



New South Wales
TREASURY

Dr Michael Keating
Chairman
Review of Metropolitan Water Agency Prices
Independent Pricing and Regulatory Tribunal
PO Box Q290
QVB Post Box NSW 1230

Contact: Kevin Cosgriff
Telephone: (02) 9228 5442
Our Reference: XXXXX
Your Reference: XXXXX



29 JUL 2005

Dear Dr Keating

Attached is NSW Treasury's public submission to IPART's Draft Determination on cost of capital for NSW metropolitan water businesses.

The weighted average cost of capital (WACC) provided by IPART is a critical parameter in terms of providing incentives for efficient investment in water infrastructure. NSW Treasury contends that the draft 6.1% WACC does not reflect the commercial return required by investors.

The 6.1% WACC compares to a 7.0% WACC adopted by IPART in recent gas and electricity network determinations. There should not be a material difference in the underlying rate of return provided on water versus electricity and gas networks, particularly given the underlying risks associated with the ongoing drought, the imposition of restrictions on water use, greater trends towards pay-for-use pricing, and the emergence of environmental issues.

NSW Treasury contends that a real pre-tax WACC of at least 6.5% should be adopted in IPART's Final Determination. If you have any questions in relation to Treasury's submission, please contact me on 9228 5442 or Greg Bedford on 9228 5371.

Yours faithfully

Kevin Cosgriff
Deputy Secretary



New South Wales
TREASURY

Rate of Return

Response to IPART's Draft Report
on Metropolitan Water Prices

July 2005

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Introduction

The rate of return provided by regulators is a critical parameter in terms of ensuring efficient investment in water infrastructure. IPART's *Draft Determination*¹ highlights the significant capital expenditure required to meet regulatory obligations and customer expectations in relation to service and environmental outcomes, given an expanding and ageing asset base and current supply/demand imbalance.

Concurrent to the pricing review, IPART is also undertaking a Section 9 review of Sydney's water industry structure. A key objective of the review is to not impede private sector involvement in the delivery of water and wastewater services in the greater Sydney metropolitan area. The 6.1% rate of return (real pre-tax) proposed in IPART's *Draft Determination* may be insufficient to justify future investment in water infrastructure.

Competitive neutrality principles dictate that there should be no difference in the application of rate of return principles between Government owned and private sector owned infrastructure assets:

"On behalf of the community, governments invest significant capital in GBEs to provide economic infrastructure services to businesses and households. This investment is subject to competing demands for funding in areas like education and health. Moreover, in many areas of economic infrastructure, services are provided by, or could be provided by, private firms. Hence, the community has a right to expect that GBEs will operate efficiently.

In this regard, a key indicator of GBE performance is the rate of return on capital (assets). Historically, these rates were very low and sometimes negative, even when adjusted for unfunded community service obligations. However, over the last two decades, rates of return across GBEs have improved markedly, although they remain well below comparable private businesses."²

The target 6.1% rate of return is higher than that adopted by IPART in previous metropolitan water determinations. However, it is well below the 7.0% return adopted in IPART's recent AGL Gas Network Determination.

IPART's *Draft Determination* states that:

"In making its draft finding on the rate of return, the Tribunal has exercised its judgement to determine the rate of return.... It investigated the implications of its chosen rate of return on the

¹ IPART, *Prices of Water Supply, Wastewater and Stormwater Services*, Sydney Water Corporation, Hunter Water Corporation, Sydney Catchment Authority, Draft Report, June 2005

² Productivity Commission, *Review of National Competition Reforms*, Discussion Draft, April 2004

average bills paid by customers with differing characteristics, and on the financial viability of the businesses estimated by changes in key financial ratios.”³

While IPART is required to balance the competing interests of stakeholders, rate of return is an inappropriate tool for managing price impacts. COAG Pricing Principles require the transparent disclosure of water services provided at less than full cost. This would not be achieved if pricing subsidies are ‘concealed’ in low rates of return.

The 6.1% real pre-tax WACC determined by IPART does not reflect the return required by investors to invest in water infrastructure. NSW Treasury contends that a real pre-tax WACC of at least 6.5% should be adopted in IPART’s *Final Determination*.

WACC - Water versus Electricity and Gas

The draft real pre-tax WACC of 6.1% for NSW metropolitan water businesses is well below the 7.0% WACC adopted by IPART in recent gas⁴ and electricity⁵ determinations. IPART’s *Draft Determination* does not attempt to justify the differential returns provided on water versus gas and electricity infrastructure.

There is insufficient variation in the underlying risk of these sectors to justify the differential rates of return provided by IPART. The provision of different returns for water versus electricity and gas infrastructure may provide inappropriate investment and demand signals.

The relative risks of the water and electricity sectors was discussed in the ACT’s Independent Competition and Regulatory Commission’s (ICRC’s) 2004 Determination for ACTEW:

“In the past, there has been a general view amongst practitioners that asset betas in the water industry are less than those in energy industries such as natural gas and electricity. The comparison of historic asset betas in these industries in the United Kingdom and the United States tends to support this view, although the differences appear small. However, recent droughts, the imposition of restrictions on water use, greater trends towards pay-for-use pricing, and the emergence of environmental issues, together mean that the water industry may not be as immune to movements in the general economy and volatility in returns as has previously been the case. Unfortunately, as noted above, at present there is no empirical evidence in Australia to prove or disprove this theory. Nevertheless, recent asset betas awarded by regulators in the gas and electricity industries are not inconsistent with the range of asset betas in the water industry, suggesting that this theory has some broader support.”⁶

³ IPART, Draft Report, Pg 57

⁴ IPART, Revised Access Arrangement for AGL Gas Network, Final Decision, April 2005

⁵ IPART, NSW Electricity Distribution Pricing 2004/05 to 2008/09, Final Report, June 2004

⁶ ICRC, Draft Report: Prices for Water and Wastewater Services in the ACT, December 2003, Page 93

Based on this evidence, ICRC adopted a common asset beta of 0.40 and real pre-tax WACC of 7.0% for both ACTEW/AGL's electricity and water businesses. Submissions made by both ACTEW (water) and ACTEW/AGL (electricity), proposed identical asset betas for both the electricity and water/wastewater businesses.

IPART's *Draft Determination* acknowledges the ICRC position on WACC⁷, but makes no attempt to explain why a similar approach was not adopted by IPART.

Equity Beta

NSW Treasury supports the majority of WACC parameters adopted in IPART's *Draft Determination*. However, Treasury does not believe that the proposed equity beta range of 0.65 to 0.90 (0.775 mid-point) reflects the potential earnings volatility of NSW water businesses, especially given IPART's 60% debt gearing assumptions.

The equity beta reflects both the underlying business risk associated with a firm's assets and the financial risk borne by shareholders due to the firm's use of debt financing. When comparing equity beta estimates, differences in leverage assumptions must be taken into account.

Stakeholders often make comparisons between the equity betas of regulated businesses and the equity beta of the market as a whole. It is invalid to suggest that a regulated water business must have an equity beta below 1.0 even if it has below average business risk, because this ignores the effect of gearing. This issue was recently addressed by the Allen Consulting Group:

"It must be recalled that, by definition, the average firm listed on the market has an equity beta of 1.00. However, the average firm is geared to 30%, rather than the 60% assumed for the DNSPs. If the average firm in the market was geared to 60% it would have an equity beta of 1.60, which is the beta that can be legitimately compared with the beta that is estimated for the DNSPs."⁸

There is a 'trade-off' between gearing and equity risk, which suggests that companies can adopt an average equity risk position (i.e. equity beta of 1.0) by adjusting gearing levels to reflect their relative systematic business risk. This implies that regulated utilities can maintain gearing levels above the market average, consistent with debt gearing assumptions (i.e. 60%) adopted by Australian regulators, including IPART.

In the absence of reliable market data and given that below average business risk and above average gearing levels have cancelling effects on equity beta, finance academics argue that an equity beta of 1.0 should be the starting point or 'null hypothesis' when estimating the beta for regulated utilities:

⁷ IPART, Draft Report, Page 59

⁸ The Allen Consulting Group, Queensland DNSPs: Cost of Capital Study, Page 51

“We consider the impact of the returns window, weighting schemes that correct for extreme estimates by adjusting beta estimates towards one, whether industry betas are useful, and the impact of outliers. In each case, we consider whether the estimation technique provides an estimated beta that is a better predictor of returns than simply assuming the equity beta equals one. This is a default or null hypothesis in the sense that the equity beta of the average stock is unity by construction. Thus, the further an estimate is from one, the greater is the probability of mis-estimation. For an estimation technique that is based on actual data to be useful, there must be evidence that it is a better predictor of future returns than simply maintaining a default estimate of unity.

While the results of this paper are applicable for general use of the CAPM, we place our analysis in the context of the regulatory setting, because of the significant impact of beta estimates on regulated prices and consequently, the market value of regulated assets. In regulated industries, including the supply and distribution of gas, water and electricity, prices are determined such that each firm operating in the industry is allowed to earn a regulated return on its assets, usually the weighted average cost of capital (WACC) of a benchmark firm, which includes the expected return on equity. The effect of under-estimation of the true equity beta is an under-estimation of the WACC and, consequently, an under-estimation of allowed prices. This affects the incentives for future investment and ultimately the ongoing viability of the regulated business. Thus, the consequences of mis-estimation of equity betas are substantial.”⁹

UK Equity Beta Estimates

The statistical imprecision associated with available equity beta estimates has long been recognised in academic literature and Australian regulatory determinations. The relevance of overseas beta estimates presents further challenges given international differences in economic and market factors. Given the statistical imprecision of historical market estimates, the ACCC adopts an equity beta of 1.0 for electricity transmission networks.¹⁰

Given the absence of Australian market estimates, IPART’s *Draft Determination* reviewed equity beta estimates for privatised UK water businesses. The analysis considered equity beta observations for the 5 largest UK water businesses over the last 6 quarters (ending December 2004), indicating a re-levered equity beta range of 0.32 to 0.74. Demonstrating that equity estimates can vary greatly over time, the London Business School Risk Management Service estimated an equity beta range of 0.72 to 1.07 for the FTSE water industry for the 5 years (20 quarters) ending March 1999.¹¹

⁹ Stephen Gray, Jason Hall, Jerry Bowman, Tim Brailsford, Robert Faff, Bob Officer, “The performance of alternative techniques for estimating equity betas of Australian firms”, May 2005, Page 3

¹⁰ ACCC, “Statement of principles for the regulation of electricity transmission revenues-background paper”, 8 December 2004, Page 108

¹¹ Ian Cooper and David Currie, “The Cost of Capital for the UK Water Sector”, Regulation Initiative Discussion Paper Series Number 28, London Business School, 1999.

OFWAT identified the variability of UK equity beta estimates in its 2004 Final Determination of Water and Sewerage prices:

“Equity beta values for the listed water companies have fallen sharply since 1996 in common with other regulated utilities in the UK. There was a temporary increase at the time of the last price review followed by further declines until 2003. Since then there has been a slight rise. The equity beta has been as low as 0.3 in 2002-03 and as high as 1.1 in 1997.

There are difficulties in interpreting equity beta values. Taken at face value the decline in the measured betas would imply that the equity market regards investment in water stocks since the 1999 review as considerably less risky than before it. Our view is that although we have taken steps to reduce regulatory uncertainty, the low beta factors are unlikely to reflect a real decrease in the riskiness of the water sector but are more likely a statistical product of the increase in market volatility.”¹²

Despite market evidence of declining equity betas, OFWAT adopted an equity beta of 1.0 (based on 55% gearing) for UK water businesses, consistent with the ‘null hypothesis’ construct. IPART has therefore provided only ‘half the story’ of the UK experience and has ignored OFWAT’s interpretation of the market evidence.

Treasury is concerned that IPART has used UK evidence to support its proposed equity beta range of 0.65 to 0.90 for NSW water businesses, despite OFWAT largely ignoring the same evidence in its 2004 determination of UK water prices. **Treasury does not believe that IPART’s analysis provides a better predictor of future returns than simply assuming a default estimate of unity.**

¹² Office of Water Services (OFWAT), “Future Water and Sewerage Charges, 2005-2010, Final Determinations”, 2004, Page 269

Earnings Volatility

The equity beta reflects the extent to which possible future returns are expected to co-vary with the overall market return. For regulated businesses, this can be measured by the potential volatility of future returns relative to the benchmark return adopted by the regulator.

NSW water agencies potentially face earnings volatility given the following factors:

- *Regulatory Regime* – NSW water agencies are regulated under a price cap. This form of price regulation has higher earnings volatility than revenue cap and rate of return regulatory regimes where regulated revenue and / or earnings are effectively assured. Under a price cap, regulated returns will be subject to fluctuations in both revenue and costs.
- *Price Smoothing* – IPART's *Draft Determination* adopts a transitional price path that delays cost recovery until the final year of the determination¹³. As a result, ex-ante earnings targets determined by IPART in other years may vary significantly to the benchmark return. Further, 2005/06 price increases have been delayed by 3 to 4 months, exacerbating revenue shortfalls in that year.
- *Revenue Volatility* - IPART's Issues Paper identified the potential revenue volatility associated with consumption forecasting and medium term price setting in the current environment involving drought and water restrictions. Future demand management initiatives (including changes in price structures to incorporate step pricing) will further increase revenue volatility over the next regulatory period.
- *Operating Leverage* – this reflects the proportion of fixed operating costs to total operating costs. NSW water agencies have high levels of operating leverage reflecting the largely fixed cost nature of their operations. This results in a higher variability of earnings (EBIT) relative to the underlying revenue stream.
- *Financial Leverage* – the assumed gearing and resultant fixed interest costs further magnifies the variability of the net income stream relative to the underlying EBIT stream. IPART has assumed 60% gearing as the benchmark financial structure in determining WACC.

Cumulatively, these risks are highlighted in the following table comparing Sydney Water's projected 2005/06 pre-tax profit (under IPART's benchmark financial structure) relative to the target regulated earnings outlined in IPART's *Draft Determination*:

¹³ IPART's *Draft Determination* adopts P_0 adjustments that minimise cost under recovery.

2005-06 (\$m)	Draft Determination (notional)	Draft Determination (smoothed)	Sydney Water 05-06 Forecast
Metered Sales (GL)	528	528	455
Regulated Revenue	1512	1493	1374
Operating Costs	904	904	891
Depreciation	111	111	111
EBIT	497	478	372
Interest	313	313	313
Pre-tax Profit	184	165	59
Notes to table:			
- Sydney Water's demand forecast assumes continuation of restrictions during 2005/06			
- Interest Costs based on IPART's 60% gearing assumption and 6.55% cost of debt			
- Opening 2005/06 RAB = \$7977m, Assumed Opening Debt = \$4786 (60%*\$7977m)			

Sydney Water projects that 2005-06 regulated revenue will be \$138m (9%) below IPART's notional revenue requirement outlined on page 32 of the *Draft Determination*, impacted by:

- the smoothing approach adopted by IPART that results in an approximate \$19m under recovery of costs in 2005/06;
- lower than forecast demand resulting from the expected continuation of water restrictions during 2005/06 (IPART's draft determination assumes 528GL compared to Sydney Water's current forecast of 455GL), impacting revenue by \$96m; and
- a three month delay in the implementation of price increases, further impacting revenue by \$23m.

All but \$13m of the \$138m revenue shortfall is expected to flow through to Sydney Water's bottom line (the \$13m reflecting reduced bulk water costs associated with the lower demand forecast). As a result, 2005-06 regulated pre-tax profit is projected at \$59m, compared to a target of \$175m implied in IPART's *Draft Determination*.

Importantly, the above analysis shows that due to the level of fixed operating and interest costs, the projected 9% reduction in sales revenue translates to a 25% reduction in projected 2005/06 EBIT and a 68% reduction in pre-tax profit.

Therefore, while NSW water businesses are generally considered 'low risk' regulated monopolies, regulated revenue and earnings are not guaranteed. There is the potential for significant volatility in actual earnings relative to the ex-ante target determined by IPART, especially given the significant forecasting uncertainty associated with the current supply-demand balance, magnified by the levels of operating and financial leverage faced or assumed for NSW water businesses.

These issues are considered **at least equal** to those faced by regulated gas and electricity network businesses. Given identical gearing assumptions, IPART should adopt an equity beta at least equivalent to the 0.90 mid-point adopted in recent gas and electricity determinations.

Selected WACC within Proposed Range

In recent gas, electricity and rail determinations, IPART adopted a final rate of return that was above the mid-point of the underlying WACC range. This approach is consistent with the Productivity Commission's observation that regulators should 'err' on the side of promoting long term investment in infrastructure assets:

"Third party access and the resulting benefits to service users are only possible over the longer term if there is continuing investment in the essential infrastructure services themselves. On the other hand, while denial or monopoly pricing of access imposes costs on the community, such behaviour cannot threaten the continued availability of the services concerned. This asymmetry in potential outcomes highlights the priority that access regulation must give to ensuring that there are appropriate incentives for efficient investment."¹⁴

However, IPART's Draft Determination adopts a WACC slightly below the proposed range mid-point:¹⁵

IPART Determinations	Recommended Range	Final WACC	Percentile
Electricity – NSW Distributors (2004)	6.2% to 7.6%	7.0%	57%
Gas – AGLGN (2005)	5.9% to 7.3%	7.0%	77%
Rail Corp - Hunter Valley Coal Network (2005)	5.3% to 8.8%	7.3%	57%
Water – Draft Determination (2005)	5.4% to 6.9%	6.1%	47%

NSW Treasury believes that IPART should adopt a consistent approach when selecting WACC within the recommended range in order to improve regulatory transparency and provide appropriate signals for new investment.

¹⁴ Productivity Commission, Review of the National Access Regime, Inquiry Report

¹⁵ It is likely that IPART's intention was to adopt the mid-point of the proposed range. However, rounding may have resulted in the selected WACC being slightly below the range mid-point

Implications for Financial Position

IPART is required to assess the impact of its pricing determination on financial viability. In this regard, the *Draft Determination* assesses overall financial strength by analysing a range of financial indicators commonly used by credit rating agencies to assess an entity's financial capacity and ability to service debt.

In order to assess the financial impact of pricing decision on credit rating, it is necessary to adopt a 'benchmark' capital structure in order to remove the impact of variations in actual gearing levels on credit rating outcomes.

In its Draft Determination, IPART determines a regulatory WACC using an assumed 'efficient' debt gearing level of 60%. IPART adopts a benchmark capital structure, rather than the actual financing structure "to ensure that customers will not bear the cost associated with an inefficient financing structure."¹⁶

However in the financial viability analysis, IPART reverts to the water agencies actual gearing levels of between 22% and 37%, despite stating that financial viability would be assessed with reference to the "benchmark financial structure."¹⁷

It is inconsistent to prescribe a rate of return based on one capital structure and then apply another capital structure in the financial analysis. NSW Treasury contends that IPART should either adjust the draft WACC so that it reflects actual gearing levels, or adjust its financial analysis to reflect the benchmark gearing levels adopted in the WACC calculation. Treasury supports the latter, in order to remove the impact of gearing on revenue requirements.

NSW Treasury has undertaken financial analysis of IPART's draft decision based on 60% gearing assumptions (refer attachment 1). The analysis shows that indicative credit rating outcomes can deteriorate to below investment grade (i.e. speculative grade) under IPART's proposed price paths:

Indicative Credit Ratings (60% Gearing)	05/06	06/07	07/08	08/09
Sydney Water	BB+	BB+	BB+	BB+
Hunter Water	BB+	BB+	BB+	BB+
Sydney Catchment Authority	BB	BB	BB	BB

¹⁶ IPART Draft Determination, Page 138

¹⁷ IPART Draft Determination, Page 76 (emphasis added)

The above credit rating outcomes indicate that either:

- the 60% gearing assumption adopted in IPART's WACC calculation is too high (in which case lower gearing assumptions should be adopted in IPART's WACC calculation) and / or,
- revenue outcomes are inadequate implying that a higher rate of return may be needed.

Impacts of Smoothing

IPART is required to determine prices with the objective of generating sufficient revenue based on the analysis of efficient operating and capital costs required to provide appropriate levels of service. As part of the determination process, IPART must also decide how prices are smoothed within each regulatory period.

IPART's *Draft Determination* incorporates a larger 2004/05 (or P₀) price change and then applies an end point glide-path over the remaining years in order to achieve the 2008/09 revenue requirement. The resultant regulated revenue and rates of return generated under the 'smoothed' price path, differ from the notional revenue requirements based on the underlying cost 'building blocks':

Sydney Water (\$m 04/05)	05/06	06/07	07/08	08/09
Notional Revenue Requirements	1475	1499	1524	1544
Smoothed Revenue Allowance	1458	1489	1519	1544
Revenue Shortfall	(17)	(10)	(5)	-
Expected Rate of Return	5.9%	6.0%	6.0%	6.1%

Hunter Water (\$m 04/05)	05/06	06/07	07/08	08/09
Notional Revenue Requirements	148	151	154	157
Smoothed Revenue Allowance	145	149	153	157
Revenue Shortfall	(3)	(2)	(1)	-

Expected Rate of Return	5.8%	5.9%	6.0%	6.1%
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SCA (\$m 04/05)	05/06	06/07	07/08	08/09
Notional Revenue Requirements	149	157	163	168
Smoothed Revenue Allowance	149	155	162	168
Revenue Shortfall	(0)	(2)	(1)	-
Expected Rate of Return	6.1%	5.9%	6.0%	6.1%

NSW Treasury would be concerned if the adoption of 'end-point' smoothing resulted in a substantial under recovery of regulated revenue requirements, thereby contravening the principle of capital maintenance. However, Treasury acknowledges that the *Draft Determination* minimises revenue shortfalls through the adoption of P_0 adjustments.

In principle, NSW Treasury supports the NPV approach to revenue smoothing as it meets the dual objectives of smoothing prices and achieving full cost recovery over the regulatory period. However, given the relative immaterial value of the proposed revenue shortfalls, Treasury endorses the smoothing approach adopted in the *Draft Determination* **on the basis that revenue shortfalls are maintained at these levels in IPART's Final Determination.**

Recommended WACC

NSW Treasury proposes that IPART's Final Determination incorporate an equity beta range of 0.8 to 1.0, consistent with the range adopted by IPART in recent gas and electricity determinations. Treasury believes this range is on the low side given that there is little evidence to justify moving from the default or 'null hypothesis' estimate of unity.

All other WACC parameters adopted in IPART's Draft Determination are appropriate.

The resultant real pre-tax WACC range is 5.7% to 7.1%. Within this range, Treasury proposes that a real pre-tax WACC of 6.5% be adopted, consistent the Productivity Commission's observations that regulators should 'err' on the side of promoting long term investment in infrastructure assets, and with previous IPART decisions to adopt a WACC slightly above the range mid-point.

	Lower Range	Upper Range
Nominal Risk Free Rate	5.4%	5.4%
Real Risk Free Rate	2.6%	2.6%
Inflation	2.7%	2.7%
Market Risk Premium	5.5%	6.5%
Debt Margin	1.13%	1.22%
Debt to Total Assets	60%	60%
Gamma	50%	30%
Tax Rate	30%	30%
Asset Beta	0.32	0.40
Debt Beta	0.0	0.0
Equity Beta	0.80	1.00
Cost of Equity	9.8%	11.9%
Cost of Debt	6.5%	6.6%
WACC (real pre-tax)	5.7%	7.1%

Attachment 1 – Credit Rating Analysis

Sydney Water	2006	2007	2008	2009
Assumed Dividend Payout Ratio	75%			
Opening Gearing	60.0%			
Opening RAB	7,977			
Opening Debt	4,786			
Regulated PROFIT & LOSS (nominal \$m)				
Regulated Revenue	1,495	1,566	1,637	1,704
Non Tariff Revenue	-	-	-	-
Operating Costs	(904)	(925)	(947)	(961)
Regulatory Depreciation	(116)	(123)	(132)	(140)
EBIT	475	518	559	602
Interest	(313)	(336)	(357)	(381)
Pre Tax Profit	162	182	201	221
Corporate Tax Expense	(49)	(55)	(60)	(66)
Post Tax Profit	113	127	141	155
Dividend Payable	(85)	(96)	(106)	(116)
Retained Earnings	28	32	35	39
Regulated CASH FLOW (nominal \$m)				
Receipts From Customers	1,495	1,566	1,637	1,704
Payments to Employees & Suppliers	(904)	(925)	(947)	(961)
Tax Paid	(49)	(55)	(60)	(66)
Cash Flow From Operations	542	587	630	676
Sale of Assets	26	59	36	1
Purchase of Assets (net of cap cons)	(512)	(543)	(566)	(548)
Cash Flow From Investing	(487)	(484)	(530)	(547)
Interest Paid	(313)	(336)	(357)	(381)
Dividends Paid	(85)	(96)	(106)	(116)
Cash Flow from Financing	(398)	(431)	(463)	(497)
NET CASH FLOW	(343)	(329)	(363)	(368)
Regulated BALANCE SHEET (nominal \$m)				
Reg Assets	8,554	9,134	9,767	10,425
Loan Debt	5,129	5,458	5,821	6,188
Equity	3,425	3,676	3,947	4,236
Regulated RATIOS				
FFO	229.0	250.8	272.5	295.2
Net Cash Flow	144.1	155.3	166.8	179.0
Debt Gearing	60.0%	59.8%	59.6%	59.4%
Notional Rating	A	A	A	A
EBIT Interest Cover	1.52	1.54	1.56	1.58
Notional Rating	BBB	BBB	BBB	BBB
FFO Interest Cover	1.73	1.75	1.76	1.77
Notional Rating	BBB	BBB	BBB	BBB
FFO / Total Debt	4.5%	4.6%	4.7%	4.8%
Notional Rating	B	B	B	B
Internal Financing Ratio	30%	32%	31%	33%
Notional Rating	BB+	BB+	BB+	BB+
Overall Notional Rating	BB+	BB+	BB+	BB+

Hunter Water	2006	2007	2008	2009
Assumed Dividend Payout Ratio	75%			
Opening Gearing	60%			
Opening Debt	637			
Regulated PROFIT & LOSS (nominal \$m)				
Regulated Revenue	148.5	156.1	164.3	173.2
Non Tariff Revenue	-	-	-	-
Operating Costs	(70.6)	(72.2)	(74.5)	(76.3)
Regulatory Depreciation	(15.9)	(16.9)	(17.9)	(18.9)
EBIT	62.1	67.0	72.0	78.0
Interest	(41.7)	(44.1)	(46.3)	(48.8)
Pre Tax Profit	20.4	22.9	25.7	29.2
Corporate Tax Expense	(6.1)	(6.9)	(7.7)	(8.8)
Post Tax Profit	14.3	16.0	18.0	20.4
Dividend Payable	(10.7)	(12.0)	(13.5)	(15.3)
Retained Earnings	3.6	4.0	4.5	5.1
CASH FLOW (nominal \$m)				
Receipts From Customers	148.5	156.1	164.3	173.2
Payments to Employees & Suppliers	(70.6)	(72.2)	(74.5)	(76.3)
Tax Paid	(6.1)	(6.9)	(7.7)	(8.8)
Cash Flow From Operations	71.9	77.0	82.1	88.2
Sale of Assets	-	-	-	-
Purchase of Assets (net of cap cons)	(56.5)	(53.7)	(61.3)	(57.5)
Cash Flow From Investing	(56.5)	(53.7)	(61.3)	(57.5)
Interest Paid	(41.7)	(44.1)	(46.3)	(48.8)
Dividends Paid	(10.7)	(12.0)	(13.5)	(15.3)
Cash Flow from Financing	(52.4)	(56.1)	(59.8)	(64.2)
NET CASH FLOW	(37.0)	(32.8)	(38.9)	(33.4)
BALANCE SHEET (nominal \$m)				
Reg Assets	1,130.3	1,196.0	1,270.0	1,341.0
Loan Debt	674.5	707.3	746.1	779.6
Equity	455.8	488.7	523.9	561.5
RATIOS				
FFO	30.2	32.9	35.9	39.4
Net Cash Flow	19.5	20.9	22.4	24.1
Debt Gearing	59.7%	59.1%	58.8%	58.1%
Notional Rating	A	A	A	A
EBIT Interest Cover	1.49	1.52	1.55	1.60
Notional Rating	BBB	BBB	BBB	BBB
FFO Interest Cover	1.72	1.74	1.77	1.81
Notional Rating	BBB	BBB	BBB	BBB
FFO / Total Debt	4.5%	4.6%	4.8%	5.1%
Notional Rating	B	B	B	B
Internal Financing Ratio	34%	39%	37%	42%
Notional Rating	BB+	BBB	BBB	BBB
Overall Notional Rating	BB+	BB+	BB+	BB+

SCA	2006	2007	2008	2009
Assumed Dividend Payout Ratio	75%			
Opening Gearing	60%			
Opening Debt	545			
Regulated PROFIT & LOSS				
Regulated Revenue	152.2	163.1	173.9	184.9
Non Tariff Revenue	1.5	1.5	1.6	1.6
Operating Costs	(81.6)	(83.7)	(84.2)	(84.0)
Regulatory Depreciation	(14.1)	(15.8)	(17.5)	(19.1)
EBIT	58.0	65.0	73.8	83.4
Interest	(35.7)	(44.7)	(51.0)	(58.2)
Pre Tax Profit	22.4	20.3	22.8	25.2
Corporate Tax Expense	(6.7)	(6.1)	(6.8)	(7.6)
Post Tax Profit	15.7	14.2	15.9	17.6
Dividend Payable	(11.7)	(10.7)	(12.0)	(13.2)
Retained Earnings	3.9	3.6	4.0	4.4
CASH FLOW				
Receipts From Customers	153.7	164.6	175.5	186.5
Payments to Employees & Suppliers	(81.6)	(83.7)	(84.2)	(84.0)
Tax Paid	(6.7)	(6.1)	(6.8)	(7.6)
Cash Flow From Operations	65.4	74.8	84.4	95.0
Sale of Assets	-	-	-	-
Purchase of Assets (net of cap cons)	(156.2)	(115.3)	(131.9)	(93.4)
Cash Flow From Investing	(156.2)	(115.3)	(131.9)	(93.4)
Interest Paid	(35.7)	(44.7)	(51.0)	(58.2)
Dividends Paid	(11.7)	(10.7)	(12.0)	(13.2)
Cash Flow from Financing	(47.4)	(55.4)	(63.0)	(71.4)
NET CASH FLOW	(138.2)	(95.9)	(110.4)	(69.9)
BALANCE SHEET				
Reg Assets	1,075.1	1,202.9	1,349.0	1,458.2
Loan Debt	683.2	779.1	889.5	959.4
Equity	391.9	423.8	459.5	498.8
RATIOS				
FFO	29.8	30.1	33.5	36.7
Net Cash Flow	18.0	19.4	21.5	23.5
Debt Gearing	63.5%	64.8%	65.9%	65.8%
Notional Rating	BBB+	BBB	BBB	BBB
EBIT Interest Cover	1.63	1.45	1.45	1.43
Notional Rating	BBB	BBB	BBB	BBB
FFO Interest Cover	1.83	1.67	1.66	1.63
Notional Rating	BBB	BBB	BBB	BBB
FFO / Total Debt	4.4%	3.9%	3.8%	3.8%
Notional Rating	B	B	B	B
Internal Financing Ratio	12%	17%	16%	25%
Notional Rating	B	B+	B+	BB
Overall Notional Rating	BB	BB	BB	BB