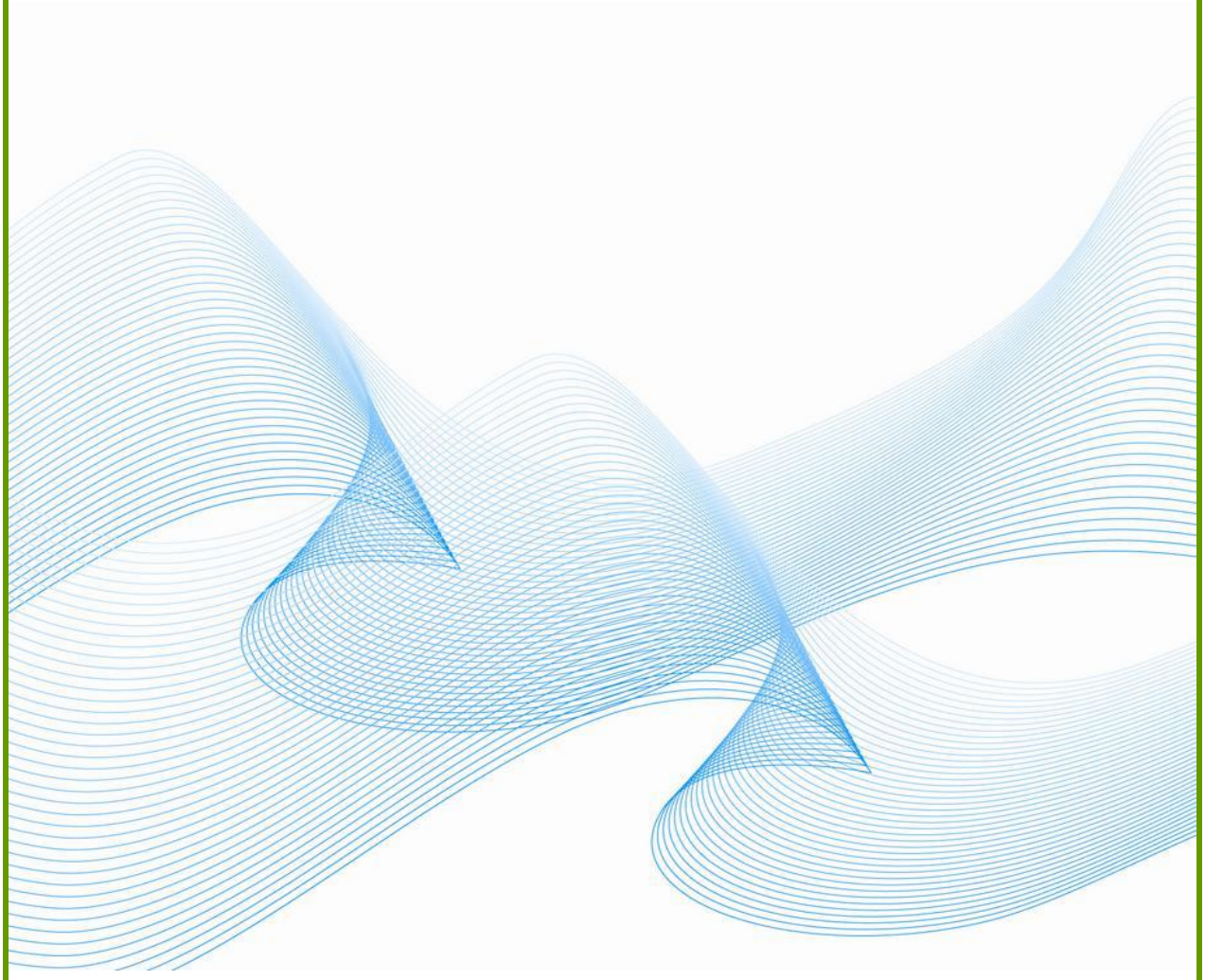
Utility Regulator
ELECTRICITY GAS WATER

Water and Sewerage Service
Price Control 2010-13

Final Determination Main Report – Annex G
Calculation of Price Limits and Subsidy

February 2010



Water and Sewerage Revenue and Charges Price Control 2010-2013

Final Determination Main Report

Annex G - Calculation of price limits and subsidy

Contents

G1. Introduction

G1.1. Overview

1.1.1. In this Annex we describe how we used a financial model to calculate the revenue that NI Water needs to raise from customers (and subsidy). The annex also details our assumptions and the ratios that we use to determine whether the proposed price limits are consistent with financial sustainability for NI Water.

1.1.2. We have a statutory duty to promote the interests of customers of NI Water's regulated business. One of the ways in which we do this is by ensuring that NI Water has sufficient funding to carry out its regulated (core) functions as a water and sewerage service undertaker in an efficient manner.

1.1.3. NI Water's funding comes from two sources:

- Revenue raised through charges to customers or subsidy and
- Borrowing (from government).

1.1.4. The revenue that is raised from customers is determined by the price limits that we set for NI Water. We use a financial model to calculate the price limits. The model therefore plays a key role for Price Control 2010, having an impact on:

- Non - domestic customers – because it determines the limits on charges for water and sewerage services,
- NI Water – because it determines the level of funding available for the business to carry out its core functions; and,
- Level of subsidy paid by the NI Executive.

1.1.5. The financial model has two principal elements:

- Calculation of the revenue that NI Water requires to carry out its core functions; and,
- The tariff basket model, which relates the revenue collected from customers (currently non-domestic) to the tariffs they will pay.

1.1.6. We have set a price limit for each of the three years covered by the *Price Control 2010 (PC10)*.

1.1.7. Price limits are forward looking and therefore in setting price limits we have to make a number of assumptions.

1.1.8. These assumptions concern both macroeconomic factors and factors that are specific to NI Water.

1.1.9. One of the key considerations of our modelling is the financial sustainability of NI Water. We use a set of ratios to assess financial sustainability. These ratios are the same as those used by other regulators to assess the financial sustainability of other utilities.

G2. The Financial Model

G2.1. Introduction

2.1.1. We developed a financial model to calculate the required price limits having taken account of the costs that NI Water is likely to incur. Constructed in Microsoft Excel©, the model consists of a series of linked spreadsheets. The model goes forward to March 2018. We have published the financial model (including input data) as part of our final determination. We have in addition published an electronic version of the financial model together with a summary user manual for the final determination.

G2.2. Development of the Financial Model

2.2.1. We developed the financial model using internal resources to ensure it reflected the circumstances in Northern Ireland e.g. current structure of charges. It takes account of the proposals outlined in our PC10 approach document and has been subject to rigorous internal analysis. This has ensured that all of the formulae perform as we would have expected and that the results are consistent with our expectations when inputting test information. We asked NERA Economic Consulting to audit the financial model, and we have published its independent audit opinion in Annex K, together with their audit report in Annex J.

2.2.2. In October 2008 and March 2009 we provided a draft version of the model to NI Water. We also gave NI Water an opportunity to comment on the model at a workshop in April 2009. We believe that our own internal challenge and the detailed scrutiny provided by the NERA audit will reassure stakeholders that the output of the financial model is reliable.

G2.3. Best Practice Guidelines

2.3.1. The Institute of Chartered Accountants for England and Wales publishes a useful guide on building financial models, *'Spreadsheet modelling best practice'*[1]. It provides guidelines on scoping, specifying, designing, building, testing and using spreadsheet models. It recommends that spreadsheet models should make distinct the following processes:

- Inputs;
- Calculations; and,
- Results.

[1] Nick and Johnathan Batson, *'Spreadsheet modelling best practice'*, April 1999, available at http://www.eusprig.org/#DOWNLOADS.

2.3.2. Further, it recommends that there should be a title sheet explaining the model; that where possible the spreadsheet should read from left to right and top to bottom; that several worksheets are used rather that one complicated worksheet; and that each row contains only one formula. We believe that our model is fully consistent with these guidelines and that it complies with best practice.

G2.4. Structure of the Model

2.4.1. The structure of our model follows the guidelines for best practice outlined above. The spreadsheets within the model can be divided into four categories:

- Input – these are the sheets into which we will input the information;
- Process – these sheets use input information in calculations that feed into the output sheets;
- Accounting outputs – these spreadsheets show the projected financial statements for NI Water. They allow us to understand the minimum amount of revenue required by NI Water; and,
- Main outputs – these worksheets contain financial ratios analysis. These sheets are critical to an understanding of whether the level of revenue is consistent with the financial sustainability of NI Water.

G2.5. Information in the Model

2.5.1. We provided NI Water with the input tables for the financial model as a part of the Business Plan guidance which we issued in March 2009. The information provided by NI Water's Business Plan has been useful. We have rigorously reviewed this before finalising the information to be input to the financial model.

2.5.2. The model also contains financial assumptions. These assumptions include information on interest rates and inflation expectations. All of the input information influences the final answer that is calculated by the model. We have produced a full audit trail for each input into the model.

G2.6. Changes to the Model

2.6.1. We have used the audited version of the model to assess NI Water's revenue requirement. There have been no material changes to the structure of the financial model between draft and final determination.

G3. Calculating Required Revenue

G3.1. Building Block Approach

3.1.1. Under this building blocks approach, the revenue requirement is calculated by:

Revenue required
=
allowed for operating costs
+
allowed for PPP costs
+
depreciation on non-infrastructure assets
+
the infrastructure renewals charge (IRC)
+
taxation
+
cash return on the regulatory capital value

3.1.2. Cash received from the disposal of assets reduces the financing requirements of NI Water.

3.1.3. Each of these items is discussed below. It should be noted that new debt and capital expenditure are not an explicit part of the calculation of revenue. For Price Control 2010 our financial model utilises both a cash - based approach as well as the building blocks approach. The cash - based approach sets price limits and revenue such that NI Water will achieve certain cash based ratios calculated by our financial model.

G3.2. Allowable Operating Costs

3.2.1. Operating costs are day-to-day running costs, including items such as employment costs, electricity, materials, contracted costs, rates, insurance, software licences and vehicle running costs. Total operating expenditure includes the costs of providing the base service and net additional running costs associated with improvements. Base service expenditure comprises the cost that is incurred to maintain a constant level of service during the regulatory control period. New operating expenditure includes the efficient increased operating costs resulting from improvements to customer service, higher treatment standards etc. Such new operating expenditure would tend to

increase customers' charges. Efficiency savings in operating expenditure would tend to decrease customers' charges

3.2.2. Our financial model takes account of each of the following factors:

- base service operating expenditure and associated efficiencies;
- new operating expenditure and associated efficiencies; and,
- the impact of inflation on operating expenditure.

G3.3. Allowable PPP Costs

3.3.1. The revenue requirement takes into account the costs of three PPP contracts. These are:

- A contract signed by the Department of the Environment for Northern Ireland and Coastal Clear Water in April 1999 for the provision of wastewater treatment at Kinnegar WwTW;
- A contract signed by the Department for Regional Development and Dalriada Water Limited in May 2006 for the provision of water treatment services – Project Alpha; and,
- A contract signed by the Department for Regional Development and Glen Water Limited in March 2007 for the provision of wastewater treatment and sludge disposal services – Project Omega.

3.3.2. NI Water now pays a single unitary charge for the services provided by PPP contractors rather than directly incurred staff, materials, chemical and maintenance costs. NI Water paid £3.395 million in charges for these contracts in 2007-08 and £17.003 million in 2008-09. However it should be noted that the Omega contract had not been fully implemented at that time and the Alpha contract had not yet commenced. PPP charges are treated separately from the operating expenditure because they contain elements of capital and financing costs.

G3.4. Depreciation

3.4.1. Each year NI Water invests to both maintain and improve its asset base. Capital expenditure relating to the replacement of worn-out assets is termed capital maintenance. Investment in improving or increasing the asset base is termed 'quality' and 'growth' investment. Water and sewerage assets can be divided into infrastructure and non-infrastructure. This distinction is important because we treat them differently when setting price limits. The level and type of capital expenditure that NI Water must make in each regulatory period is determined by NI Ministers following public consultation. The current investment programme outlined in the NI Water Strategic Business Plan is scheduled to run from April 2007 until March 2010.

3.4.2. The next investment period (PC10) runs from April 2010 until March 2013. Ministers determine the levels of investment required and we have assessed the scope for efficiency before inputting information on net capital expenditure required into the financial model.

3.4.3. In the financial model we include information on forecast investment for the current regulatory period, divided between investment in infrastructure and non-infrastructure assets in the financial model.

G3.5. Investment in Infrastructure and Non-infrastructure Assets

3.5.1. It is assumed that non-infrastructure assets (generally those that are above ground) depreciate, i.e. it is assumed that they have a finite life and that they lose value equally throughout their life. It is important that detailed information is available about the age of the assets in order to forecast the appropriate depreciation.

3.5.2. When setting prices, we consider both depreciation of existing assets at the start of the regulatory period and assets that are added during the period. The method that we have used to calculate depreciation for above ground assets is different from that which NI Water uses to calculate depreciation in its statutory accounts. The base value for depreciating the assets is not the book value of assets.

3.5.3. Instead, Ofwat sets depreciation by reference to the Modern Equivalent Asset Value (MEAV) of its assets. The gross MEAV is the estimated cost of constructing an equivalent system at current prices, while the net MEAV is the depreciated value to match the remaining life of the current assets. The net MEAV is the starting point for calculating depreciation. The estimated asset value is then divided into five categories according to its remaining life. We have used the same asset life categories and assumed asset life as those that Ofwat uses. These are shown in Table 3.1.

Table 3.1 - Asset Life categories used in the financial model

Category	Assumed Life (years)	Description
Very Short	5	Assets having a life of up to five years, e.g. vehicles and computer equipment.
Short		Assets having a life of 6 to 15 years, e.g. telemetry, heavy vehicles and plant.
Medium	20	Generally, mechanical assets having a life of 16 to 30 years, e.g. pumping units and associated electrical plant, process plant, filter bed media, glass coated steel storage tanks.
Medium / Long	40	Generally mechanical assets having a life of 31 to 50 years, e.g. filter bed structures, site fencing.

Category	Assumed Life (years)	Description
Long	60	Generally operational structures including service reservoirs, treatment work structures, inter-process pipe work and filter bed structures. Such assets will have a life exceeding 50 years.
Infinite	Infinite	Assets with an assumed infinite life, generally land.

3.5.4. The modern equivalent asset value is the cost of replacing the assets that provide the service to customers with their modern equivalents. It therefore takes account of inflation and innovation (including changes in technology). This asset value is important to the use of the (notional) RCV method of price setting as this method seeks to ensure that sufficient resources are provided, not only to operate assets but also to refurbish, replace and finance them. As such, an improved understanding of the modern equivalent asset value is important.

3.5.5. NI Water does not have a current MEA valuation but is expected to be able to conduct such a valuation exercise for the PC13 price control. This may allow a more accurate and robust valuation of its assets and calculation of depreciation.

G3.6. Overall Check on Total Depreciation - 'Broad Equivalence'

3.6.1. For companies in England and Wales, Ofwat combines reported depreciation on existing assets with depreciation on new capital expenditure to provide a figure for total depreciation. It applies a check on this total figure to ensure that it is reasonable. This check is called 'broad equivalence'. Where calculated depreciation fails this check, Ofwat will adjust the level of depreciation to ensure that prices are set at an appropriate level. We have utilised the 'broad equivalence' approach to determine NI Water appropriate Current Cost Depreciation for PC10. The rationale behind broad equivalence is relatively simple[2]. The level of depreciation should depend on the level of investment. Depreciation should only increase if there is net new investment. The practical effect of broad equivalence is to use projected capital maintenance expenditure as a 'cap' on the level of future depreciation. This ensures that customers do not face bills that are higher than necessary.

3.6.2. We have categorised assets that are added during the regulatory control period in the same way and depreciated them over their assumed life. Assumptions about depreciation affect revenue, and therefore prices, in several ways:

[2] Ofwat first set out its rationale in its consultation for the 1999 price review, 'Setting price limits for water and sewerage services. The framework and business planning process for the 1999 Periodic Review' (February 1998).

- NI Water is allowed to collect annual depreciation from customers, so the higher the depreciation charge the higher the revenue that is required from customers;
- Depreciation is deducted from the notional RCV each year. This reduces the return on capital that NI Water is allowed to collect from customers;
- New non-infrastructure assets are added to the notional RCV. This increases the return on capital that NI Water is allowed to collect from customers; and,
- NI Water will benefit from the depreciation on new asset additions in additional revenue from customers (or subsidy).

G3.7. Infrastructure Renewals Charge

3.7.1. In common with the water and sewerage companies in England, Wales and Scotland, we have included an Infrastructure Renewals Charge (IRC) in our calculation of prices. The IRC is the notional level of investment required to maintain infrastructure assets. In any one year the actual level of investment in infrastructure assets is termed the infrastructure renewals expenditure (IRE). When we inputted our assumptions into the financial model, we assumed that NI Water's projected figures for the IRC will be the same as IRE. We have assumed that NI Water will spend the theoretical level required to maintain the infrastructure assets during each year of the regulatory control period.

G3.8. Taxation

3.8.1. We do not expect NI Water to pay Corporation Tax in the 2010-13 period due to the extent of the Capital Works Programme and consequently capital allowances available. We have therefore not included Corporation Tax in the required revenue calculation within the financial model.

G3.9. Cash Return on the Notional Regulatory Capital Value

3.9.1. We highlighted earlier that we have used both a cash based approach and a building blocks approach to Price Control 2010. In using a building-blocks approach NI Water earns a return on its notional Regulatory Capital Value (RCV). This is consistent with the approach of other utility regulators. NI Water would earn a return for holding its assets. To calculate the cash return on the notional RCV we would need to set:

- an initial theoretical closing notional RCV for NI Water at 2009-10; and,
- the rate of return that NI Water should be allowed to earn.

G3.10. Notional Regulatory Capital Value

3.10.1. The notional RCV will change over time; it will be increased by annual investments in water and sewerage assets made by NI Water and will be decreased by the level of depreciation of those assets. The effects of inflation and the efficiency with which new assets are delivered, are also taken into account.

3.10.2. We have taken an average[3] of the opening and closing RCVs for each year. The average RCV is the first input to the cash return on the RCV.

G3.11. Rate of Return

3.11.1. We will input an appropriate rate of return to the financial model. For Price Control 2010 we input a rate of return of 4.8 %

[3] Average RCV = (Opening RCV + Closing RCV) ÷ 2.

G4. Financial Assumptions

G4.1. Introduction

4.1.1. In building our model, we need to make a number of financial assumptions. These are briefly described below.

G4.2. Inflation

4.2.1. Inflation measures increases in the prices of goods and services. Our assumptions concerning inflation are important because the model projects costs forward over a number of years. Indices are used to calculate inflation. In the Price Control we propose to use two indices to measure inflation, namely:

- the Retail Price Index (RPI) for all non-asset costs; and,
- the Construction Output Price Index (COPI), to assess the impact of increases in prices on capital expenditure.

G4.3. RPI

4.3.1. We believe that the RPI is an appropriate measure of inflation for non-capital goods costs. Ofwat and WICS currently use the Retail Price Index (RPI) in their price setting process. NI Water's charges are set for each financial year (April to March) with respect to the RPI measured in November of the previous year. The annual price limits for 2010-11 until 2012-13 that will be set in the Final Determination will apply relative to actual RPI inflation each November from 2009 to 2012.

4.3.2. In assessing NI Water's costs, inflation needs to be taken into account. Whilst inflation across the economy will affect most of NI Water's costs, it will not affect cash interest payments within PC10 (which are on a fixed-interest rate basis) and is unlikely to affect the level of public borrowing that the NI Executive is prepared to make available. NI Water attempted to forecast inflation in its business plan.

4.3.3. The Utility Regulator has chosen to apply a simple stylistic assumption that should be well understood by stakeholders. We have assumed an annual RPI of 2.3% over each year of the PC10 period. It is accepted that the outcome may be very different to this assumption. After all, the price limits are being set in uncertain economic times.

G4.4. COPI

4.4.1. We have used COPI for analysing the effect of inflation on capital expenditure. The cost of NI Water's capital investment can be affected by factors that are not taken into account in RPI. For example, cost trends in the building sector of the economy can fluctuate more than in the economy as a whole. A separate inflation index, the Construction Output Price Index (COPI) is widely used to estimate inflation levels within the building and related sectors. COPI measures the movement in prices of construction work that is carried out. There are six different indices that are calculated: public housing, private housing, infrastructure, public non-housing, private industrial and private commercial. Finally there is an output index called the 'all new construction output index', which is a weighted average of all six previous indexes. We have used the latter definition in our Price Control.

4.4.2. The Department of Trade and Industry (DTI) publishes these indices on a quarterly basis.

4.4.3. In its business plan submission NI Water proposed applying annual forecasts of COPI. As with RPI, the Utility Regulator does not consider such forecasts to be reliable. We have applied the same simple, stylistic assumption for COPI as has been applied for RPI, that is 2.3% per year over the regulatory control period. The effect of this assumption is that charges would be unaffected by any differences between inflation in the building sector and inflation in the economy as a whole.

4.4.4. If NI Water benefits from low or negative inflation specific to the building sector (in other words COPI is below that determined by the Utility Regulator i.e. 2.3%), it may become necessary to reduce charges to take account of this. If the impact is large, the Utility Regulator would seek to use the Relevant Change of Circumstance (i.e. RCC. 4). A small impact would be 'logged down' so that customers benefit only after the next Price Control. The same mechanisms would apply in the event that actual COPI is higher than assumed at final determination, but would increase rather than decrease charges to customers (and consequently subsidy).

G4.5. Dividends

4.5.1. Within our PC10 Business Plan information requirements we asked NI Water to indicate any dividend they would expect to pay over the PC10 period.

4.5.2. The actual level of dividend that NI Water pays in any one year is a matter for NI Water. Condition F 6.12 of the licence states that:

1. The dividends declared or paid will not impair the ability of the Appointee to finance the Appointed Business; and,

2. Under a system of incentive regulation, dividends would be expected to reward efficiency and the management of economic risk.

4.5.3. The Utility Regulator notes that in Scotland, Scottish Minister's have agreed not to extract a dividend from Scottish Water (a public sector company which sits within the Shareholder Executive 'portfolio of businesses') and that this arrangement provides real savings to Scottish Water customers.

G4.6. Working Capital and Other Balance Sheet Assumptions

4.6.1. The most common definition for working capital is current assets minus current liabilities. Current assets are defined as those assets that would be turned into cash in less than one year. Current assets can be cash, debtors, stocks or prepayments. Current liabilities refer to those liabilities that will mature within one year. These include items such as trade and capital creditors, and short-term debt. Differences in working capital have a direct impact on NI Water's cash flow. These are forecast in the financial model. In the model we use different assumptions for each of the accounts mentioned. Our assumptions for 2012-13 are outlined in Table 4.1.

Table 4.1 - Balance sheet assumptions

Title	Assumption	2012 - 13
Trade Debtors	Number of Days	22.9
Stocks	Percentage of operating expenditure excluding PPP	1.8%
Prepayments and other short-term debtors	Percentage of revenue	2.5%
Trade creditors	Number of days	30
Short-term capital creditors	% capital expenditure	23.8%
Accruals and other creditors	Percentage of operating expenditure including PPP	14.4%
Non trade creditors due < 1year	Nominal amount	£33.3m
Other investments	Nominal amount	£0.1m
Other creditors > 1 year	Nominal amount	£3.4m
PPP capital repayments	Nominal amount	£6.1m

4.6.2. Changes in non-current accounts will also affect the cash needs of the company. On the assets side we have the fixed assets account, which we assume will vary in proportion to the investment programme. On the liability side, there are accounts such as creditors and provisions for liabilities and charges. These are inputs in the model.

G4.7. Atypical Costs (2007- 08 prices)

4.7.1. By definition, atypical items are related to transactions that are unusual in nature, infrequent in occurrence and material in amount. For instance, in the SBP most of the Business Improvement Programme (BIP) and Voluntary Early Retirement (VER) expenses / Voluntary Severance (VS) were projected as atypical items, as these were considered to be one-off expenses related to reorganisation. For PC10 we have allowed the atypical items as shown in Table 4.2. Within the financial model exceptional costs are included with operating costs for financial modelling purposes.

Table 4.2 - Atypical costs

Item	2010-11	2011-12	2012-13
VER/VS (£m)	9.72	10.30	7.58
BIP (£m)	4.13	3.40	2.42
1 Figures rounded to 2 decimal places			

G5. Financial Sustainability

G5.1. Introduction

5.1.1. In this section we explain the financial ratios we have used in Price Control 2010. The model automatically calculates these financial ratios. We can compare the outcome of these calculations with the ratios used by Ofwat except that we have set the gearing ratio target for NI Water to 55%. Ratios are important tools that allow us to assess the financial sustainability of NI Water. There is no single financial ratio that can fully describe the financial performance of a company. Usually, financial ratios measure the profitability, liquidity and solvency of a company. Ratios can be compared to benchmarks to assess the company's relative financial position. A commercial bank, for example, will use financial ratios to decide whether to approve a loan.

G5.2. Ofwat's and WICS Use of Financial Ratios

5.2.1. Ofwat has a duty to ensure that an efficient company can finance its functions. Ofwat therefore uses financial indicators to assess the financial sustainability of water and sewerage companies. Ofwat does not prescribe an optimal capital structure or preferred rating for company debt, but it does use financial ratio comparisons to ensure that a company will be able to access the capital markets. Ofwat consults with the capital markets on the appropriate financial ratios for the regulatory control period. We have adopted financial ratios similar to those used in Ofwat's 2009 draft price determinations as shown in Table 5.1.

Table 5.1 - OFWAT's target ratios for 2010-15

Ratio	Target
Cash Interest Cover (funds from operations / gross interest)	Around 3 times
Adjusted cash interest cover (funds from operations less capital maintenance expenditure / gross interest paid)	Around 2 times
Funds from operations / debt	>13%
Retained Cash flow / debt	>8%
Gearing (net debt / regulatory capital value)	< 65%

G5.3. Our Approach for Price Control 2010

5.3.1. We have targeted the same levels that Ofwat has targeted except for gearing. Where Ofwat has stated that a target is 'around' a certain level, we assume that the ratio for NI Water should be within 20% of the target and should move towards the target by 2012-13.

5.3.2. We believe that it is useful to continue to monitor these ratios to ensure consistency in our approach to financial sustainability. The following paragraphs explain how each of these ratios will be calculated and their significance.

G5.4. Cash Interest Cover (OFWAT 2009 price review)

5.4.1. This formula calculates the number of times the profits of one year (generated from operations and after paying any taxes) can cover interest expenses of the same year. A number of 1 would mean that the company generated enough cash to cover interest expenses. This ratio does not take into account any expense on capital.

5.4.2. Cash Interest Cover is calculated as follows

$$\frac{\textbf{Net cash flow from operations – taxes + interest received}}{\textbf{Interest paid}}$$

5.4.3. Our target for this ratio during PC10 is around 3 times.

G5.5. Adjusted Cash Interest Cover (OFWAT 2009 price review)

5.5.1. This ratio calculates the number of times that interest can be paid out of the profits in one year, adding back maintenance. Ofwat differentiates between maintenance charges and maintenance expenditure and calculates two separate ratios. Throughout the financial model we have assumed that the maintenance charge (infrastructure renewals charge) is the same as infrastructure renewals expenditure. We will correct for any material differences from this assumption at the next Price Control through a process of logging up and down. We however still show both ratios in the model.

5.5.2. We have used a target of around 2 times as the appropriate target for NI Water.

5.5.3. The adjusted cash interest cover ratio will be calculated as follows:

$$\frac{\text{Net cash flow – maintenance non-infrastructure (MNI) – infrastructure renewals expenditure (IRE) – Tax + interest received}}{\text{Interest paid}}$$

G5.6. Funds from Operations to Debt (OFWAT 2009 price review)

5.6.1. This ratio measures the percentage of net debt that can be covered by the funds from operations generated over the year.

5.6.2. The funds from operations to debt ratio, is calculated as follows:

$$\frac{\text{Net cash flow from operations – taxes – interest paid + interest received}}{\text{Net debt (including PPP related debt)}}$$

5.6.3. Our target for this ratio is >13%.

G5.7. Retained Cash Flow to Debt (OFWAT 2009 price review)

5.7.1. This ratio measures the ability of a company to pay its debt back from cash retained within the business. The output is a percentage.

$$\frac{\text{Retained Cash Flow}}{\text{Net debt (including PPP related debt)}}$$

5.7.2. Our target for this ratio is > 8%.

G5.8. Gearing (OFWAT 2009 price review)

5.8.1. This is a measure of NI Water's level of indebtedness. It is the total debt divided by the RCV. We will monitor this ratio, but we do not expect NI Water to change its leverage levels significantly. Where there is any pension deficit we include this within net debt and adjust the RCV to include any part of the deficit.

5.8.2. The ratio is calculated as follows:

$$\frac{\textbf{Net debt}}{\textbf{RCV}}$$

5.8.3. Our target for this ratio is < 55%.

G6. Calculating Customers' Charges (Notional for Domestic Customers)

G6.1. Introduction

6.1.1. We have described the financial model that we use to calculate the amount of revenue NI Water needs to raise from customers. After we have established the revenue required, we need to translate this revenue into customers' charges and / or subsidy. To do this we use the tariff baskets. The tariff baskets require us to take account of any underlying changes in the customer base that would either increase or decrease the change in prices necessary to match the change in revenue required. Price limits will be applied to regulated income only[4]. We have subtracted the costs associated with providing non-appointed services from the revenue requirement before matching required revenue to expected revenue.

6.1.2. It is worthwhile expanding on the terms we use in relation to charges to ensure customers are clear about how charges are controlled. A tariff is a charge or list of charges levied on customers of the appointed water company for a particular service or services provided. We do not set limits on individual charges but we do set limits on baskets of charges. A tariff basket is a group of charges to which the annual price limits apply, comprising charges for:

- unmetered water supply;
- metered water supply;
- unmetered sewerage services;
- metered sewerage services; and,
- reception, treatment and disposal of trade effluent.

6.1.3. Within the overall price limit, basket items may increase or decrease by different amounts and percentages. However, the average change in the basket of charges must not exceed the price limit. This does not mean that NI Water can increase an individual charge by an unlimited amount, because a charge has to be fair and has to reflect the cost of providing the particular service on which it is levied. It does however give the company scope to re-balance tariffs within a basket if the cost of providing a service changes. Where the company increases (or decreases) individual tariffs by an amount we consider unacceptable, we will ask NI Water to justify the change. If it cannot do this, the charge will have to be changed before we can approve the annual scheme of charges. In addition, we expect NI Water to ensure large user tariffs are compliant with the cost of provision of services to those users.

[4] Regulated income refers to tariff charges for the provision of water and waste water services. Non-appointed income is income collected for all services not defined as appointed services, for example charges for vehicle maintenance and septic tank emptying services.

G6.2. Changes in Customer Base Affecting Revenue

6.2.1. We need to ensure that price limits take account of any changes in the customer base during PC10 which would impact on revenue (e.g. changes in the relative proportion of customers in each tariff basket as customers may move from one tariff basket to another). We begin by forecasting what the revenue would be if tariffs were kept constant each year. We multiply the tariffs by the relevant tariff multiplier[5] based on the NI Water business plan submission. We have compared this to allowed revenue shown in the DRD Social and Environmental Guidance. This is shown in Table 6.1.

Table 6.1 - DRD Social and Environmental Guidance allowed revenue v revenue from flat tariffs.

	2010-11	2011-12	2012-13
Allowed revenue assumption in draft DRD Social and Environmental Guidance	£390m	£415m	£440m
Revenue if tariffs remained at 2009-10 levels	£350.4m	£353m	£356.3m
Difference	£39.6m	£62m	£83.7m

G6.3. NI Water PC10 Business Plan Tariff Multiplier Projections

6.3.1. We asked NI Water for a projection of the relevant tariff multiplier for each tariff within its PC10 business plan submission. We expect these projections to be based on sensible assumptions and to be justified by reference to historical trends. We modify any tariff multipliers that we do not consider to have been appropriately justified.

Table 6.2 - Example of changes in expected revenue (with no tariff changes) to match required revenue

	Year 1	Year 2
Previous Year Revenue (£)	620,000	760,000
Percentage increase in revenue from customer base	18.3%	1%
Revenue without tariff change (£)	733,460	767,600
Required revenue (from financial model) (£)	760,000	780,000

[5] A tariff multiplier is the appropriate unit that a tariff is multiplied by to calculate a bill or revenue. For example, this may be the rateable value, the number of connections (i.e. customers) or the volume of water consumed.

Total charge increase required (WACI)	3.62%	1.62%
Inflation	2%	2%
K factor	1.62%	-0.38%

N.B: WACI (Weighted Average Charge Increase) = K factor plus inflation (RPI).

6.3.2. Table 6.2, provides an example of how movement in customer base revenue may impact upon tariffs (and subsidy). In Year 1 the weighted average charge increase is 3.62% (including inflation) as the gap between required revenue (from the financial model) and revenue without tariff changes is £26,540 (i.e. £760,000 - £733,460) i.e. 3.62%.

G6.4. K- Factor

6.4.1. The K factor is the percentage increase above inflation by which tariff basket price limits are allowed to rise on an annual basis during the Price Control period.

6.4.2. NI Water is allowed to increase weighted average charge for each of its tariff baskets by up to the K-factor plus inflation. This is the weighted average charge increase, or WACI. The WACI is therefore equal to the K-factor plus the reported Retail Price Index (RPI). The RPI figure is published by the Office for National Statistics on a monthly basis. The figure for the 12 months to November in the year prior to the year in question is used as the RPI figure for the WACI.

6.4.3. Where the K-factor is negative, as in the above example (Year 2), then the WACI will be inflation less 0.38%. If for example therefore, inflation in the November prior to charging year 2 is published as 2.38%, NI Water would only be able to increase its weighted charges by 2%.

6.4.4. We publish a K-factor for each of the tariff baskets. This enables us to take account of any cross subsidy that may exist and any changes in the proportion of expenditure between water and sewerage services.

G6.5. Condition C: Infrastructure Charges

6.5.1. Under Condition C of the licence we are required to set infrastructure charges for the PC10 period for both water and sewerage services. We have determined these charges to be £269 for 2010-11 assuming inflation of 2.3%. In subsequent years in PC10 these charges will increase in line with inflation. These charges are lower than equivalent infrastructure charges in Great Britain.

G6.6. Setting Price Limits: The Role of the Tariff Basket

6.6.1. We are committed to improving the transparency of the regulatory regime. As part of this commitment, we believe it is vital that non-domestic customers can more readily understand the likely impact of the Price Control on their bills (or level of subsidy).

6.6.2. Tariff baskets are defined in Condition B of the licence to cover the regulated [core] services provided by NI Water. The use of tariff baskets helps to ensure that the process of unwinding any cross subsidies is as transparent as possible. In addition, we consider that tariff baskets allow (directly paying) customers to see more clearly the likely impact of the Price Control 2010 on their bills. The use of 'tariff baskets' mirrors the price setting process of other utility regulators in the UK, such as Ofgem, Ofwat and WICS.

6.6.3. In our view it has become clear that the existing arrangements (in the SBP period) for establishing charges, and communicating changes to customers, have a number of limitations. In particular:-

- The link between the revenue cap and non-domestic customers' bills is not clear;
- Information on tariffs is not available until around two months before they take effect; and,
- There is only limited scope for flexibility in the approval process for the annual scheme of charges.

6.6.4. A price limit regime establishes a clearer link between the Price Control and any direct bills that customers pay (currently non-domestic customers). We believe that setting price limits will allow customers to understand the likely impact of any tariff changes on their bill for the relevant period.

6.6.5. As we explained earlier, by using tariff baskets we can establish, and communicate to customers, the impact on bills of changes in charges. Tariff baskets are the collection of charges to which the annual regulatory price limits would apply. There are very many individual tariffs and it would be not be practical to set a limit on each individual tariff. Instead we group tariffs into baskets and impose a price limit on each basket.

6.6.6. There can therefore be modest differences in the changes in the levels of the individual tariffs within a single basket, but overall the impact on all customers in that basket should be very similar.

G6.7. The Structure of Charges for NI Water

6.7.1. Charges (where applicable) to individual customers will vary according to the type of customer and the service they are receiving.

6.7.2. Customers are classified as:

- water or wastewater;
- domestic (household) or non-domestic (non - household – businesses, charities or public sector organisations);
- measured (metered), un-measured (un-metered); and
- trade effluent.

G6.8. Domestic Unmeasured Water (Notional)

6.8.1. The unmeasured domestic (household) notional charge is based on the Capital Value of each household property. This notional charge does not depend on consumption. Currently, the unmeasured domestic (household) charge is paid via subsidy and through a contribution in the annual domestic rates.

G6.9. Domestic Unmeasured Wastewater (Notional)

6.9.1. The unmeasured domestic (household) notional charge is also based on the Capital Value of each household property. This notional charge includes surface water from drainage but excludes drainage from public roads and footways etc. Currently, the unmeasured domestic (household) charge is paid via subsidy and through a contribution in annual domestic rates.

G6.10. Domestic Measured Water (Notional)

6.10.1. Currently, no domestic customers pay for water services charges based on usage.

G6.11. Domestic Measured Wastewater (Notional)

6.11.1. Currently, no domestic customers pay for waste water services charges based on usage.

G6.12. Non-Domestic Unmeasured Water

6.12.1. Unmetered non-domestic customers are currently charged relative to the rateable value of their property. These customers pay two fixed charges, neither of which reflects their consumption of water: a minimum charge for access to the network and an additional charge that is a proportion of their rateable value. Currently, there is a 50% subsidy in place for non-domestic unmeasured water charges.

G6.13. Non-Domestic Unmeasured Wastewater

6.13.1. Charges for unmeasured non-domestic wastewater are also a function of the connected property's rateable value. Customers pay two separate fixed charges: a minimum charge for accessing the network and a charge that is in proportion to their rateable value. Currently, there is a 50% subsidy in place for non-domestic unmeasured wastewater charges.

G6.14. Non-Domestic Measured Water

6.14.1. Measured non-domestic customers pay a standing charge, which depends on the size of their meter connection and a volumetric charge based on how much water they consume. Currently, there is a domestic allowance subsidy in place for non-domestic measured water charges.

G6.15. Non-Domestic Measured Wastewater

6.15.1. Non-domestic wastewater customers pay a fixed charge based on the size of their water meter connection and a volumetric rate based on an assumption that 95% of their water consumption is returned to sewer. If a customer can demonstrate that less than 95% of water returns to sewer (for example, a company that uses water in its production processes) then they can apply to have the assumption of 95% reduced. Currently, there is a domestic allowance subsidy in place for non-domestic measured wastewater charges.

6.15.2. There are no discounts for customers who discharge large volumes of wastewater.

6.15.3. The cost of surface water drainage for non-domestic measured wastewater is included in the tariff for measured wastewater.

G6.16. Trade Effluent

6.16.1. Charges for trade effluent are based on the Mogden formula. This formula assesses a charge for the treatment of a particular strength and volume of effluent based on the costs of treating this wastewater.

6.16.2. Trade effluent customers pay a variable rate based on the actual volume and strength of the effluent discharged.

6.16.3. The Mogden formula is: $C = R + V + (O_t/O_s)B + (S_t/S_s)S$

C	is the unit charge in pence per cubic metre for the trade effluent discharge.

R	is the unit cost in pence per cubic metre for reception and conveyance.
V	is the unit cost in pence per cubic metre of the volumetric and primary treatment of sewage treated and disposed of in sewage treatment works.
O_t	is the chemical oxygen demand in mg/l of the trade effluent after 1 hour quiescent settlement.
O_s	is the chemical oxygen demand in mg/l of the settled sewage - standard strength.
B	is the unit cost in pence per cubic metre of the biological oxidation treatment of settled sewage.
S_t	is the total suspended solids in mg/l of the trade effluent at pH 7.
S_s	is the total suspended solids in mg/l of crude sewage - standard strength.
S	is the unit cost in pence per cubic metre of treatment and disposal of primary sludge.

G6.17. Roads Drainage

6.17.1. In Great Britain, customers pay a proportion of their sewerage charges for the collection and treatment of surface water drainage (rainwater that falls onto properties, driveways and is channeled to the sewerage network) and highway drainage (run-off from roads and pavements). The cost of dealing with rainwater is complicated by the fact that some surface water in rural areas would be collected by separate drainage network and would be discharged directly to water-courses, whilst a proportion of urban drainage (within cities and towns) would normally be collected by the sewerage network and discharged to a sewage treatment works. The cost of providing these facilities is, in Great Britain, paid for by sewerage customers. This is because legislation in Great Britain does not permit any alternative method of cost recovery. In Northern Ireland, however, such legislation does not exist and, following the accepted recommendation of the Independent Water Review Panel, the costs of collecting and treating drainage from roads is to be recharged to DRD Roads Service and is financed through general taxation. This reduces the amount of revenue to be raised directly from NI Water customers. The cost of dealing with surface water is allocated across the sewerage customer groups (with the exception of trade effluent customers) in the same proportion as wastewater produced. We have provided below in Table 1.7 an 'indicative' forecast amount for Roads Drainage that may be recharged to DRD Roads Service in the PC10 period.

Table 6.3 - Indicative Roads Drainage recharge to DRD Roads Service over PC10 (Nominal prices)

	2010-11	2011-12	2012-13
Forecast Roads Drainage Recharge (£m)	£19.87	£20.07	£20.27

G6.18. Domestic Allowance for Non-Domestic Customers (measured)

6.18.1. We have assumed for the purposes of PC10 draft determination that the domestic allowance for non-domestic (water and sewerage measured) will continue into PC10. The domestic allowance compensates non-domestic customers for domestic consumption, given that subsidy is being paid on behalf of domestic customers by the NI Executive.

G6.19. Disposal of Tankered Waste

6.19.1. NI Water currently provides a discretionary service for the disposal of tankered waste. Each domestic customer was entitled to one free tank empty in the 2009/10 year. Subsequent requests for collection and treatment of sewage of a domestic nature (e.g. septic tanks, domestic treatment plants and cesspools) were subject to a charge. We understand that the current regime covering disposal of tankered waste will continue in the PC10 period.

G7. Tariff Basket Calculations

G7.1. A Definition of Tariff Baskets

7.1.1. In the previous section we outlined the wide range of services provided by NI Water. A tariff basket would include all of the tariffs that impact on customers who receive a particular service. For example, if measured non-domestic customers were considered as a group, all of the tariffs that impact them would be included. Such a tariff basket would therefore include the standing charges relating to the different sizes of connection available and the volumetric tariff. The balance of tariffs within the basket will be determined by the number and type of connections, amount discharged and by increases or decreases in the tariffs included in the basket. Total revenue is determined by adding together the output of each tariff basket. The revenue from an individual tariff basket is assessed by calculating the sum product of the relevant customer base and relevant tariffs.

7.1.2. In this example (Table 7.1), there are just two tariff baskets:

Table 7.1 - Tariff baskets

	No of customers Years 1 and 2	Consumption Years 1 and 2	Tariff Year 1	Tariff Year 2	Revenue Year 1	Revenue Year 2
Basket A	5	10	£1	£1.5	£50	£75
Basket B	5	10	£2	£2.5	£100	£125
Total	10	20			£150	£200

7.1.3. A 50% increase is allowed in Basket A and a 25% increase in Basket B. Revenue from Basket A increases from £50 to £75 and from Basket B from £100 to £125. Total revenue increases from £150 to £200.

G7.2. Defining the Weighted Average Charge Increase (WACI)

7.2.1. WACI is the weighted average charge increase and is a measure of the overall impact of all the tariff changes in each tariff basket. It is therefore the amount by which tariffs on average have increased within the tariff basket.

7.2.2. For the Price Control 2010 we are setting real limits on the weighted average charge increase on each tariff basket. A real price limit is the allowed change in prices before inflation. If the real WACI cap is zero, then prices would increase at the rate of

inflation. We have estimated the implied nominal price limit for Price Control 2010. The actual nominal price limit is set in line with the appropriate RPI for the years in which the tariffs are set (setting years). We have implemented a price limit regime for Northern Ireland in the same way that it is applied in England, Wales and Scotland as this facilitates comparison of price limits across the UK. NI Water would be permitted to carry over any unused change in prices from one year to following years. We should not penalise NI Water for choosing to have charges below their allowed price cap in any one year. Unused price cap is denoted with the letter 'u'. The real price cap is denoted by the letter 'K'.

7.2.3. The maximum weighted average increase in prices is determined as follows:

$$WACI = RPI + K + u$$

G7.3. The Use of Tariff Baskets; Ensuring Compliance with the Price Limits

7.3.1. We need to take account of the combined impact of changes in the individual tariffs that make up a customer's bill. We do this by calculating a 'weighted average' change in prices for the tariff basket. We compare this with the price limit that has been applied to the tariff basket. The weighted average price change is calculated by multiplying the percentage of NI Water's total revenue that each tariff comprises by the change in the tariff. This gives a weighted percentage increase for each tariff. The total of these weighted percentage increases is then the overall weighted average. This is illustrated using a sample tariff basket containing just three tariffs.

Table 7.2 - The use of weighted average tariffs

	% increase (D)	% of total revenue (E)	Weighted % increase (D x E)
Tariff A	5%	50%	2.5% (A)
Tariff B	-5%	20%	-1% (B)
Tariff C	20%	30%	6% (C)
Weighted Average (A + B + C)			7.5%

7.3.2. The weighted average increase provides a good indication of the impact on customers, as it takes account of the relative size of the impact from each tariff change. The impact of a change in tariffs may be different in subsequent years. It will depend on the importance of that tariff to the total revenue contributed by that tariff basket i.e. the percentages in column E in Table 7.2 above may change. In Table 7.4Table 7.4, the importance of Tariff A to total revenue has declined, while Tariff B's has increased. The increases in individual tariffs remain the same while the overall weighted average

increase for the basket as a whole has reduced because the relative weight of the Tariff A has declined and that of Tariff B increased.

Table 7.3 - Effect of changing usage of different tariffs

	% increase	% of total revenue	Weighted % increase
Tariff A	5%	40%	2%
Tariff B	-5%	30%	-1.5%
Tariff C	20%	30%	6%
Weighted Average (A + B + C)			6.5%

7.3.3. We believe that our approach ensures that customers of a tariff basket are treated equitably. Introducing tariff baskets into the charging regime will also allow us to analyse carefully the impact of tariff changes on total revenue where customers buy a different mix of services.

G7.4. Timetable for Setting Charges

7.4.1. We have established a clear timetable for the annual tariff setting process. Our proposed timetable for 2010 - 11 is set out below. We use the following terms:

7.4.2. *Charging year* – the financial year to which the tariffs will apply (2010-11).

7.4.3. *Prior (setting) year* – the financial year in which the tariffs are set (which is one year prior to the charging year, 2009-10 in this example).

7.4.4. *Weighting (reference) year* – the financial year from which customer information is taken (which is two years prior to the charging year, 2008-09 in this example).

Table 7.4 - Timetable for setting domestic (notional) charges and non-domestic charges for 2010-11

End September in reference year (2008-09)	• Customer numbers set • Rateable value set
End March in reference year (2008-09)	• Water and sewage volumes set • Trade effluent volumes and loads set • Revenue split set
June of prior (setting) year (2009-10)	• NI Water propose any new tariffs (in PC10 business plan)

July of prior (setting) year (2009-10)	• NI Water submits customer numbers, capital value information, consumption and revenue split in the 'Annual Information Return' for the reference year.
Late September in prior (setting) year (2009-10)	• NI Water submits draft scheme of charges, including tariff basket information.
End of November weighting (reference) year (2008-09) to end November of prior (setting) year (2009-10)	• RPI to be applied to prices is measured
December of prior (setting) year (2009-10) set the inflation figure.	• We write to NI Water to provide inflation figure
March in prior (setting) year (2009-10)	• Approve NI Water scheme of charges
1 April in charging year (2010-11)	• New tariffs take effect

7.4.5. We recognise that tariffs will not be finalised until early in the year they come into effect. However, the Price Control will have set out the proposed weighting to be applied in each year to each tariff basket. The Price Control will also forecast likely customer numbers. This information, combined with the maximum revenue allowed to NI Water, should allow most customers (currently non-domestic) to have a broad understanding of the likely level of their bill in each year of the regulatory control period.

G7.5. Our Approach to Tariff Baskets

7.5.1. The formulae which define the tariff baskets used in setting prices are contained within Condition B of NI Water operating licence.

7.5.2. We use the following information to determine the weighted average charge increase:

- Tariffs in the setting year;
- Tariffs in the charging year;
- Full-year customer numbers from the reference year;
- Full-year rateable values in the reference year;
- Full-year volumes in the reference year;
- Half year or latest customer numbers in the setting year;
- Half year or latest rateable values in the setting year;
- Half year or latest volumes in the setting year;

- Trade effluent volumes and loads for the reference year;
- Revenue split in the reference, setting and charging year; and
- The change in RPI between 1st November in the reference year and the end of October in the setting Year

7.5.3. Condition B of the NI Water licence specifies 5 Basket items i.e.

- Measured Water
- Measured Sewerage
- Unmeasured Water
- Unmeasured Sewerage
- Trade Effluent

7.5.4. Our approach involves the following three stages for each tariff basket item:

- A notional revenue for the setting year is calculated. This involves multiplying the customer information in the reference year by the tariffs in the setting year.
- A notional revenue for the charging year is calculated. This involves multiplying the metered customer information in the reference year by the proposed tariffs for the charging year.
- We would then establish the percentage increase for the tariff basket item by dividing the notional revenue in the charging year by the notional revenue in the setting year, subtracting 1 and multiplying by 100.
- The following example explains our approach:
- We have to assess the change in charges for metered water between Years 2 and 3. We would need to know the customer numbers for Year 1. We will assume that there were 10 customers and each had a 20mm meter connection. We also assume that the total metered water consumption for the ten customers was 1,200m^3. We also need to know what the tariffs were in Years 2 and 3. Table 7.5 shows the tariffs used in this example. Table 7.6 shows how the percentage increase in measured water is calculated.

Table 7.5 - Example tariffs (non-domestic customers)

	Year 2	Year 3
20mm fixed charge	£150	£200
Water rate (£/m^3)	£0.75	£0.60

Table 7.6 - Calculation of the percentage increase in revenue from a tariff basket (non – domestic customers)

	Year 1 (units)	Year 2 (revenue)	Year 3 (revenue)
Standing charge	10	£1,500	£2,000
Volumetric	1,200	£900	£720
Total		£2,400	£2,720
Percentage increase			13.33%

7.5.5. We repeat the calculation in Table 7.6 for each of the 5 items in NI Water's tariff basket. This gives us the increase for each item. We would then check that the revenue likely to be raised from each tariff basket was consistent with the weightings set out in the Price Control. To do this, we would weigh the implied increase in revenue from the tariff basket with the weightings for the appropriate reference year.

G7.6. Comparison with Ofwat's Approach

7.6.1. For measured customers we are using the same approach as Ofwat. We use one set of customer numbers and calculate the impact of the percentage increase in charges on total revenue[6]. Each year's price change would not use information from any previous year's change in price.

7.6.2. For unmeasured customers we are also using the same approach as Ofwat. Ofwat calculates one notional total revenue and a corresponding average bill each year. This notional average bill is compared with the previous year's average bill to work out the percentage increase for this group of customers. The notional revenue is calculated by multiplying the tariffs in the charging year by the customer numbers as at December of the prior year. The average charge is calculated by dividing this notional revenue by the number of customers in the December of the prior year. For example, Ofwat used customer numbers from December 2008 to assess the unmeasured price increase for 2009-10. Ofwat first multiplied the tariffs for 2009-10 by customer numbers in December 2008 to create the notional revenue. Ofwat then divided this notional revenue by customer numbers in December 2008. This created the notional average charge for 2009-10. Ofwat calculate the percentage increase in charges by dividing the notional average charge for 2009-10 by the notional average charge for 2008-09[7].

[6] Since the customer numbers are the same it does not matter whether average bill or total revenue is used.
[7] Calculated the same way, but when Ofwat was reviewing the companies' tariff proposals the previous year.

G7.7. Worked Example of Our Approach

7.7.1. The example below shows how our approach to tariff baskets would operate. Table 7.7 sets out the split of revenue by tariff basket in Year 1. It also shows the percentage increases in Year 3. The weighted average increase in Year 3 is the percentage increase in each item multiplied by that item's share of total revenue in Year 1 that the item accounted for.

Table 7.7 - Worked example of the use of tariff baskets

	Year 1 revenue (%) A	Year 3 increase (%) B	Weighted Increase (%) (A x B)
Measured water	40%	1.0%	0.400% (C)
Measured sewerage	35%	2.0%	0.700% (D)
Unmeasured water	10%	10%	1.000% (E)
Unmeasured sewerage	8%	2.25%	0.180% (F)
Trade Effluent	7%	2%	0.140 % (G)
Weighted Average Increase (C + D + E + F + G)			2.42 %

7.7.2. If NI Water had been allowed a real increase of 0.5% in revenue for Year 3 and the appropriate RPI was 2%, the increase in charges would be within the weighted average price increase allowed. NI Water would also be allowed to carry forward 0.08% of an unused price cap to the following year i.e. 2.5% - 2.42% = 0.08%. It is important to emphasise that changes in the current balance of tariff baskets will be made to reflect the outcome of any Ministerial Guidance which we might receive on 'principles of charging' e.g. ensuring no cross-subsidy between customer groups.

7.7.3. If NI Water wanted to change the balance of tariffs within a tariff basket, we would expect to see a clear and robust explanation of the rationale behind the change. Normally, we would approve such a proposal only if the proposed tariffs were demonstrably more cost reflective.