverage. The current proposal appears to recognise the theory, but no longer considers that the theory holds in practice for reasons that are not explained.<sup>33</sup>

## 5.2.3 Wider regulatory precedent

The Competition Markets Authority and UK economic regulators generally accept that the cost of equity increases with leverage (i.e. a version of the MM theory of capital structure, although with variation around the assumed debt management policies, active vs passive, which result in slightly different versions of the WACC and gearing/ungearing formulae). Most economic regulators also use a notional capital structure approach to setting the WACC, in recognition of the fact that companies (and financial managers) are best placed to manage (and bear) capital structure risk.

### The Competition and Markets Authority (CMA)

The Competition and Markets Authority (CMA), the UK Appeals body explicitly accepts that the capital structure is largely invariant to gearing, once the tax shield effect has been accounted for. For example, in the latest appeal raised by Bristol Water (2015), the CMA noted:

*“Different levels of gearing may be associated with different levels of WACC and, in principle, an optimal level of gearing might be estimated by attempting to balance the different effects (including the risks and costs of any financial distress that might be associated with higher gearing). However, after taking*

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<sup>32</sup> Ofwat (January, 2014), *Setting price controls for 2015-20 – risk and reward guidance*, page 24, see here: [https://www.ofwat.gov.uk/wp-content/uploads/2015/11/gud\\_tec20140127riskreward.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2015/11/gud_tec20140127riskreward.pdf)

<sup>33</sup> Ofwat (April, 2018), page 15. “Secondly, finance theory implies that equity returns increase in linear fashion with gearing but, typically, such theories do not reflect the benefits of securitisation arrangements. The covenants in such arrangements allow companies to achieve a lower cost of debt (and a lower cost of equity) than would otherwise be the case for a given level of gearing.”

*into account the tax shield from more debt, the WACC is not very sensitive to the level of gearing.*” (emphasis added)<sup>34</sup>

The CMA also uses a notional approach to gearing, explicitly stating that capital structure risk should be borne by capital providers.

### Other regulators—selected examples of adopted approaches

Most UK economic regulators take a notional capital structure approach, and allow the companies to deviate from this notional capital structure if they deem that would be efficient. The latest Annual Update Report by the UK Regulators Network (UKRN) on the Cost of Capital in UK regulation notes this:

*“The WACC is derived for a company or part of a company (the “regulated businesses”). This is usually by way of a notional gearing assumption which may be different to the actual gearing of the regulated company or its group.”*<sup>35</sup>

*“When setting prices most regulators use an assumed notional capital structure and a notional level of gearing.”* (emphasis added)<sup>36</sup>

Examples of other economic regulators endorsing a notional capital structure approach and the MM relationship between equity risk and leverage include:

The CAA took a notional structure approach when setting e.g. Heathrow’s cost of capital for Q6 price review, noting that the company should bear capital structure risk, and explicitly any risk due to higher than notional leverage:

*“The CAA’s approach to the WACC continues to assume notionally financed airport operators. The financing structure should remain the responsibility of the regulated company. The regulated companies and their shareholders should bear the risk of highly leveraged structures (or gearing above the notional gearing assumptions).”*<sup>37</sup>

The CAA also explicitly noted that the notional structure approach ensures that the regulated company should bear the risk that it chooses a level of gearing which is inefficient:

*“The notional capital structure approach continues to ensure that financing is a matter for the company, and investors bear the cost and risk of an inappropriate financial structure.”*<sup>38</sup>

<sup>34</sup> CMA (October, 2015), *Bristol Water - A reference under section 12(3)(a) of the Water Industry Act 1991*, Page 300, see here:

[https://assets.publishing.service.gov.uk/media/56279924ed915d194b000001/Bristol\\_Water\\_plc\\_final\\_determination.pdf](https://assets.publishing.service.gov.uk/media/56279924ed915d194b000001/Bristol_Water_plc_final_determination.pdf)

<sup>35</sup> UKRN (May 2017), *Cost of Capital – Annual Update Report*. Page 5. See here:

[http://www.ukrn.org.uk/wp-content/uploads/2017/05/20170503-UKRN-Annual-WACC-Comparison-Report\\_FINAL.pdf](http://www.ukrn.org.uk/wp-content/uploads/2017/05/20170503-UKRN-Annual-WACC-Comparison-Report_FINAL.pdf)

<sup>36</sup> UKRN (May 2017), *Cost of Capital – Annual Update Report*. Page 18.

<sup>37</sup> CAA (October, 2013), *Estimating the cost of capital: a technical appendix to the CAA’s Final Proposal for economic regulation of Heathrow and Gatwick after April 2014*, Page 2, see here: <https://publicapps.caa.co.uk/docs/33/CAP1115.pdf>

<sup>38</sup> CAA (October, 2013), Page 35.

As many other regulators, the CAA acknowledges the relationship between gearing and equity risk, through taking a view on the asset beta for airports, and re-levering it to set an equity beta allowance for the chosen level of notional gearing. For Q6, the CAA took a view that Heathrow's asset beta lies within the range of 0.42-0.52, which resulted in an equity beta range for Heathrow of 0.9-1.15, at 60 per cent notional gearing.<sup>39</sup> The Harris-Pringle formula was used in this case to re-lever the beta.<sup>40</sup>

Ofgem, at the RIIO price control also took a notional approach to gearing, allowing companies the choice to optimize their capital structures:

*"Ofgem takes a notional gearing approach, and places only indicative weight on the gearing levels quoted by the companies, since they are typically owned by holding companies, broader than the regulatory entities, that have some discretion over the allocation of their debts..."<sup>41</sup>*

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<sup>39</sup> CAA (October, 2013), Page 89.

<sup>40</sup> The Harris-Pringle assumes the following relationship between the asset, equity and debt betas of the firm:  $\beta_a = \beta_e (1 - G) + \beta_d (G)$  where  $\beta_a$  is the company asset beta,  $\beta_e$  is the equity beta,  $\beta_d$  is the debt beta, and G is a measure of gearing. See PWC (April 2013), *Estimating the cost of capital in Q6 for Heathrow, Gatwick and Stansted: A report prepared for the Civil Aviation Authority*. Page 67. Accessed here: <http://webarchive.nationalarchives.gov.uk/20150601181840/http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=14279>

<sup>41</sup> Europe Economics (March, 2011), *The Weighted Average Cost of Capital for Ofgem's Future Price Control*, Page 12, see here: <https://www.ofgem.gov.uk/ofgem-publications/48264/gd1waccpdf>



## 6 Commentary on the design, incentives and likely effectiveness of the proposal

The Better Regulation Task Force defined 5 principles of good regulation. Two of these are: (1) Targeting, i.e. the idea that regulation should be focused on the specific problem it aims to address and minimise any side effects; and (2) Proportionality, i.e. the idea that regulators should only intervene when necessary. Remedies should be appropriate to the risk posed, and costs identified and minimised.<sup>42</sup>

It is therefore important to assess whether the mechanisms described in the Consultation meet these two principles, and specifically, whether: (1) they effectively address their stated aims; (2) they are well designed and properly considered; and (3) whether they are likely to lead to any unintended consequences. This is discussed below.

### 6.1 Incentives and risk embedded in the proposal

Ofwat's notional capital structure should, in theory, be set to reflect the optimal capital structure that minimises the WACC, for the given systematic risk inherent in the regulated water business.

However, in practice, there are a number of reasons why it may be optimal for companies to be allowed to deviate from the notional capital structure set by Ofwat:

- The optimal capital structure is a dynamic parameter that will likely change as conditions in debt and equity capital markets change over the regulatory period; for example, an unexpected, within-period change in interest rates (and therefore corporate debt costs) could make it optimal for companies to react by increasing/ decrease leverage;
- The practicalities of financing a business and the costs of raising finance mean debt is raised periodically not continually, which implies that gearing is not static.

Even if the optimal structure could be fixed with some certainty over the regulatory period, it can be argued that company financial managers are better equipped to take a view on what the optimal capital structure for their firm should look like, and therefore that financing risk associated with the capital structure would be best managed by the companies themselves.

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<sup>42</sup> Better Regulation Task Force (2013), *Principles of Good Regulation*, Page 5 & 7, see here:<http://webarchive.nationalarchives.gov.uk/20100407162704/http://archive.cabinetoffice.gov.uk/brc/upload/assets/www.brc.gov.uk/principlesleaflet.pdf>



In light of the above, Ofwat (and other UK regulators) have so far allowed companies the freedom to optimise their capital structures around the notional level set by the Regulator.

Specifically, the existing arrangements preserve the incentive for financial managers to optimise the capital structure, given that:

- Companies are neither penalised nor rewarded for any particular deviation from the notional level of gearing; and
- Subject to the claw-back of the tax shield benefit arising from differences between actual and notional gearing, companies are able to earn an allowed WACC set at the notional level of gearing, regardless of what the company's actual financial structure looks like.

The second condition above is important in that it ensures that levels of equity return change with the level of risk concentration, commensurate with the actual level of gearing. This is a necessary condition for financial managers to have been able to deviate from the notional capital structure set by Ofwat, in order to achieve one that is optimal for each company given its particular circumstances which include its business characteristics, forward-looking financing needs, existing financing contracts, etc.

Although Ofwat's Consultation argues that the current proposal does not prevent companies from choosing (and optimising) their capital structures<sup>43</sup>, in practice, the proposal removes the incentive or indeed freedom (given financial penalties) for financial managers to do so. This is because under the current proposal, companies will earn their allowed return (allowed WACC) only if they choose to finance at or below the notional level of gearing. Deviating from the notional capital structure, and specifically increasing leverage, erodes baseline returns, since cash is being returned to customers, but the cost of capital has not changed.

Figure 7 below illustrates the impact from the adjustment:

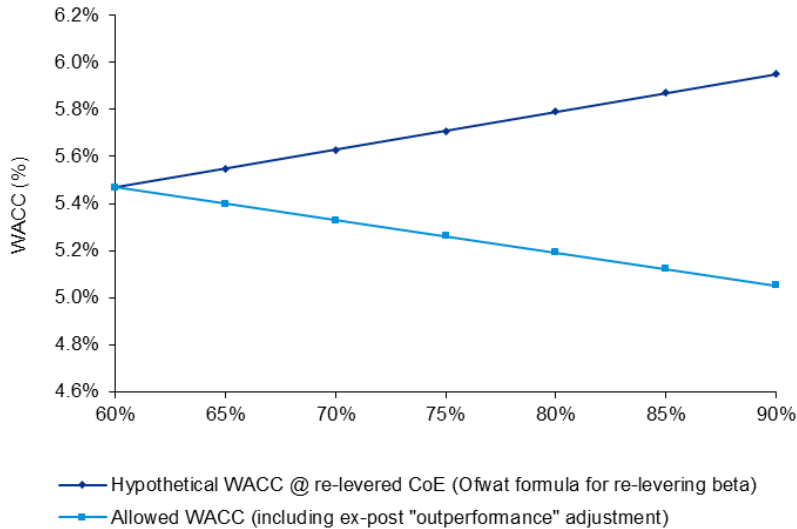
- First, it shows the impact from the adjustment on the *ex post* allowed WACC for a given (hypothetical) firm, at different levels of gearing above the notional level, using Ofwat's central estimates of the notional CoE and CoD (nominal) at PR19 (see lighter blue line). The *ex post* WACC is calculated as the *ex ante* allowed WACC plus the adjustment (calculated as 50 per cent x (CoE-CoD) x (actual – notional gearing)).
- Second, it shows the hypothetical WACC that Ofwat would have calculated, if it were to re-lever the asset beta at different levels of gearing above the notional level, using Ofwat's own assumptions for PR19, including the way it

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<sup>43</sup> Ofwat (April, 2018) Consultation, Page 4. And further on page 13: "To ensure companies bear risk around financing, at PR19 (as for previous price reviews) our price determinations will be set on the basis of a notional capital structure rather than each company's actual financing structure."

sets the equity beta, and simply changing the “notional” level of gearing of 60 per cent to higher values in the equation used to determine that equity beta.<sup>44</sup>

**Figure 7: Allowed WACC with ex post adjustment vs Hypothetical WACC using CoE adjusted for gearing**



Note: KPMG Analysis.

Source:

1. The allowed WACC calculation uses notional, nominal values for CoE and CoD, presented as central estimates in Ofwat’s PR19 consultation.
2. The hypothetical WACC calculation uses the aforementioned notional, nominal CoD, however calculates the CoE using Ofwat’s stated Risk Free Rate (RFR) and Equity Market Risk Premium (EMRP), and the levered beta, which is dependent upon the level of gearing.<sup>45</sup>
3. Hypothetical WACC assumes the CoD doesn’t change with leverage, which is a conservative assumption.

The above shows that the *ex post* WACC that will be effectively allowed under this proposal, will in fact not allow water companies to recover their full cost of finance in the event that they choose to deviate upwards from Ofwat’s notional capital structure. It also shows that the proposals are not consistent with Ofwat’s own calculation of the WACC, and in particular with what it would have chosen as the levered CoE in the WACC allowance, if it were to choose a higher notional gearing.

Therefore, the proposal removes the incentive for companies to optimise their capital structures in practice, and as a result will likely lead to an equilibrium where companies are to an extent forced to finance their operations at the notional level set by Ofwat or lower, given the asymmetry of the proposals.

<sup>44</sup> Ofwat (December, 2017), *Delivering Water 2020: Our final methodology for the 2019 price review*, Page 174, see here: <https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Final-methodology-1.pdf>

<sup>45</sup> Ofwat (December, 2017) Final PR19 Methodology, see footnote 44.

In effect, this transfers balance sheet or financing risk to customers, because the Regulator is setting the actual capital structure and creating a penalty mechanism where this is not adopted. It can be argued that customers are not best placed to manage this risk.

## 6.2 Ofwat's role in determining the efficient capital structure

Ofwat's determination of the notional capital structure will receive elevated importance under the proposed arrangement for sharing "gearing outperformance", because companies will not have (symmetric) incentives to take a different view on what constitutes an "efficient" capital structure relative to Ofwat's view, without incurring penalties for such deviations.

In the past and currently in other sectors, the role of the notional gearing determination was/is not as fundamental.

For example, at PR14, Ofwat's consultants, considered and recommended an optimal capital structure for the water sector with a 10 per cent range (i.e. between 60–70 per cent), based on a range of evidence including:<sup>46</sup>

- the actual gearing of water companies;
- considerations of how the low interest environment could have encouraged deviations from the long-term efficient gearing level;
- the gearing rate which could sustain Ofwat's requirements for interest cover for investment grade debt, and therefore meet financeability requirements; and
- regulatory benchmarks for gearing in other sectors.

Subsequently, Ofwat chose the notional capital structure, stating that it chooses to use *"...a range of 60% to 62.5%, and a point estimate of 62.5%", justified because "... [the] level balances the benefits of lower-cost debt financing with considerations of financeability."*<sup>47</sup>

Ofwat therefore (like other regulators) has determined the notional capital structure for the sector based on a wide range of benchmarks, which means its estimates of the efficient capital structure have not been precise. Moreover, the Regulator's choice of the notional capital structure above has also been affected by the desire to discharge a regulatory financeability duty. The actual, optimal capital structure of the firm, on the other hand, should be driven by asset risk, investment needs, liquidity requirements, capital market conditions, embedded debt etc.

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<sup>46</sup> PWC (July, 2013), Cost of capital for PR14: Methodological considerations, Page 32, see here: [https://www.ofwat.gov.uk/wp-content/uploads/2016/01/rpt\\_com201307pwccofc.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2016/01/rpt_com201307pwccofc.pdf)

<sup>47</sup> Ofwat (January 2014), Setting price controls for 2015-20 – risk and reward guidance. Page 9, see here: [http://webarchive.nationalarchives.gov.uk/20150603201459/http://www.ofwat.gov.uk/pricereview/pr14/gud\\_tec20140127riskreward.pdf](http://webarchive.nationalarchives.gov.uk/20150603201459/http://www.ofwat.gov.uk/pricereview/pr14/gud_tec20140127riskreward.pdf)

For these reasons, regulators have not historically sought to set the “efficient” capital structure that minimises the WACC, to do so going forwards would require a different set of capabilities to those needed in the past.

Placing the determination of the efficient capital structure of water companies in the hands of the Regulator might therefore lead to increased financing risk and side effects, in that companies will bear the risk that the Regulator may not end up selecting the real optimal capital structure for either the sector as a whole or for individual companies within the sector, which will likely lead to increased long-term cost of capital in the sector.

There are also a number of issues with the design of proposals as currently set out, recognising that in their current form they are still somewhat vaguely defined and not fully developed.

Firstly, an asymmetric, penalty-only mechanism does not incentivise companies to optimise their capital structures to ensure that they are efficiently financed. Instead, it incentivises companies to finance at the notional gearing. It is also not consistent with a ‘fair bet’ principle, i.e. the concept that companies need to be able to earn their actual cost of capital on the balance of probable outcomes. The fair bet principle is needed to avoid detrimental risk aversion, e.g. in its current design, the proposal does not encourage the company to take any financing risk since it is unable to realise any benefit—it can only lose. This is detrimental to consumers’ interest since it does not encourage behaviours that could lead to inefficient risk-aversion *and* higher costs for customers in the longer term.

Secondly, the consequences of the complexities of the financial markets have not been properly considered. Debt is not a neatly defined concept. There are a number of financial products that do not fully fit into the usual categorisation of debt. If the definition of gearing is to consider the ratio of equity to net debt, then the proposals may encourage companies to utilise more exotic products, derivatives, swaps, hybrids, options etc. While this may not in-of-itself be an issue, it is unlikely to be the intention of the proposals. Attempting to widen the definition of debt to include other types of product will be complicated and will likely unintentionally capture other instruments such as hedging tools which should not be an aim of these proposals.

Third, debt is typically raised in debt capital markets at fixed rates, and for a long period, and so cannot easily be refinanced at will to reduce gearing levels or change the financial structure at short notice, Ofwat may be, potentially, inadvertently introducing additional cost and risk into the system through incentivising de-levering.

Fourthly, the practicalities of accessing the debt markets and the dynamism of financing a business do not seem to have been fully considered. For example, it is not clear at what point in time the gearing test will be carried out. It could be annual or an average over the price control period. It could be opening debt, closing debt or average debt. The same issue is true of the value of the equity since the RCV also moves during the year and throughout the price control.

What is typically the case however, is that finance tends to be raised before investment takes place. That is to say the debt required to fund RCV growth is

raised in advance, meaning there is a lag between debt appearing on the balance sheet and that capital being fully deployed in the RCV, meaning at any point in time, gearing is likely to appear artificially higher than it actually is. In periods of growth, particularly through large, one-off type investments the impact of this could be material.

Another issue is that there are fixed costs associated with raising debt. For this reason it is often more cost effective, particularly for smaller companies, to only access the markets periodically, and raise enough debt to cover a medium term investment horizon. This can lead to a saw-tooth shaped gearing profile as debt is raised then gradually deployed into the RCV over time. These proposals could penalise this process, leading to companies needing inefficiently to access the market more frequently for smaller amounts of debt, ultimately leading to increased costs.

Overall, the proposals do not incentivise companies to structure their financing in the most efficient way, but to use the capital structure which Ofwat determines. This may have the consequence of increasing costs for consumers and effectively has the implication of transferring financing risk away from companies to consumers who are likely to be less well placed to manage that risk. There are also a number of potential side-effects including higher debt issuance costs, excessive risk aversion, and reduced transparency.

It is therefore challenging to see how the proposals as currently drafted meet the tests of proportional and targeted regulation. As discussed in more detail in section 8, the aims of these proposals are to address the perception of lack of transparency and public trust, but, as currently drafted, it could be argued that some of the proposals, actually, could be counterproductive to that aim.

## 7 Potential implications of the proposed mechanisms on customer bills in the short term and in the long term

The Regulator's primary duty is to protect the interests of consumers. A key component of this duty is to consider the impact of any regulatory change on the prices consumers pay and the quality of service they receive. This section therefore considers the impact of the proposals on customer bills.

### 7.1 Short term impact on customer bills

At present, almost all companies in the UK water sector adopt leverage levels that exceed the notional level set by Ofwat, although a number of companies fall within the proposed 5 per cent deadband. Because the majority of the water companies are geared above notional, the proposed mechanism will have the immediate result of a downward correction to allowed revenues for many of them, in the short term.

The proposed mechanism will benefit consumers in the short term in that it returns 50 per cent of the difference between the cost of equity and debt capital, accrued on the RCV financed with debt above notional. However, KPMG calculations show that the effect is likely to be small (see below).

Ofwat discusses several options on how the adjustment could be implemented in practice, including the following variations:

- Real vs Nominal basis: Ofwat proposes to apply the calculation on a nominal basis, with cost of equity calculated on the basis of long term inflation. However, a variation of this could be to calculate the adjustment on a real basis.
- Actual vs Notional CoD: Ofwat favours the use of actual cost of debt reported by companies, since it recognises that there is likely to be a link between gearing level and the cost of debt.

Figure 8 below illustrates the likely annual impact on the allowed return for companies, if the "gearing outperformance" sharing mechanism were adopted, where the cost of equity and Debt wedge is calculated as the difference between:

- (1) Notional CoE and actual CoD, both expressed in nominal terms;
- (2) Notional CoE and notional CoD, both expressed in nominal terms; and
- (3) Notional CoE and notional CoD, both expressed in real terms.

In line with what was stated in Ofwat's Consultation, the calculations below are based on a 50 per cent sharing rate of the "gearing outperformance" calculated as discussed under the three approaches above, and applied on the full difference between actual and notional gearing (i.e. relative to the 60 per cent notional gearing target). The calculations exclude the companies which fall within

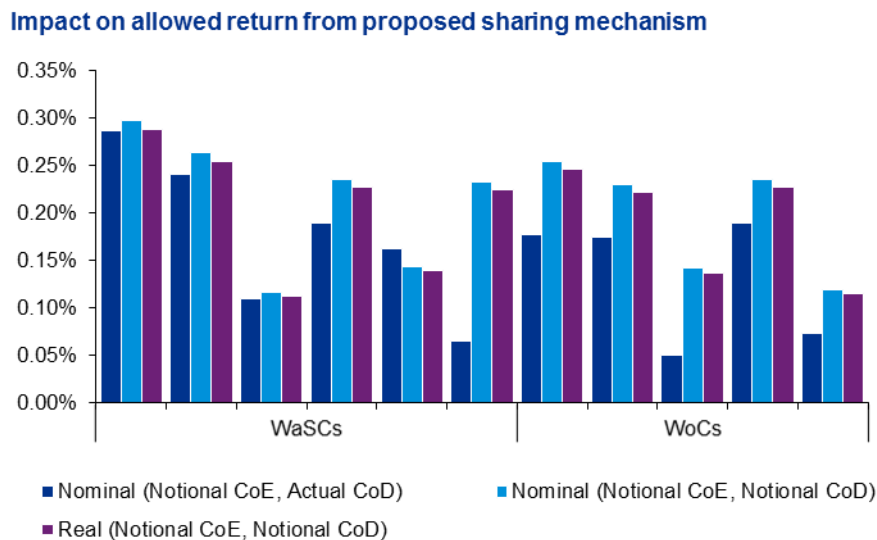
the dead band. The calculations illustrate the impact of the proposed mechanism at present levels of gearing in the industry.

As shown in Figure 8, the maximum impact from the proposed mechanism is a reduction of the WACC of c.30bps, and on average across the affected companies, the adjustment will have the effect of circa 15-20bps.

In terms of customer bills, the maximum impact is circa £7 or circa 1.9 per cent of the annual customer bill, with an industry average of circa £3.

Therefore, the impact of the sharing mechanism on customer bills is quite small to begin with, and will likely dissipate throughout the next regulatory period as companies adjust their capital structures to avoid this adjustment, and as their tax liabilities increase accordingly.

**Figure 8: Annual impact on return from “gearing outperformance” sharing mechanism (2017 data) for companies for which the mechanism applies**



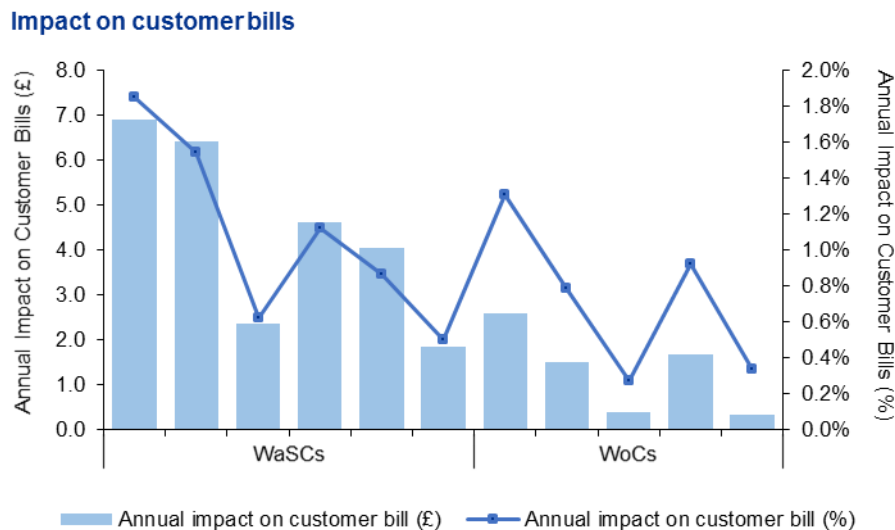
Note: KPMG Analysis.

Sources:

1. Notional CoE and CoD taken from Ofwat’s December 2017 PR19 Final Methodology, Table 10.2: ‘Our early view of the cost of capital’
2. Gearing data taken from the Annual Performance Report (APR) 2017 tables. Actual CoD data taken from ‘Monitoring financial resilience 2016-17’ charts published by Ofwat



**Figure 9: Annual impact on customer bills from “gearing outperformance” sharing mechanism (2017 data) for companies for which the mechanism applies**



Note: KPMG Analysis.

Sources:

1. Impact on customer bill assumes that the calculation will be done using Notional CoE and Actual CoD, both expressed on a nominal basis, taken from Ofwat’s December 2017 PR19 Final Methodology, Table 10.2: ‘Our early view of the cost of capital’
2. Actual CoD data taken from ‘Monitoring financial resilience 2016-17’ charts published by Ofwat
3. Customer number data: Annual Performance Report (APR) 2017 tables
4. RCV data: ‘Regulatory capital values 2017’ tables, published by Ofwat
5. Annual bill data: Discover Water ‘annual bill’ website

## 7.2 Medium to long term impact on customer bills

Any positive impact on consumer bills might dissipate, or even turn negative (i.e. increase bills), in the medium to long term as a result of several factors:

- Firstly, companies will likely adjust their gearing levels downwards to notional levels, which will remove the “CoE-CoD” wedge saving consumers would benefit from in the short term, as discussed above.
- Secondly, if companies change leverage, companies will no longer return the tax shield benefit from higher leverage. All else being equal, this is a dis-benefit to consumers adding to their water bill, which will increase customer bills, as companies’ tax allowances start reflecting higher actual (and future expected) taxes; and
- Thirdly, the WACC will likely increase as a result of perception of increased risk in the sector, arising due to (1) risk that the selected notional capital structure is not optimal, as well as due to (2) possible increased regulatory risk premium arising from lack of confidence in the regulatory regime. Both of



these will lead to higher WACC and upward pressure on customer bills in the medium to long-term.

## 8 Measures taken by the sector to strengthen transparency and public trust

It is important to separate the specific mechanisms set out in the Consultation from the outcomes the Regulator is seeking to achieve by implementing them. The driver for these proposals is to strengthen transparency and public trust. Therefore, it is useful to consider what the sector has already committed to in this area and what more it could do, potentially to achieve the same outcome without a number of the potential adverse side-effects of some of these proposals.

### Trust

Dividend policy and the perception of excess returns going to shareholders was identified as a key driver for these proposals. Without attempting to second guess the rationale, it might be inferred from some of the correspondence and discourse around these proposals that the fundamental driver of distrust is not level of debt but levels of dividend, and that high gearing is an enabler for 'excess' dividends to be paid.

If this line of argument holds, namely that the issue is not high debt but high dividends, and that high gearing is simply a vehicle for enabling special dividends distributions, then the issue is not the absolute level of gearing, but the change in gearing, and, specifically, potential for companies to lever up, if it exists, given the restrictions and limitations in place. If this is the case then penalising companies that are already more highly levered does not solve the underlying issue, and there are, potentially better approaches for targeting special or 'extraordinary' returns.

### Transparency

On the issue of transparency, there is much that can be achieved through better quality reporting, including a much better explanation of the drivers of out- and under-performance. Part of the issue is that, at present, it might be hard clearly to understand what has driven the levels of performance which in turn erodes trust. If performance, where relevant, could be better communicated and explained, the perception of transparency would increase and it is also likely that trust would follow.

It should also be noted that many companies have already made some commitments to help further improve the perception of opaqueness and lack of trust in the sector. There have been commitments to ensure the financial resilience of companies remains robust, in addition, from some of the more highly geared companies a commitment that they will de-lever over the next price control period.

The cumulative impact of these commitments and options should be considered against the somewhat incremental impact these proposals in their current form might have, especially given the level of disruption their implementation could



cause. It is likely that much can, and will already, be achieved through these less disruptive choices.



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