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Ports Regulator Roadshows
Tariff Methodology
October 2016

Regulatory Framework

Ports Regulator's process

- On 30 June 2016, the Ports Regulator requested for proposals and sharing of insights on the review of the current Tariff Methodology, from interested stakeholders

Regulatory Framework

- The Port Directives were approved on 13 July 2009 (gazetted on 06 August 2009) and amended on 29 January 2010.

- Directives require the Regulator to ensure that the Authority's tariffs allows it to:

recover its investment;

recover its costs;

make a profit commensurate with the risk.

Current Tariff Methodology

Regulatory Framework

- On 31 July 2014 the Regulator issued a Regulatory Manual ("Tariff Methodology") applicable for the tariff years 2015/16 to 2017/18.
- The approved Tariff Methodology is multi-year in its approach (3 years)
- The methodology further allows for an annual review and an annual adjustment of tariffs within the three year period as opposed to fixing the prices for the full period.
- FY 2017/18 is the final year of the Tariff Methodology.

Tariff Methodology

- The Tariff Methodology prescribes the following Required Revenue (RR) formula:

Revenue Requirement

= Regulatory Asset Base (RAB) x Weighted Average Cost of Capital (WACC) + Operating Costs + Depreciation + Taxation Expense ± Claw-back ± Excessive Tariff Increase Margin Credit (ETIMC)

Tariff Methodology

- The key principles included in the Tariff Methodology is as follows:

Component	Details
Regulatory Asset Base (RAB)	• The RAB represents the value of assets that the NPA is allowed to earn a return on.
Vanilla Weighted Average Cost of Capital (WACC)	• A real WACC will be applied, given that the RAB is indexed for inflation.
Operating Costs	• The NPA is required to provide detailed and complete motivation for each of the expenses applied for.
Depreciation	• The depreciation of the assets in the RAB will be calculated as a straight line 40 year on the opening balance of the RAB.
Taxation Expense	• The Regulator will use the pass-through tax approach where the vanilla WACC will be applied to the average RAB for the period under consideration
Claw-Back	• The Regulator will spread the total impact of over/under recovery of revenue over a period of two tariff determinations.
Excessive Tariff Increase Margin Credit (ETIMC)	• The Regulator considers it prudent to avoid future tariff spikes by retaining and increasing the NPA's ETIMC.

What necessitates a change in the Tariff Methodology?

- Like any other industry, the regulated industries evolve with time such that they experience substantial transformations and maturities on the key aspects such as pricing, operations, investments;
- It is for these reasons that Regulators ought to evolve and re-define their regulatory tools such as tariff methodologies and operating standards to respond to current challenges;

Authority's consideration and proposal

- The Authority has considered alternative appropriate regulatory methodologies to the current methodology (Revenue Requirement methodology) ;
- This includes the rigorous Price Cap regulatory methodology which is driven by capped tariffs, volumes (economic growth) and savings & efficiency gains on expenditure;
- Given the historic imbalances in the current tariff structure, the RR methodology is more appropriate to correct and align the tariff structure.
- If implemented too early this could have unintended consequences for customers or the Authority especially given the current efforts of addressing tariff imbalances through the tariff strategy.
- The Authority therefore proposes the continued use of the RR methodology with an addition of the retention of the portion of savings due to efficiency gains (e.g. 50% sharing with customers).

RAB and Depreciation

RAB

Establishes an economic basis on which tariffs are determined

Depreciation

Provides recovery of capital invested for replacement and refurbishment when assets reach end of useful lives

Regulatory Asset Base

Discussions	• Trended Original Cost (TOC) understates technological advances in the infrastructure and leads to price shocks when assets have to be replaced. • Depreciated Optimised Replacement Cost (DORC) presents a much more appropriate approach to replicate the competitive economic value of underlying assets as the valuation is systematic and includes sophisticated but realistic engineering methods.
Current Treatment	• TOC, based on the Starting Regulatory Asset Base last set at the inception of regulation and never revised.
Proposed Treatment	• Rebasing of the Regulatory Asset Base by using DORC with inflation trending in the intervening years.
Rationale	• In the regulation of monopoly businesses, the asset values are used in setting the tariffs. DORC presents a much more appropriate ability to replicate the competitive economic value as the valuation is systematic and includes sophisticated engineering methods than the simple TOC approach.

Depreciation

Discussions	• Provides recovery of capital invested for replacement and refurbishment when assets reach end of useful lives • The depreciation method should provide a sensible and practical approach to enable the recovery of the capital invested for re-investment
Current Treatment	• Straight line over 40 years (All Assets)
Proposed Treatment	• Should be based on different asset class types and the average useful life as prescribed in the accounting policies used in the Annual Financial Statements
Rationale	• It's a standard approach which clearly distinguishes the average useful lives of different asset categories • This manner makes investment appraisal for different capital projects more realistic than when lumped together at an average 40 years.

Weighted Average Cost of Capital

WACC

- ***represents risk adjusted opportunity cost of capital;***
- ***incorporates cost of equity calculated on Capital Asset Pricing Model (CAPM); and***
- ***embedded Transnet's cost of debt***

Risk Free Rate

Discussions	• Instrument identified as proxy for Risk free rate should have a term which closely mirrors Transnet's capital funding term.
Current Treatment	• 20 year government bond with R186 as a benchmark. • This bond is nearing maturity date.
Proposed Treatment	• SA bond R214 is proposed. Like R186, this bond will have to be substituted with a suitable 20 year or longer bond when approaching maturity (i.e. 20 years mirror Transnet term of capital funding)
Rationale	• The approaching maturity date impacts trading of R186 notes in the bond market, as a result R186 cannot continue to represent a proper benchmark for long term risk free rate.

Inflation

Discussions	• Use of one year forecast CPI for tariff determination (forward looking) and claw back (post event).
Current Treatment	• One year forecast CPI used in determining the RAB as well as in determining the real Cost of Debt rate and the real Cost of Equity rate • This is used in tariff determination (forward looking) and claw back (post event) with latter considered inappropriate.
Proposed Treatment	• Actual and not forecast CPI should be used in determining the RAB as well as the real Cost of Debt rate and the real Cost of Equity rate for claw back purposes.
Rationale	• It is very difficult to accurately forecast macro economic inputs such as CPI resulting in differences between actual and forecast CPI. • Use of forecast CPI for claw back purposes contradicts claw back principles.

Weighted Average Cost of Debt

Discussions	• Use of Transnet's forecast WACD for claw back purposes.
Current Treatment	• Transnet's forecast WACD determined at tariff application stage used for claw back purposes.
Proposed Treatment	• Actual and not forecast Transnet WACD to be used for claw back purposes.
Rationale	• There is a period of more than 21 months between the forecast and the actual WACD. • Impact of MPC decisions, credit rating agencies and any changes in Transnet's funding approach during the year would not have been incorporated in a forecast WACD.

Market Risk Premium

Discussions	• MRP represents a risk premium compensating investors for taking a risk of investing in equities over risk free bonds. • The Dimson, Marsh, Staunton (DMS) 113 year period geometric mean hardly ever changes year on year (e.g. 2012: 5.3%, 2013: 5.3%, 2014: 5.4%, 2015:5.4%). • It doesn't reflect recent market performance reality.
Current Treatment	• DMS 113 year period on geometric mean.
Proposed Treatment	• Revert back to DMS arithmetic mean as per initial issue of the Regulatory Manual. This will address current concerns on the 113 years which is considered to be too long to reflect recent market performance reality without changing the preferred source of the Regulators MRP.
Rationale	• The long term nature (113 year) of measuring MRP gives a flat risk premium and it doesn't reflect recent market performance realities where returns fluctuates with market conditions.

Beta

Discussions	• The measure of a company in comparison to the market risk driven by volatility in the share price. • With the Authority not being traded on any stock exchange, an appropriate asset beta is determined by setting benchmarks from comparable companies of a similar size listed in a stock market.
Current Treatment	• 0.5 beta set by the Regulator.
Proposed Treatment	• A comparator study to establish benchmark companies used to set beta for the Authority. • The Authority benchmarks its asset beta at 0.63 from a study of comparatives that are similar to it.
Rationale	• Beta is determined by setting a benchmark of using comparable companies of same size, operating in similar market conditions.

Clawback and Incentive Regulatory Regimes

Clawback

represents a mechanism to deal with differences in forecasts of costs and volumes

Incentive Regulatory Regimes

a new addition to incentivise efficiency on operating expenses

Clawback

Discussions	• Represents a mechanism to deal with differences in forecasts of costs and volumes. • Amounts resulting in overs and unders (claw back) is calculated and taken out of the revenues over the period of two tariff determinations.
Current Treatment	• Amounts resulting in overs and unders (claw back) is calculated and taken out of the revenues over the period of two tariff determinations.
Proposed Treatment	• An incentive scheme with the retention of portion of Opex not spent by the Authority. As long as it is proven to be resulting from efficiency & savings. • Clawback should only be considered after the Authority has been allowed to keep a portion of incentives earned from cost reductions & savings.
Rationale	• This incentivizes the Authority to increase efforts on cost reductions and savings to lower port costs to the benefit of port users.

Incentive Regulatory regimes

Discussions	• It is desirable for incentives on operating costs to be considered in the way clawback is treated in the formula; or • Alternatively the Regulator may formulate a pure price methodology with the approval of cap on prices and the Authority making a gain/loss on volumes and efficiency gains.
Current Treatment	• Not Applicable.
Proposed Treatment	• A consideration for an addition of an incentive scheme on operating expenditure only at this stage, until the environment matures to accommodate incentive targets on Capex as well.
Rationale	• This incentivizes the Authority to increase efforts on cost reductions and savings to lower port costs to the benefit of port users.

Excessive Tariff Increase Margin Credit

ETIMC

represents amounts retained in the pool of funds of the Authority upfront which will be used to mitigate future tariff spikes

Excessive Tariff Increase Margin Credit

Discussions	• Represents an amounts retained in the coffers of the Authority upfront which will be used to mitigate to future tariff spikes.
Current Treatment	• ETIMC Retained as a liability in the books of the Authority at a cost equivalent to the cost of capital approved for the Authority.
Proposed Treatment	• ETIMC be retained at a cost of debt applicable to other liabilities rather than the cost equivalent to the WACC currently applicable. • To be used to fund discounts in line with the principle of public interest in Incentivising beneficiation of raw materials to finished goods.
Rationale	• Funding ETIMC as a liability in the books of the Authority comes at a much higher cost than the current cost of raising debt finance.

Elements where changes are unwarranted

Elements where changes are unwarranted

The formula includes the treatment of:

- ***Operating Expenditure***
- ***Gearing***
- ***Taxation***

Conclusion

- The Authority recommends continuation of the use of Rate of Return Tariff Methodology with Incentive schemes applicable on operating costs applied through the clawback mechanism

- In summary the proposed refinements to existing Tariff Methodology

  - RAB valuation using DORC with inflation trending in the intervening years
  - Depreciation per different asset class types as used in the AFS
  - Use of SA bond R214 for risk free rate
  - For clawback calculation, use of actual CPI on revising:- RAB, WACD & Cost of Equity
  - Use of actual WACD for claw back purposes.
  - DMS arithmetic mean rather than geometric mean
  - 0.63 asset beta and use of the suggested comparatives
  - Incentives only on opex at this stage
  - Retain a portion of Opex savings
  - ETIMC liability interest paid at the cost of debt
  - On unwinding, ETIMC to fund discounts in line with the principle of public interest

Thank You