PR19 Risk and Return Workshop

16th February 2017

Workshop agenda

9.45-10.15	**REGISTRATION AND COFFEE**
10.15-11.45	**Programme update** **Risk & return issues:** **Balance of incentives** **Risk** **Uncertainty**
11.45-12.00	**BREAK**
12.00-13.30	**Financeability**
13.30-14.00	**LUNCH**
14.00-15.30	**Tax**
15.30	**END**

Topics

Update on PR19

Balance of incentives

Cost of equity

Risk and uncertainty

RoRE analysis

Progress towards PR19 – what we have done and what is still to do?

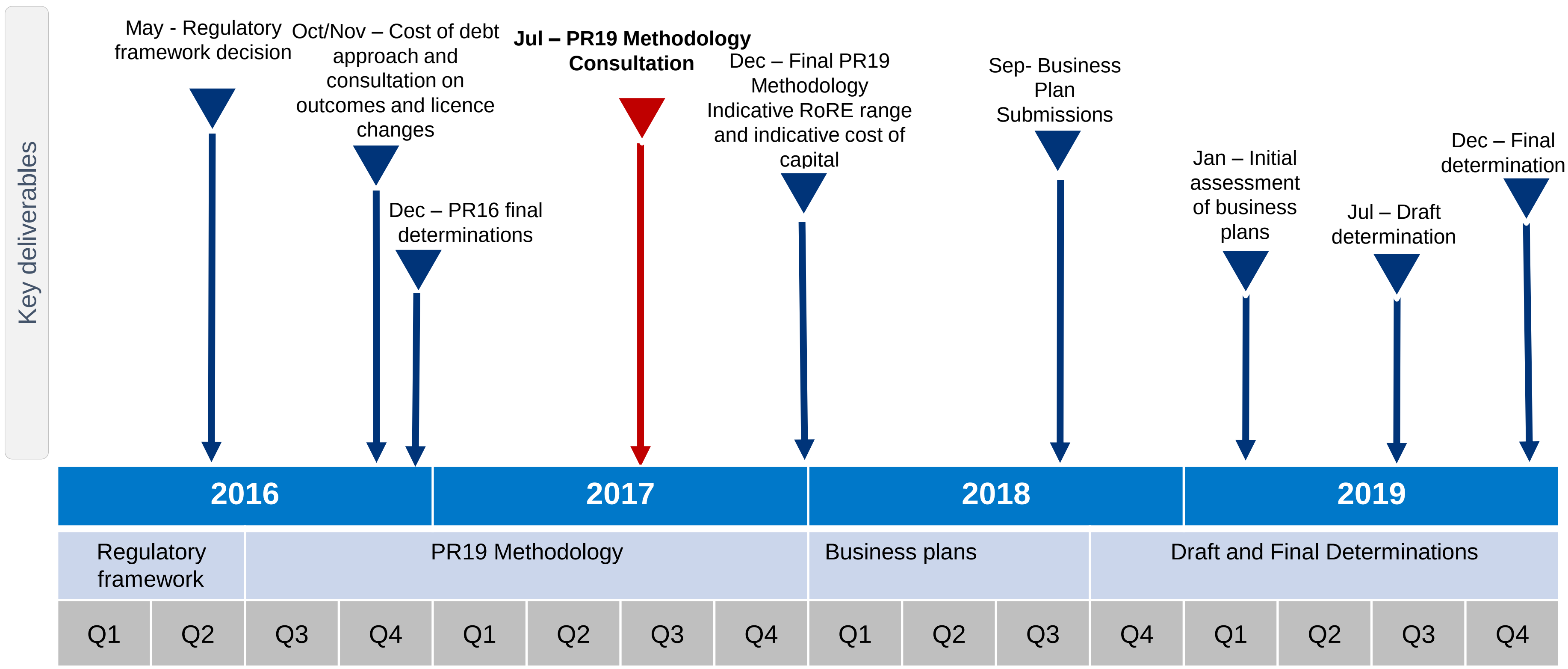
We have already decided some key elements of the regulatory framework

- Strengthened approach to customer engagement and outcomes
- CPI/CPIH indexation of price/revenue controls and the RCV
- Separate binding price controls for water resources and bioresources (and the broad outline of how these controls will operate)
- Information platforms for water resource and bioresource markets
- Greater use of markets in the financing and provision of new assets by third parties (direct procurement for customers)

The PR19 methodology will set out further detail of our regulatory approach.

In particular our expectations of what we expect to see in company business plans, how we will assess those business plans and our approach to intervening if companies do not submit good business plans.

This will cover our approach to individual elements of the price control such as affordability, resilience and financeability.



What the PR19 methodology will need to cover

The PR19 methodology will cover each area of the price control, and where appropriate consider issues separately for the different wholesale and retail controls

Coverage of July methodology document

Wholesale controls

Water resources | Water network plus | Wastewater network plus | Bioresources

Total revenue control | Total revenue control | Total revenue control | Average revenue control

Market design (Information, incentives, prices) | Market design (information, incentives, prices)

Direct procurement for customers

Retail controls

Residential (?) | Business (Wales)

Total revenue control (?) | Total revenue control(?)

Enhanced customer engagement (empowering customers)

Outcome performance commitments and delivery incentives and future of SIM

Affordability of all and vulnerable customers

Measuring and incentivising resilience

Totex

Retail cost approach | Retail cost approach

RCV allocation, indexation and run off rates

Return on capital (debt indexation, approach to cost of equity, overall scope for out and under performance (totex, outcomes, financing))

Retail margins

Financeability, tax, PAYG rates and link to affordability

Focus of today's work shop

PR14 reconciliation (in line with published reconciliation rulebook)

Risk-based review and business plan requirements

Topics

- **Update on PR19**
- **Balance of incentives**
- **Cost of equity**
- **Risk and uncertainty**
- **RoRE analysis**

Totex

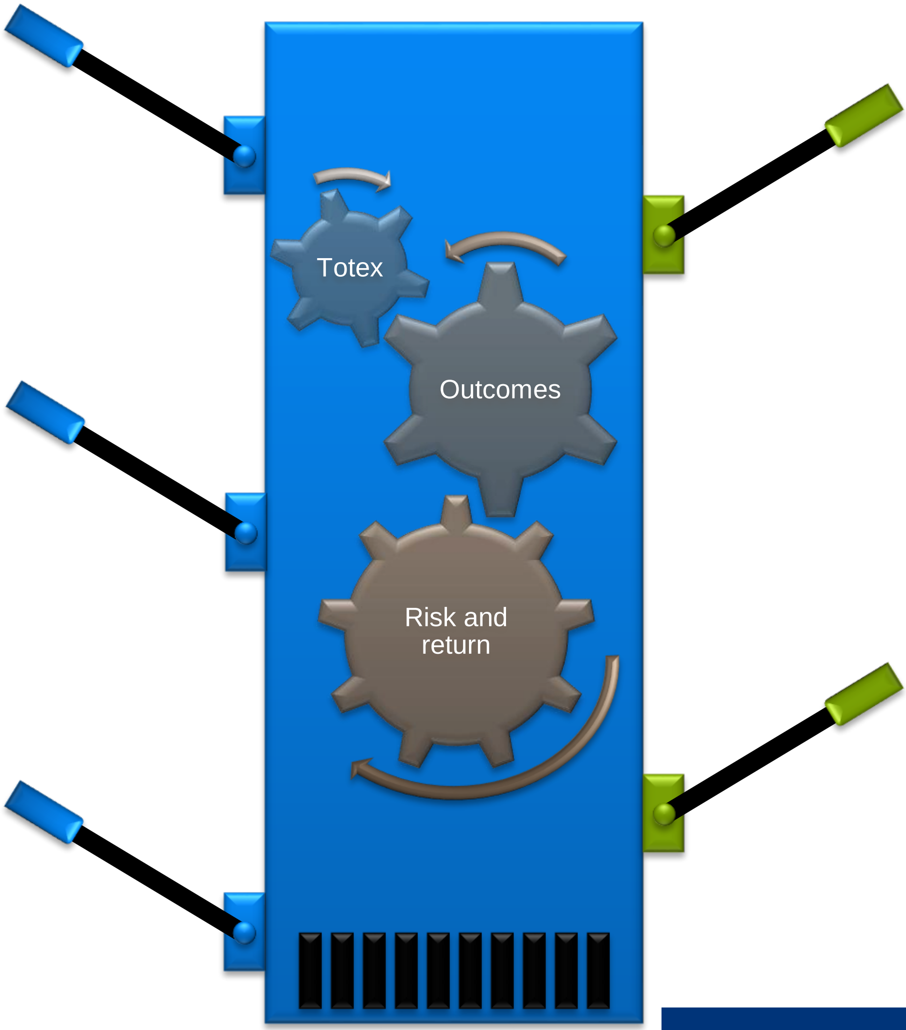
Set allowances for total expenditure (capital and operating) for price review period.

Risks

Allocate risk between company, investors and customers such as demand risk, cost variances and risk transfer mechanisms such as interim determinations of K (IDoKs).

Returns

We set the level of return - Weighted Average Cost of Capital (WACC) - on the regulated capital value (RCV).



Outcomes

Set performance commitments and financial and reputational rewards and penalties for delivery of what current and future customers want.

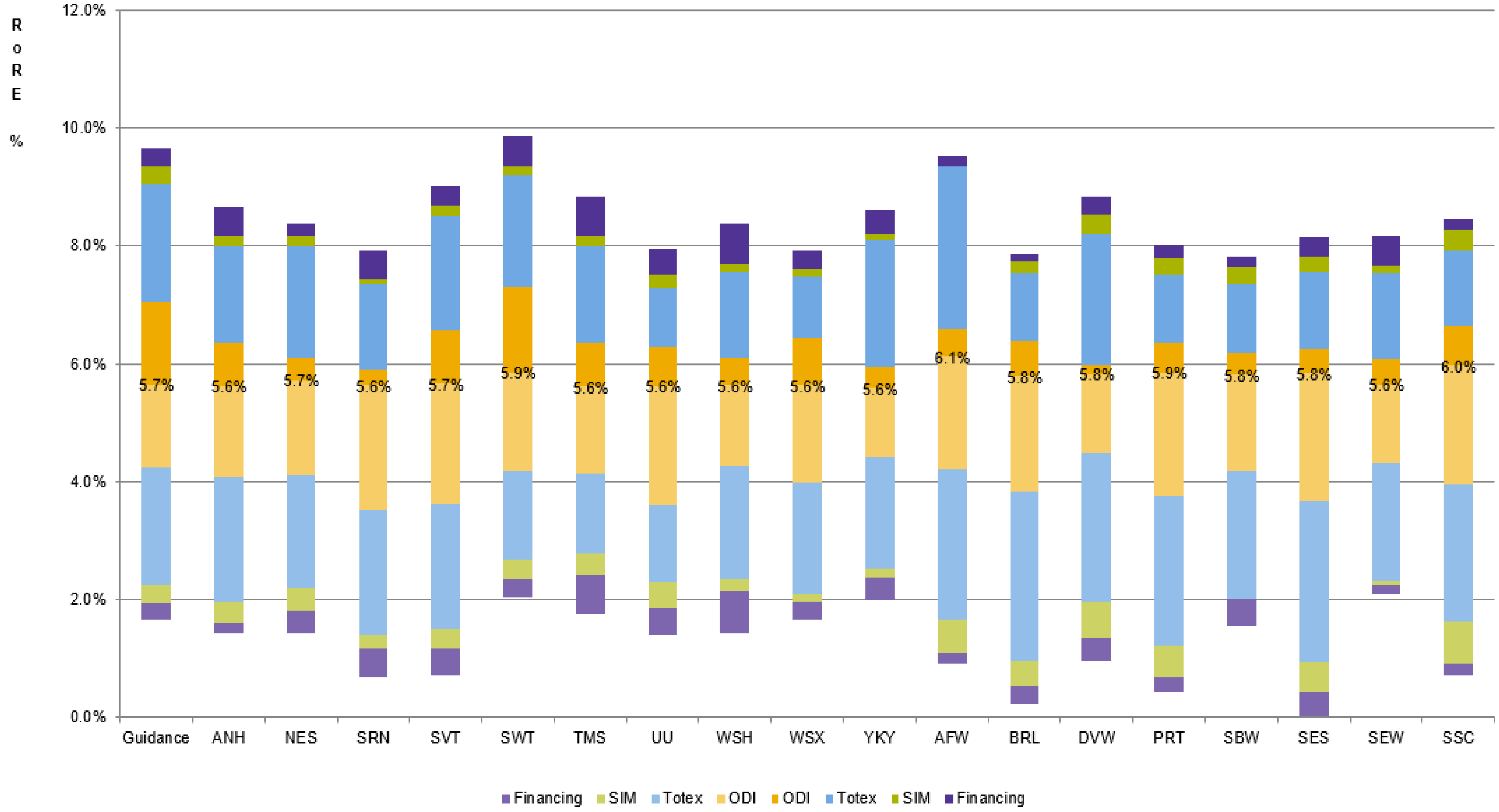
Financeability and affordability

Set speed of recovery of totex over time via Pay As You Go (PAYG) rate and speed of depreciation of the RCV. This impacts on financeability, level of bills and sharing of costs between current and future customers.

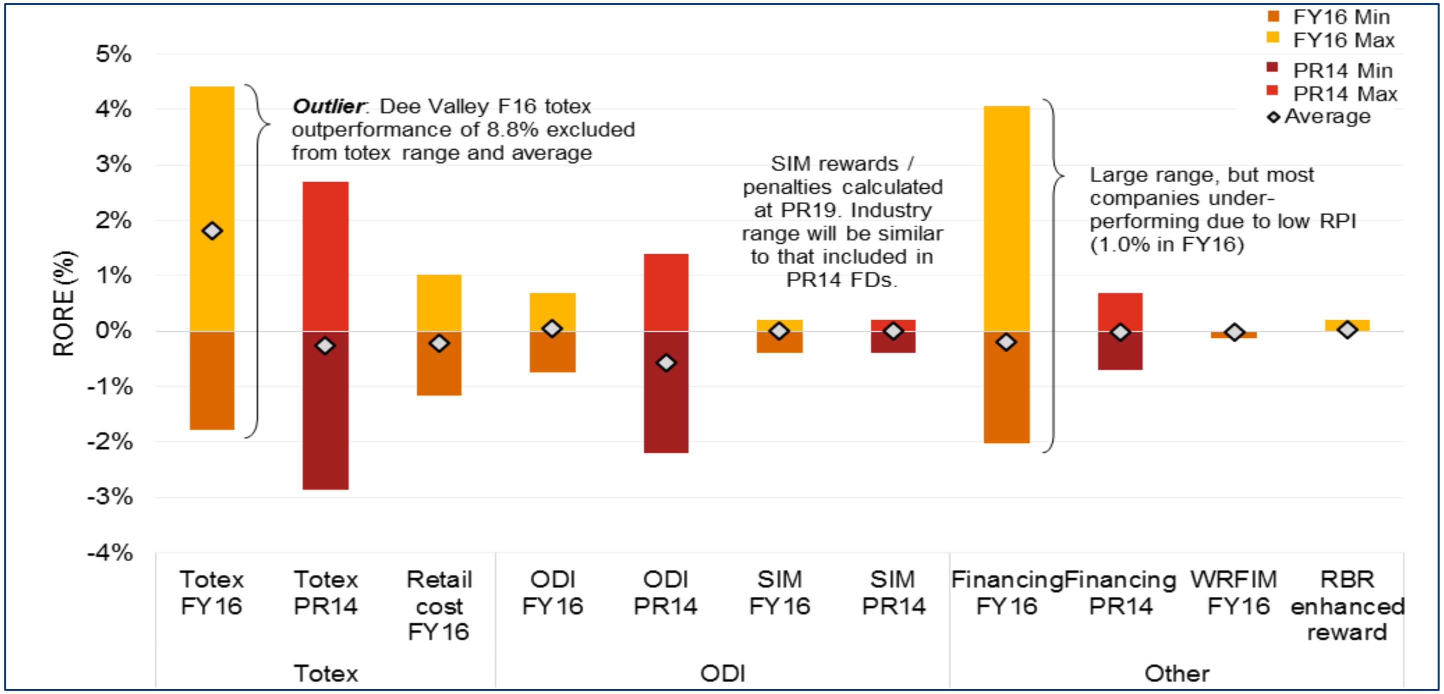
The tools are the same in England and Wales, but they can be applied in different ways

These tools come together in our “Initial Assessment” of business plans (the new name for “RBR”)

Overall balance of incentives - PR14



- ODI range in the chart is likely to over-represent the potential financial impact at PR14 because it assumes very good or very poor performance across all a company's ODIs; financing performance is wider than presumed in the chart
- Over 2015-20, for most companies ODIs will not contribute to bills (three companies recover in-period) but can change bills by a maximum of 4% (up or down)



Source: PwC draft analysis

Key points

- **The PR14 totex range presented at PR14 was approximately 5.6%.** PwC's analysis of 2015-16 data indicates a range across companies of 6.2%. A key difference is that actual performance is weighted to the upside, but as this is the first year of the AMP is it unclear to what extent this is driven by deferral of expenditure as appose to outperformance.
- **ODI outturn range is narrower at 1.4% compared to the range of 3.6% expected in the P10 to P90 range.** The industry average RoRE impact from ODI performance is 0.0% from FY16 data, whereas the expected average is to be -0.6% over the five year period, indicating companies, overall are performing better than the performance commitment level. A potential explanation of this is that penalties provide stronger incentives.
- **Financing incentives are large.** The figures in the chart are based on a notional company and therefore likely to understate actual range. The figures shown for FY16 compare the real cost of debt reported by companies to the real cost of debt allowance set at PR14. As the PR14 RoRE range is focused on performance against the cost of new debt allowance, this comparison of RoRE an outturn is not a directly equivalent one.
- **WRFIM penalties are small** – this is reasonable given extent of management controllability

Next steps

- We continue to consider balance of risk and return; guidance on RoRE range for ODIs in 2020-25 to be set out with final methodology

Ambition and cost of equity (PREMO) – summary of consultation responses

Feedback from consultation

- The approach may involve a significant amount of subjectivity in our assessment – we would need to build in objectivity to make it viable. Might also lead to companies trying to satisfy us and our criteria for cost of equity upgrades, rather than customers.

- How it would relate to the risk based review and any potential enhanced status for business plans. What would be materially different under PREMO and how it would relate to RBR.

- The regulatory landscape in Victoria is fundamentally different from the UK – the model may not therefore be directly comparable (ie no ODIs or sharing factors). Regulated companies in Victoria are also public, not private.

- The approach is untested (still just a proposals from the Victorian regulator).

- There may be an inherent bias in the classifications or menu approach (eg no company board would want to sign off on a 'basic' business plan; conversely companies might aim for a safe option to minimise risk of a cost of equity downgrade)

- How we would benchmark the 'standard' cost of equity and banding.

Next steps

- Taking the above feedback into account for how we develop tests for the Initial Assessment of Business Plans (RBR)
- Considering how to recognise ambition in plans in a robust way

We seek views on the following issues:

- **Do you have comments on the current overall balance of incentives?**
- **Should there be a reward for ambition in business plans and how should it be balanced with other regulatory incentives?**
- **Should it include an ex-post assessment of what was achieved?**

Topics

Update on PR19

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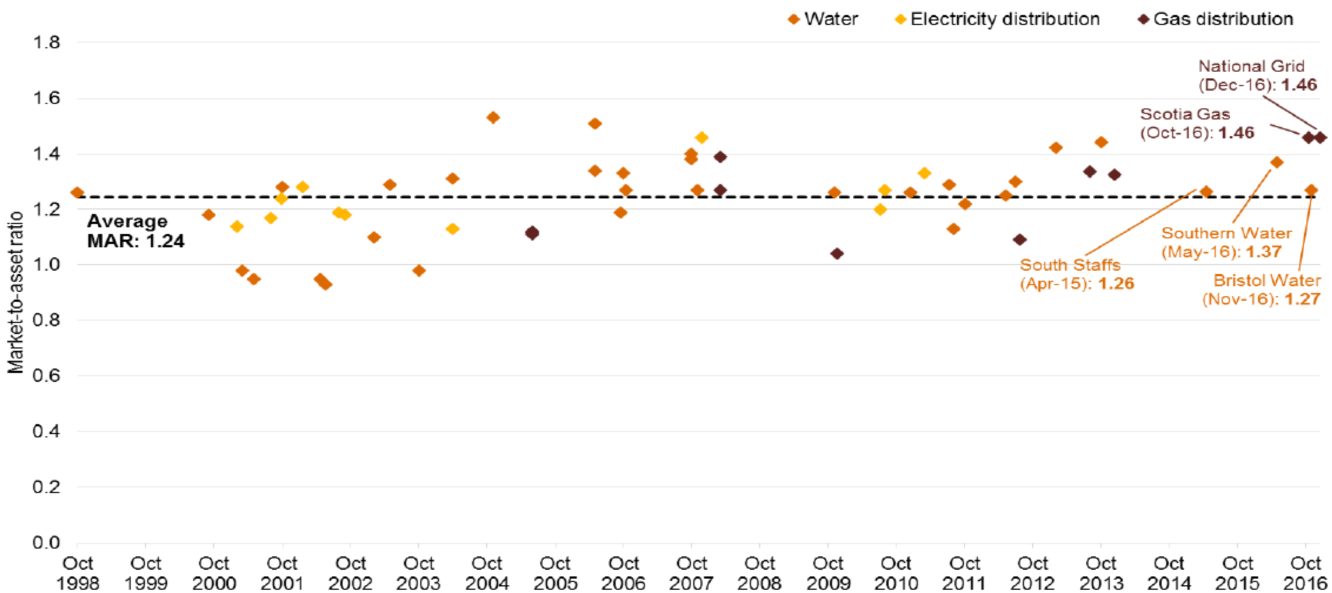


Source: PwC draft analysis

Analyst quotes:

Credit Suisse: “The challenge for UK utility companies is that capital is oversupplied and returns have fallen to low levels. Whereas c10-20% post-tax nominal equity IRRs were achievable across 2008-13, we think those have now halved in recent years.”

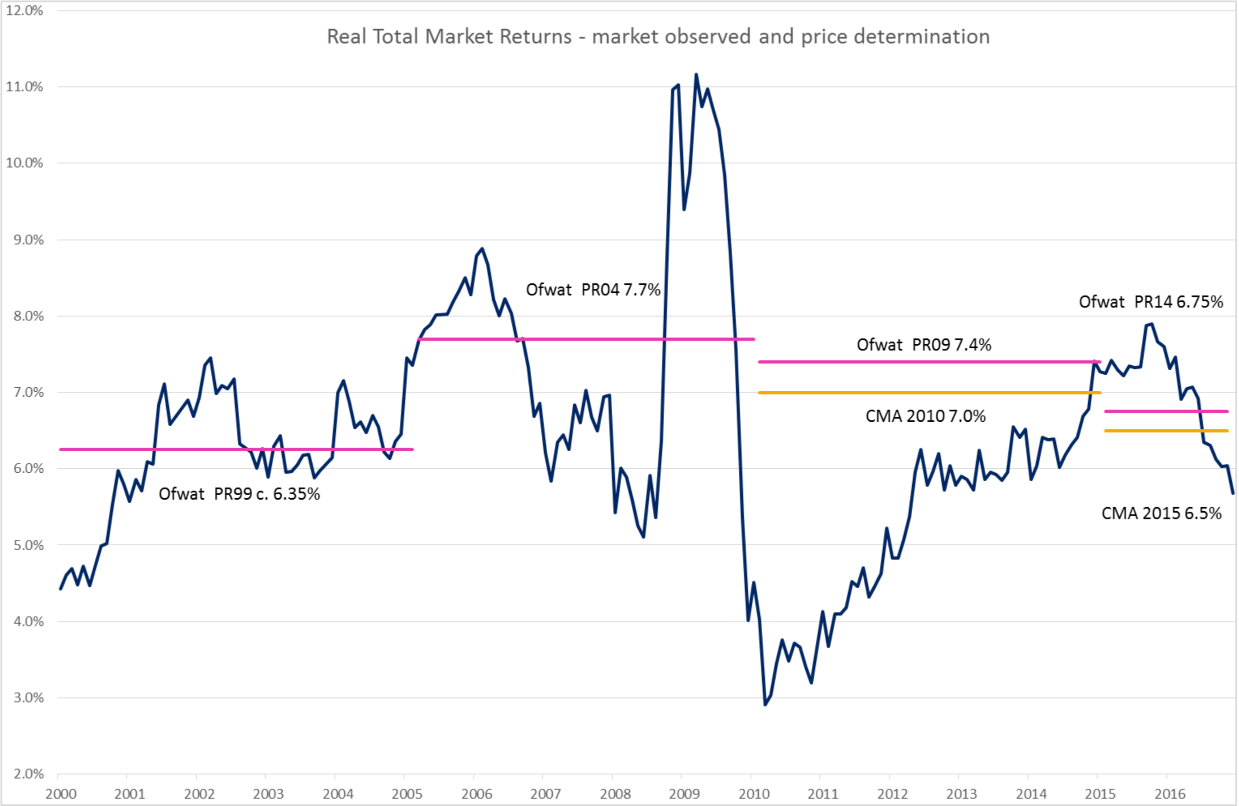
Figure 26: Our view of the post-tax nominal cost of equity acceptable to bidders

Post-tax nominal ROE	Type of asset	Recent precedent transactions
6.0%	Low-risk cash-flow-generative assets not subject to price controls	PFI-type projects and asset sale-and-leasebacks.
7.0%	Networks subject to price-cap regulation by OFGEM and OFWAT	Sale of stakes in SGN at 44% RAB premium and NG GD at 48%.
8.0%	Onshore wind assets, offshore wind assets with a CfD	Burbo bank offshore wind project. Sale of Clyde
9.0%	Offshore wind assets without an EPC and with power price risk	Race Bank offshore wind project, receiving 1.8x ROC

Source: Credit Suisse research, Credit Suisse estimates

Macquarie: “We estimate baseline RORE at 4% real, in line with our current cost of equity (7% nominal at 62.5% leverage). This would already be the lowest allowed regulated RORE in the UK since privatisation and is lower than the CMA determination of the cost of equity based on long-run beta, risk free and ERP calculations.”

Cost of equity - total market returns



Source of TMR data: PwC

Credit Suisse yearbook 2016: “We continue to live in a low-return world. Long-term bond yields remain extremely low throughout the developed world, so that future bond returns are likely to be much lower than over the last few decades. Future real equity returns will depend on the expected real risk-free interest rate plus the expected equity premium. Real interest rates remain low everywhere, and there is no reason to believe that the equity risk premium is unusually elevated. Prospectively, therefore, the real returns on bills, bonds, equities, and indeed all risky assets, seem likely to be relatively low.”

Update on PR19

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Background: Addressing risk and uncertainty in business planning

Business planning
- All business have to deal with risks and uncertainty in operating and planning their activities
- Companies that submit good business plans will be able to demonstrate that their proposals address the risks and uncertainties within their plan, and appropriately balance risk between the company and their customers

Risks
- Risks are quantifiable and identifiable e.g. risks to delivery of a project or a cost shock. These enable companies to manage and plan for mitigations in their normal business planning processes and are remunerated through cost allowances or the cost of capital.
- When a company is able to materially influence the probability or magnitude of impacts, or mitigate the effect efficiently, then the risk should remain with the company, at least in part.

Uncertainties
- Less clear cut, and usually based on factors outside the company's direct control which make them harder to plan and mitigate
- Where the impacts are outside of prudent management control then it may be reasonable to pass through to customers

While a normal part of business planning that all companies have to manage, there are therefore specific tools for dealing with risk and uncertainty through the regulatory settlement

Managing risk and uncertainty

Key messages

- All businesses have to deal with risk and uncertainty in operating and planning their activities
- As with PR14, we will apply a high evidential bar where companies propose uncertainty mechanisms at PR19, given the risk mechanisms implicit within the controls (outlined below)

Within a price settlement

1. Use of inflation in price controls
2. 5 year price controls
3. Totex cost sharing and special cost factors
4. Outcome Delivery Incentives
5. Revenue true ups
6. Possible mechanisms for tax and cost of debt

All of these can effectively reduce companies' exposure to unexpected variations in costs and/or revenues by allowing them to pass some of the unexpected variation onto customers through changes in bills

Possible issues for PR19?

National Environment Programme

- Recognise there is a potential issue in regards to timings of development of National Environment Plan
- Both EA and NRW are working with companies to manage issues associated with uncertainty that the different planning cycle brings

Business rates

- Timing of the business rates revaluation in PR14 cycle meant that uncertainty mechanism was created for all companies
- Currently not clear that the level of uncertainty is as great as PR14

Brexit

- The UK will continue to be bound by EU law until it is no longer a member.
- The UK Government's plan is that the provisions of EU law will become part of domestic UK law when the UK leaves the EU
- The UK Government has said that it is still committed to the environmental outcome in its manifesto

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Original scope of PR14 scenarios
1. Number of households
2. Industrial demand
3. Input costs
Combined (1, 2, 3 above)
Rainfall
Incentive performance
Up to 6 additional company specific scenarios

Each scenario had a mid, high and low case

High and low determined at P10 and P90 (ie 10% chance of higher or lower value occurring in each year of 2015-20)

Significant number of data input cells (>5000) allowed companies flexibility to model various scenarios to provide companies with an indication of the magnitude and areas of risk

Assessed in bespoke model – Risk Assessment Tool

Scenarios compared to mid/base case

We expected companies to prepare their scenarios using the same high level macro-economic assumptions, as customer bills should not vary on account of different assumptions of the performance of the national economy

Base case assumptions provided to companies for
GDP Growth
Inflation (RPI)
Industrial production
The number of households
The unemployment rate
Industrial electricity retail prices
Construction input cost inflation

But companies retained discretion to modify based on local economic conditions provided they explained the rationale for any changes.

Initial view of risk assessment for PR19

Key messages

- Objective – build sensitivity analysis into the financial model rather than separate risk assessment tool
- Some guidance required to ensure RORE comparability
- But expect companies required to demonstrate understanding of risk in their business plans

Scenario
Revenue shortfall
Inflation upside and downside
Totex increase/decrease
Opex increase/decrease
Capex increase/decrease
ODI scenarios
Cost of debt increase/decrease

Companies to consider sensitivities when submitting business plans

Some prescription required to allow comparable RORE analysis

But companies will need to demonstrate their own understanding of risk

For purposes of RORE assessment it will be necessary to make some simplifying assumptions, e.g. all upside / downside scenarios assumed to impact within period, rather than ex-post true up post 2025

We seek views on the following issues:

- **We will give guidance for carrying out risk assessment – what do you think the extent of that guidance should be to ensure consistent comparisons across companies? Are there merits in a P10/P90 approach?**

- **Are there additional scenarios that should be considered other than those set out in the previous slide?**