



EXHIBIT BB4(f).3

**YOUSUF ISMAIL
LAHER**

**SUPPLEMENTARY
STATEMENT & ANNEXURES**



**JUDICIAL COMMISSION OF INQUIRY INTO ALLEGATIONS OF STATE CAPTURE,
CORRUPTION AND FRAUD IN THE PUBLIC SECTOR INCLUDING ORGANS OF STATE**

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INDEX: EXHIBIT BB4(f).3

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4.	Annexure "YL 41"		046 to 060

SUPPLEMENTARY STATEMENT

I, the undersigned,

YOUSUF ISMAIL LAHER

do hereby state that:

1. My personal details as reflected in my previous statements remain the same.
2. The facts contained in this supplementary statement are both true and correct, and within my personal knowledge, unless the context provides otherwise. These events occurred many years ago. It is possible, even likely, that with the passage of time, my memory of actual detail is less than perfect.
3. I use the same abbreviations and terminology herein as I used in my previous statements (without redefinition).
4. In February 2019, I was requested by the Commission to provide a statement in relation to, in particular, Transnet's acquisition of 1064 diesel and electric locomotives.
5. On 15 April 2019, I provided a statement to the Commission, and was later advised that I would possibly be required to testify before the Commission on 28 May 2019 on the basis thereof. I refer to this statement as my "main statement".
6. Subsequently, and further to the evidence of Mr Callard, the plan for me to give evidence did not materialize.



7. On 21 May 2019, I was served with a rule 3.3 notice by the Commission. In the notice, I was advised that paragraphs 60, 64, 67, 197 and 211 of Mr Callard's statement implicates or may implicate me.
8. I then brought an application in terms of rule 3.4 to present evidence to the Commission in rebuttal of Mr Callard's evidence against me, which application was granted on 25 March 2020. The application contains what I refer to as my "rule 3.4 statement".
9. Arising from my rule 3.4 application, I was scheduled to give evidence before the Commission on 27 August 2020, but the hearing was postponed with a view to the introduction of further evidence by Mr Callard and I.
10. Based on discussions held with members of the Commission's legal team, what follows is a supplementary statement containing evidence not dealt with in my main statement or rule 3.4 statement. To a large extent, this evidence either came to light, or the significance thereof became apparent to me, during the course of my involvement in recent disciplinary proceedings against former Transnet officials.
11. This statement should be read together with my main statement and my rule 3.4 statement.

1064 LOCOMOTIVE TENDER

12. The reporting lines during this tender process for both the evaluation stage and the negotiation stage are depicted in **annexure YL39**. I attach this in order to provide further clarity to the Commission.



Financial evaluation of the bids received (stage 6)

13. In addition to the evidence presented in paragraph 30.1 of my main statement, I would like to add that CFET Finance advised SCS that we were thus not able to complete a proper evaluation mainly because some bidders did not quote a fixed price including escalation and hedging costs. CFET Finance proposed to SCS that clarifications be requested from bidders. Mr Jiyane was of the view that clarifications should be avoided unless absolutely necessary because this would extend the time frame of the evaluations, and open a door for bidders to change pricing and create further ambiguity.
14. SCS in turn advised CFET Finance that we should exclude the costs of escalation and hedging from the price evaluation. This is dealt with in our report on page 10 of **annexure YL6** and page 10 of **annexure YL7**, where it records that we agreed to do so on the proviso that this change to the evaluation methodology be brought to the attention of the Steering Committee and Transnet Board for approval prior to the award of the contract. Thus the price evaluation was done based on the price excluding hedging and escalation costs for all bidders. Our report highlighted the importance of these costs, and the significant impact they could have on the final negotiated price.

Approval to split the batches and memos to the board dated 17 January 2014

15. In addition to the evidence presented in my main statement under this heading and with reference to **annexure YL10** and **annexure YL11** thereto, I would like to point out that paragraph 31 of the 465 Diesel memo and paragraph 32 of the 599 Electric memo incorrectly states that the "*CFET recommended that the scheduled and unscheduled maintenance be excluded from the evaluations of the TCO model*".



16. CFET Finance did not make this recommendation. Its report detailed three different scenarios (one including all elements, one excluding unscheduled maintenance and bonus point allocation, and one excluding unscheduled and scheduled maintenance, as well as bonus point allocation). The report requested the Steering Committee to approve one of the TCO scenarios to be used for final evaluation. I refer in this regard to pages 26-28 of **annexure YL6** as well as pages 25-27 of **annexure YL7** to my main statement.

Negotiations

17. In addition to the evidence presented in my main statement under this heading in paragraphs 51-52, I would like to add that during a caucus on 7 February 2014, I raised with Messrs Singh and Jiyane that we had communicated to the bidders that the pricing per unit must remain the same, albeit that the batch sizes had been reduced. I pointed out to them that it was important to retain the price because the mandate required the same price.
18. In paragraph 13 of Mr Callard's fourth supplementary statement, which I have had sight of, Mr Callard makes reference to the video recording of this meeting and puts up his own transcription of the relevant extract (annexure FC-S4-1). I am advised that an official transcription is in the process of being obtained.

Final consolidation

19. In addition to the evidence presented in my main statement under this heading, I would like to present further evidence related to the hurdle rates used for the NPV calculations. This evidence was identified in February 2020 whilst I was preparing to present evidence in the SAICA disciplinary case against Mr Singh.



20. As part of the process of obtaining inputs for the memo (**annexure YL16** to my main statement) for Mr Singh, Mr Singh requested that I contact Mr Callard in order to obtain the updated NPV number, as Mr Callard had performed the original calculations.
21. As instructed, I contacted Mr Callard on 21 March 2014. Mr Callard responded on 23 March 2014, essentially indicating that if the hurdle rate for the original NPV calculation that was presented to the Board of 18.56 % was used, the NPV would become negative.
22. Shortly thereafter, Mr Singh told me that the hurdle rate had changed from about 18% to about 15% and that the NPV would become positive if the hurdle rate is adjusted to the latest changed rate.
23. On 25 March 2014, I sent an email to Mr Gama, copying in Mr Callard. In that email, I indicated that *"the Transnet hurdle rate changed very recently from about 18% to about 15% (it changed last week, I think)"*. A copy of the email is attached as **annexure YL40**.
24. The policy owner for the Transnet hurdle rates policy ("WACC policy") was the GM: Group Financial Planning, who reported to the Group CFO. The policy sponsor was the Group CFO, who was at that stage, Mr Singh.
25. I was not involved in developing or utilizing the WACC policy at that time, and accordingly did not know about any change or pending change to the WACC policy or hurdle rates.
26. The WACC policy was signed off by Mr Singh on 20 May 2014 (attached as **annexure YL41**), effective from 31 March 2014.



27. In about January or February 2020, I found out that at the time (March 2014) when Mr Singh told me that the hurdle rate had changed, such change had not yet been approved by Transnet EXCO or embodied in a policy change.
28. It is possible that Mr Singh deliberately influenced for the hurdle rate to be changed from the applicable 18.56% to a lower rate of 15.2 % in order to ensure that the NPV remains positive.

MNS report

29. MNS issued a report in 2018 about the 1064 locomotive transaction. The MNS report incorrectly states that I should be held responsible for allowing the contract to be signed for the locomotives without obtaining the requisite approval for the increase in the ETC first. The MNS report also incorrectly states that I should be held responsible for the increase in price due to batch pricing which was against the draft mandate provided.
30. Paragraphs 9, 10, 13, 30, 35 and 36 of my main statement and paragraph 17 above clearly establish why the MNS report is incorrect in relation to the conclusions made therein about me.

100 LOCOMOTIVE TENDER

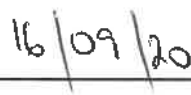
31. In addition to the evidence provided on this topic in my rule 3.4 statement, I would like to add this for clarity.
32. The approved business case memorandum (**annexure YL23** to my rule 3.4 statement) used the Yen rate from which to base the ETC, even though the procurement event was being confined to a Chinese company. I do not know why this was done as I was not involved in that process.



33. The Rand-Yen rate used in the business case was a 'given'. It was more correct to work with the 'given' Rand-Yen rate than to attempt to make further assumptions to convert the Rand-Yen rate to a Rand-Dollar rate, as this would expose the calculation to unnecessary complications and risk of miscalculation.



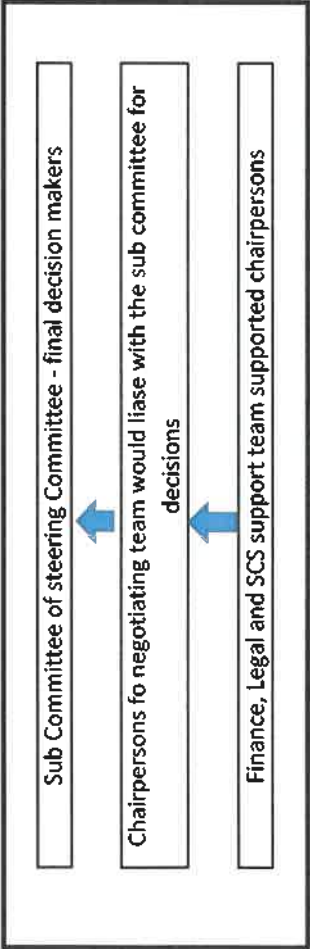
Yousuf Ismail Laher



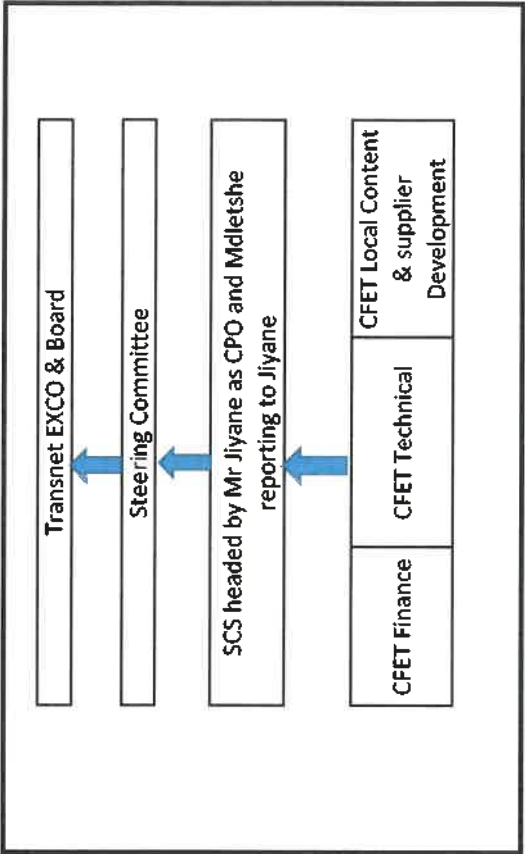
Date

Annexure YL39

Reporting lines during negotiations



Reporting lines during Evaluations



Annexure YL40

From: Yousuf Laher Transnet Freight Rail JHB <Yousuf.Laher@transnet.net>
Sent: Tuesday, 25 March 2014 09:51
To: Siyabonga Gama Transnet Freight Rail JHB
Cc: Francis Callard Transnet Freight Rail JHB
Subject: RE: Locomotive Scenarios With EBITDA - Confidential

Hi Siya, in a nutshell the NPV became negative because the assumptions have changed since i.e. the price per loco etc.

Further to Francis's mail below, if the hurdle rate is adjusted to the latest Transnet issued hurdle rate then the NPV will become positive again. Francis will rerun the numbers based on the latest hurdle rate.

The Transnet hurdle rate changed very recently from about 18% to about 15% (it changed last week I think).

Best Regards

Yousuf Laher CA (SA)
 Transnet Freight Rail

From: Francis Callard Transnet Freight Rail JHB
Sent: 25 March 2014 09:34 AM
To: Siyabonga Gama Transnet Freight Rail JHB; Yousuf Laher Transnet Freight Rail JHB
Subject: RE: Locomotive Scenarios With EBITDA - Confidential

Hi Siya

The main reason for the change is that in the earlier EBITDA mail I used the following prices as given at the time.

- Diesel Loco Price R33m; Electric Loco Price R42m

The NPV calculations were based on the later actual contract prices and cash flow. Contract prices used were

- Diesel Loco Price R39 517 630 and Electric Loco Price R52 039 276

These are the weighted average of the two electric and two diesel suppliers.

I will have the EBITDA rerun using the contract prices.

Hope this helps.

Francis

From: Siyabonga Gama Transnet Freight Rail JHB
Sent: 24 March 2014 06:53 PM
To: Yousuf Laher Transnet Freight Rail JHB
Cc: Francis Callard Transnet Freight Rail JHB
Subject: FW: Locomotive Scenarios With EBITDA - Confidential

Hi Yousuf,

How does this positive outcome from Francis correlate with your negative NPV...?

sg

From: Francis Callard Transnet Freight Rail JHB

Sent: 13 March 2014 12:46 PM

To: Anoj Singh Corporate JHB; Siyabonga Gama Transnet Freight Rail JHB; Nomfuyo Galeni Transnet Freight Rail JHB

Cc: Mohammed Mahomed Transnet Corporate JHB; Yusuf Mahomed Transnet Corporate JHB; Thabo Lebelo Transnet Corporate JHB; Rita Roper Transnet Freight Rail JHB; Natasia McMahon Transnet Freight Rail JHB; Johan Bouwer Transnet Freight Rail JHB; Pragasen Pillay Transnet Freight Rail JHB

Subject: RE: Locomotive Scenarios With EBITDA - Confidential

Dear All

Please see the implications of the various locomotive scenarios

The critical assumptions are:

- Diesel Loco Price R33m; Electric Loco Price R42m
- Deposit of R3.847bn
- Economic Parameters – per latest from Transnet R/\$ 10.89 for 14/15
- Benefit of locomotives is based on “in production”. Sequence is Delivery > Commissioning > Production.
- Different commissioning times are incorporated in calculations.
- Payment is based on successful commissioning.
- Locomotive benefit is based on 100 000 tons per loco per annum. This equates to the 7 500 MGTK per loco per the business case.
- Original business case had 53% of locomotives allocated to expansionary volumes. In this model **50% of new locomotives allocated to Expansionary volumes**. This brings the “Current Corporate Plan” + “Expansionary volumes” to generally equal the original MDS with its peak of 175mt .
- Savings on MOP and GO and programs for retired locomotives have been included in EBITDA benefit.
- Benefit of reliability of new locomotives has not been modelled but is qualitatively significant.
- The 1064 only take TFR up to ~ 175 mTons. Locomotive requirements beyond ~175 mTons have not been incorporated.

48 Locos per month = ~ 600 per year

Fin Year	13/14	14/15	15/16	16/17	17/18	18/19
Rand Mill	3 847	-	6 790	21 848	18 369	1
Locos in Production	-	-	132	468	449	
Original Production	-	-	44	183	180	
Cum Exp Locos	-	-	44	187	321	
MTons Benefit	-	-	4,4	18,7	32,1	2
Bus Plan 2014/15		97,7	111,4	131,1	147,3	11
Total Tons	-	97,7	115,8	149,8	179,4	18
Rand Mill Benefit	-	-	1 171	4 947	9 347	7
Mtce Savings Rm	-	160	236	460	709	
EBITDA Rm		18 611	23 748	32 604	40 939	44
Bus Plan 14/15 EBITDA		18 611	22 500	27 449	31 970	37
Increase EBITDA Rm	-	-	1 248	5 155	8 969	7

40 Locos per month = 480 per year

Fin Year	13/14	14/15	15/16	16/17	17/18	18/19
Rand Mill	3 847	-	6 709	19 560	18 274	3
Locos in Production	-	-	132	417	431	
Original Production	-	-	44	183	180	
Cum Exp Locos	-	-	44	161	287	
MTons Benefit	-	-	4,4	16,1	28,7	2
Bus Plan 2014/15		97,7	111,4	131,1	147,3	11
Total Tons	-	97,7	115,8	147,2	176,0	18
Rand Mill Benefit	-	-	2 343	8 542	16 685	15
Mtce Savings Rm	-	160	236	460	709	
EBITDA Rm		18 611	23 748	31 966	40 073	44
Bus Plan 14/15 EBITDA		18 611	22 500	27 449	31 970	37
Increase EBITDA Rm	-	-	1 248	4 517	8 103	7

28 locos pm ~ 300 per year

Fin Year	13/14	14/15	15/16	16/17	17/18	18/19
Rand Mill	3 847	-	5 865	15 433	14 338	11
Locos in Production	-	-	119	319	330	
Original Production	-	-	44	183	180	
Cum Exp Locos	-	-	38	106	181	
MTons Benefit	-	-	3,8	10,6	18,1	
Bus Plan 2014/15		97,7	111,4	131,1	147,3	1
Total Tons	-	97,7	115,2	141,7	165,4	18
Rand Mill Benefit	-	-	1 997	5 597	10 512	14
Mtce Savings Rm	-	35	140	403	669	
EBITDA Rm		18 611	23 511	30 560	37 332	43
Bus Plan 14/15 EBITDA		18 611	22 500	27 449	31 970	37
Increase EBITDA Rm	-	-	1 011	3 111	5 362	6

The decreasing benefit as the procurement program is extended has only a gradual taper

The excel file presents the same summary info in readable format.

The full excel files are available – but will require talking through.

Please call if further detail is required.

Regards

Francis
083 283 1593

From: Anoj Singh Corporate JHB
Sent: 12 March 2014 10:18 AM
To: Thabo Lebelo Transnet Corporate JHB; Francis Callard Transnet Freight Rail JHB
Cc: Mohammed Mahomed Transnet Corporate JHB; Yusuf Mahomed Transnet Corporate JHB
Subject: Re: Locomotive Scenarios - Confidential

Status guys.

A

Sent from Samsung Mobile

----- Original message -----

From: Thabo Lebelo Transnet Corporate JHB <Thabo.Lebelo@transnet.net>
Date: 11/03/2014 16:32 (GMT+02:00)
To: Francis Callard Transnet Freight Rail JHB <Francis.Callard@transnet.net>
Cc: Anoj Singh Corporate JHB <Anoj.Singh@transnet.net>, Mohammed Mahomed Transnet Corporate JHB <Mohammed.Mahomed@transnet.net>, Yusuf Mahomed Transnet Corporate JHB <Yusuf.Mahomed@transnet.net>
Subject: RE: Locomotive Scenarios - Confidential

Hi Francis

Understood. Many thanks. Will receive that from you tomorrow to run the impact on the 2014/15 Corporate Plan

Regards
 Thabo

From: Francis Callard Transnet Freight Rail JHB
Sent: 11 March 2014 04:31 PM
To: Thabo Lebelo Transnet Corporate JHB
Cc: Anoj Singh Corporate JHB; Mohammed Mahomed Transnet Corporate JHB; Yusuf Mahomed Transnet Corporate JHB
Subject: RE: Locomotive Scenarios - Confidential

Hi Thabo

That is not in the model .It is coming up tomorrow. Had to get that stage first as to the productive locos. From the productive locos get to the tons and revenue and cost impact.
 Best
 Francis

From: Thabo Lebelo Transnet Corporate JHB
Sent: 11 March 2014 01:31 PM
To: Francis Callard Transnet Freight Rail JHB
Cc: Anoj Singh Corporate JHB; Mohammed Mahomed Transnet Corporate JHB; Yusuf Mahomed Transnet Corporate JHB
Subject: RE: Locomotive Scenarios - Confidential

Hi Francis

Thanks for the locomotive delivery schedule scenarios and related capital expenditure. You state in the email below that there is also impact on EBITDA for each of the scenario. I can't find it in the model. Please send the EBITDA impact for each of the scenarios including the corporate plan scenario as a base for delta calculations to quantify the impact of the corporate plan.

Regards
Thabo

From: Anoj Singh Corporate JHB
Sent: 11 March 2014 12:43 PM
To: Thabo Lebelo Transnet Corporate JHB; Mohammed Mahomed Transnet Corporate JHB; Yusuf Mahomed Transnet Corporate JHB
Subject: Fwd: Locomotive Scenarios - Confidential

Sent from Samsung Mobile

----- Original message -----

From: Francis Callard Transnet Freight Rail JHB <Francis.Callard@transnet.net>
Date: 11/03/2014 12:15 (GMT+02:00)
To: Siyabonga Gama Transnet Freight Rail JHB <Gama.Siyabonga@transnet.net>, Anoj Singh Corporate JHB <Anoj.Singh@transnet.net>, Nomfuyo Galeni Transnet Freight Rail JHB <Nomfuyo.Galeni@transnet.net>
Subject: Locomotive Scenarios - Confidential

Hi Anoj and Siya

The locomotive scenarios for the various production rates based on the latest Transnet Economic forecasts and the estimated prices received from Yusef

The production line is the capacity for the year based on the production rates. If a locomotive is **commissioned** in February it is deemed to have 1/12 productive capacity for the year i.e. the last month of March.

The effect on volume calc and EBITDA is following.

48 Locos per month = ~ 600 per year

Diesel

R33m

Electric

R42m

Year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21
Total	3 847	-	6 790	21 848	18 369	1 079	-	-
Production	-	-	132	468	449	15	-	-

40 Locos per month = 480 per year

Year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21
Total	3 847	-	6 709	19 550	18 274	3 782	13	-
Production	-	-	132	417	431	84	-	-

28 locos pm ~ 300 per year

Year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21
Total	3 847	-	5 865	15 433	14 338	11 666	1 774	11
Production	-	-	119	319	330	266	30	-

Original 180 locos per year

Year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21
Total	3 848	-	2 609	9 089	7 843	8 188	8 568	7 720
Production	-	-	44	183	180	180	180	157

The model is attached.

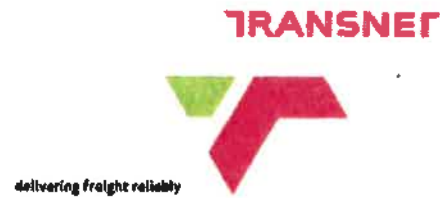
Regards

Francis



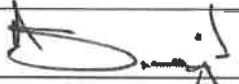
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Annexure YL41



Transnet Group

WEIGHTED AVERAGE COST OF CAPITAL AND HURDLE RATES POLICY “WACC POLICY”

Policy Reference Number	<i>GFP003</i>
Version Number	<i>4</i>
Effective Date	<i>31 March 2014</i>
Review Date	<i>31 March 2016</i>
Policy Owner	<i>GM: Group Financial Planning</i>
Signature	
Policy Sponsor	<i>Group Chief Financial Officer</i>
Signature	
Date Approved	<i>24/05/14</i>



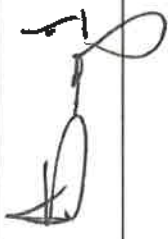
Group Financial Planning

Stakeholders

Name		Designation	Approval Signature	Date	E-Mail	Contact Number
Compulsory Stakeholder Involvement						
Subject Experts	Matter	Thandwa Siyaya		14/05/2014	Thandwa.siyaya@transnet.net	011 308 2383
Subject Experts	Matter	Patrick Khethani		14/05/2014	Patrick.khethani@transnet.net	011 308 1358
Subject Experts	Matter	Thabo Lebelo		15/05/2014	Thabo.lebelo@transnet.net	011 308 2219
Other Stakeholder Involvement						
"Other"(Please specify)		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Recommended by Policy Owner and Policy Sponsor:

I hereby acknowledge that a search has been conducted and that this WACC Policy is not duplicated or in conflict with any other Transnet Policies.

Name	Designation	Approval Signature	Date	E-Mail	Contact Number
Policy Owner	Thabo Lebelo	Group Planning General Manager	 14/05/2014	Thabo.lebelo@transnet.net	(011) 308 2219
Policy Sponsor	Anoj Singh	Group Financial Chief Officer	 23/05/14	Anoj.singh@transnet.net	(011) 308 2253

Final Approval

Name of Committee: Group Executive Committee

Date Approved:



Summary of Version Control

Version Number	Effective Date	Summary of Changes
V4	31 March 2014	Updated the WACC and relevant inputs. Nominal WACC determined from real inputs as opposed to nominal inputs (i.e. inflation only added once to arrive at Nominal WACC).
		Hurdle rates corrected for double impacting of inflation.
		Exempted mandatory projects from compliance with the WACC Policy.
		Determination and application of pre-tax WACC for accounting purposes revised and appropriately illustrated.
		Refined the theory and principles of WACC discussion in the document.
		Formatting and alignment to recent standard policy template.



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1. INTRODUCTION, BACKGROUND AND PROBLEM STATEMENT

The costs of capital are opportunity costs: the returns investors and lenders require from providing capital to a company rather than in alternative investments of a similar risk.

The Cost Of Capital or Weighted Average Cost of Capital (WACC) is made up of the weighted average of the after tax cost of debt (K_d) and the cost of equity (K_e) (i.e. is the price a company pays for the funds it uses to finance its investments). Most companies raise several types or components of capital including but not limited to ordinary shares, various forms of debt and in some cases hybrid capital such as convertible loan securities.

Transnet, like other companies, adjusts its overall and Operating Divisions (ODs) WACC for use as a discount or hurdle rate for evaluating capital investments. This adjusted rate is known as the Hurdle Rate (and includes a premium to the WACC).

This policy provides an estimate for the WACC and hurdle rates for Transnet and its ODs. The calculation is based on methodologies which conforms to best theoretical and industry practices by large companies in South Africa and internationally, and which are typically used by competition and policy authorities and regulators in evaluating a company's cost of capital and profitability¹.

The policy discusses how to apply these WACC and hurdle rates. The Appendices provide further details on the theory of WACC, the manner in which WACC is computed for Transnet and its ODs (including the beta), the derivation of hurdle rates and the use of WACC for accounting purposes (e.g. impairment calculations, revaluations and discounting of long-term liability provisions).

¹ Examples of surveys of how large and respected companies estimate their cost of capital in different countries include: Graham, J.R., Harvey, C.R., (2001). The theory and practice of corporate finance: evidence from the field. *Journal of Financial Economics*, 60 187-243; Bruner, R.B., Eades, K.M., Harris, R.S., and Higgins, R.C., (1998). Best Practices in Estimating the Cost of Capital: Survey and Synthesis. *Financial Practice and Education*, Spring/Summer; and Truong, G., Partington, G., and Peat, M., (2005). Cost of Capital Estimation and Capital Budgeting Practice in Australia, Working Paper, University of Sydney.



2. PURPOSE OF THE POLICY

- To discuss the principles and the manner in which Transnet WACC and hurdle rates have been determined.
- To outline the application as well as the relationship between WACC and hurdle rates.
- To establish a discount rate for capital investment evaluations and IFRS discount rates for Transnet.

3. POLICY SCOPE AND APPLICABILITY

The Policy applies to the Transnet capital investment community and financial accounting and reporting community. This will include, amongst others, employees involved in financial reporting, capital projects, programmes and portfolios. The accountability for the use of this policy ultimately lies with OD Capital Investment Committees, Group Capital Investment Committee and Group Executive Committee.

The WACC policy will be reviewed in March every year for the purposes of the annual audit, and any revisions, if applicable, will be tabled for consideration at the Transnet Capital Investment Committee by no later than June each year.

Furthermore this WACC policy could be reviewed during the course of any financial year to which it relates should there be material changes in the WACC inputs from the time that the WACC was computed.

The following are amongst other factors to which the WACC would be sensitive to, these factors could lead to a review of the WACC during the course of a financial year if there were material changes:

- Material changes in the tax rates.
- Material changes in the RSA inflation rate.
- Material changes in RSA interest rates.
- RSA downgrading by any of the rating agencies (e.g. Standard and Poor or Fitch) will affect all State Owned Entities. The downgrading of the RSA credit rating will have a negative effect of pushing the WACC upwards.
- Material changes in the International and/or South African economic environment, e.g. Financial or Economic crisis.



4. DEFINITIONS

For ease of reference; words, expressions and abbreviations some of which are used or relevant to this WACC policy are defined below:

- **CAPIC:** Capital Investment Committee
- **CAPM:** Capital Asset Pricing Model is a model used to estimate a company's cost of equity.
- **Discounted cash flow (DCF):** Future cash flows multiplied by discount rates/factors to obtain present value.
- **Discount rate:** Is the rate used to calculate the present value of future cash flows.
- **MRP:** Market Risk Premium (or MRP) is the excess return expected by investors on an equity market portfolio relative to risk-free assets. This premium is also known as the country risk premium (CRP).
- **Equity risk premium:** Means the risk premium specific to the shares (i.e. Equity) of the company in question. Computed as MRP multiplied by the company's specific equity beta.
- **Hurdle rate:** Minimum acceptable rate of return on a project and used as the discount rate when calculating net present values. To determine a hurdle rate a premium is added to the WACC, In practice the reasons for this includes amongst others – retaining value for the company shareholder (s), access capital, investment risks, recognition that the actual cost of capital is not known with certainty or simply because management believes that cash flows are generally optimistic mainly due to a lack of predictability on all relevant risks.
- **Internal rate of return (IRR):** Is the rate of return that the investment is expected to achieve throughout its investment life. This IRR equates the present value of the expected future cash flows or receipts to the initial capital investment cash outlay (i.e. a discount rate at which the capital investment cash flows will achieve an NPV of zero).



- **Modified internal rate of return (MIRR):** An IRR consistent with the NPV assumption of cash flows being reinvested at the discounting rate used to determine the NPV. Ensures that IRR and NPV results do not give conflicting recommendations where two or more capital investment options are evaluated. Computed based on present value cash flows.
- **Net present value (NPV):** A capital investment's net contribution to wealth – present value of net cash flows minus initial investment.
- **Real interest rate:** Interest rate expressed in terms of real goods; i.e. nominal interest rate adjusted for inflation.
- **Gearing:** A financial ratio that compares owner's equity to borrowed funds. It is a measure of financial leverage, demonstrating a degree to which a company's business is funded by owner's funds versus debt providers. This ratio is computed as $(Total\ Interest\ Bearing\ Borrowings) / (Total\ Interest\ Bearing\ Borrowings + Total\ Equity)$. It is important to note that the components of this ratio may differ from company to company, however the principles remain the same.
- **Debt to equity ratio:** A measure of a company's financial leverage, computed by *dividing its Interest Bearing Borrowings by Total Equity*. It indicates the proportion of equity and debt the company is using to finance its assets. It is important to note that the components of this ratio may differ from company to company but the principles remain the same.
- **Beta:** Also known as "beta coefficient", A measure of the volatility, or systematic risk (i.e. the risk that the share's possible return is exposed to risks that cannot be avoided by diversification e.g. economic trends, political or social factors affecting all companies simultaneously) , of a security or a portfolio in comparison to the market as whole. Beta is used in CAPM. It is important to note that beta is computed based on historic returns which may or may not have predictive value for the future.
- **Asset beta:** Also known as "Unlevered Beta" , Asset beta is a model of what a company's share volatility would be if it had no debt relative to the market. Un-levering the beta removes any beneficial effects gained by adding debt to the firm's capital structure. Comparing companies' unlevered



betas gives the investor a better idea of how much risk they will be taking on when purchasing a firm's stock.

- **Equity beta:** Provides a measure of how much systematic risk a firm's equity has when compared to the market.
- **Risk free rate (Rf):** In theory, the risk free rate is the minimum return an investor expects for any investment because he or she will not accept additional risk unless the potential rate of return is greater than the risk free rate. In practice, however, the risk free rate does not exist because even the safest investment carry some small amount of risk. Thus an interest rate on government bonds or bills is often used as a risk free rate benchmark.
- **Cost of equity (Ke):** A firm's cost of equity represents the compensation that the shareholders (i.e. Equity Investors) demands in exchange for owning the asset and bearing the risk of ownership in a company. The CAPM is one of the mostly used methods to determine the cost of equity.
- **Cost of debt (Kd):** The effective rate that a company pays on its current interest bearing debt. It gives an idea as to the cost that the company incurs as a result of using debt financing.
- **Geometric mean:** The average of a set of products, the calculation of which is commonly used to determine the performance of an investment or portfolio (because of its accuracy in this regard). The geometric mean is equivalent to a compounded growth rate method and is usually lower than the arithmetic mean.
- **Arithmetic mean:** A mathematical representation of the typical value of a series of numbers, computed as the sum of all numbers in the series divided by the count of all numbers in the series.
- **RSA:** Republic Of South Africa.
- **SAGB:** South African Government Bond.
- **TFR:** Transnet Freight Rail.
- **TNPA:** Transnet National Ports Authority.
- **TPT:** Transnet Port Terminals.
- **TE:** Transnet Engineering.
- **TPL:** Transnet Pipelines.



5. POLICY STATEMENT

1. Transnet's WACC

The basis for calculating Transnet and its ODs WACC is as follows:

- Cost Of Equity (K_e) is calculated using CAPM.
 - Beta values are calculated with reference to peer listed companies using a "monthly" frequency over a period of five years (i.e. five year monthly average).
 - A MRP of 6.30% is computed as the geometric mean of the RSA country risk premium using a monthly frequency over five years (i.e. a five year monthly average).
 - The SAGB 10.5% 12/21/26 R186 five year monthly average of 8.46% compounded annually is used as a proxy for the Risk Free Rate (R_f).
- Cost Of Debt (K_d) is calculated by Group Treasury considering a corporate plan seven year horizon.
- A Transnet target gearing of 45% is utilised for Transnet and its ODs.

The revised post-tax WACC for Transnet, TFR, Ports, TPL and TE is shown below:

Variable	Transnet SOC Ltd	Freight Rail	Engineering	Ports (TNPA and TPT)	Pipelines
Nominal Post Tax WACC	12.51%	13.08%	11.39%	12.22%	11.31%

More details on the theory of WACC, assumptions used; the choice of betas and how the WACC is calculated is set out in **Appendix 1** and **Appendix 4**.

2. USES OF WACC

The WACC can be used for (but not limited to):

- Investment Evaluations: Subject to certain adjustments to obtain the hurdle rate for the evaluation of:



- **Greenfield Investments** : These are completely new projects usually associated with higher related business risks. These will be projects which Transnet has no experience in rolling out.
- **Brownfield Investments**: These are projects relating to the expansion of existing operations and replacement of existing capacity that Transnet has experience in rolling out, with lower business risks than Greenfield Projects.
- Other uses such as for accounting computations including IFRS impairment calculations, revaluations, and discounting of long-term liability provisions.

2.1 Use of Hurdle rate for evaluating investments

Most companies adjust their overall or divisional WACC for use as a discount or hurdle rate for evaluating capital investments. The reasons for adding a hurdle rate premium to the WACC and the derivation thereof is discussed in **Appendix 3** of this WACC policy.

The tables below set out the current approved hurdle rates.

Greenfields Investments

These projects have significantly more risk and thus a premium of 3.0% in addition to the post-tax real WACC is recommended:

Variable	Transnet SOC Ltd	TFR	TE	Ports (TNPA and TPT)	TPL
Real Post Tax WACC	6.68%	7.23%	5.63%	6.41%	5.55%
Greenfields Risk Premium	3.00%	3.00%	3.00%	3.00%	3.00%
Real Greenfields Hurdle Rate	9.68%	10.23%	8.63%	9.41%	8.55%
Average Inflation	5.46%	5.46%	5.46%	5.46%	5.46%
Nominal Greenfields Hurdle Rate	15.67%	16.24%	14.56%	15.38%	14.47%



Brownfield Investments

A premium of 2.5% in addition to the post-tax real WACC rates is recommended. The table below illustrates:

Variable	Transnet SOC Ltd	TFR	TE	Ports (TNPA and TPT)	TPL
Real Post Tax WACC	6.68%	7.23%	5.63%	6.41%	5.55%
Brownfields Risk Premium	2.50%	2.50%	2.50%	2.50%	2.50%
Real Brownfields Hurdle Rate	9.18%	9.73%	8.13%	8.91%	8.05%
Average Inflation	5.46%	5.46%	5.46%	5.46%	5.46%
Nominal Brownfields Hurdle Rate	15.14%	15.72%	14.03%	14.85%	13.95%

Specialist units, for non-property related acquisitions, can use the Transnet Group Rate.

It is desirable that the internal rate of return (IRR)/Modified Internal Rate Of Return (MIRR) on capital projects should be achieved.

Mandatory projects are exempted from the requirement to achieve hurdle rates. Mandatory projects are made up of the following categories:

- Projects already in execution;
- Safety related projects;
- Legal and shareholder directive compliance related projects; and
- Commercial pricing.

2.2 Use of the WACC for accounting purposes

International Financial Reporting Standards ("IFRS") requires the WACC to be used to determine (per division) whether assets within a division should be impaired. Other accounting applications include utilising the WACC for revaluations and discounting of long-term liability provisions.

For the purposes of accounting computations, the relevant post-tax WACC rates to be used are set out below.

Variable	Transnet SOC Ltd	Freight Rail	Engineering	Ports (TNPA and TPT)	Pipelines
Nominal Post Tax WACC	12.51%	13.08%	11.39%	12.22%	11.31%



A More detailed discussion on the use of the WACC for accounting purposes is provided in **Appendix 4**.

6. REGULATORY REQUIREMENTS

Transnet recognises the importance of complying with all applicable regulatory requirements as reflected in the Transnet regulatory universe. Specific reference is made to:

- The Legal Succession to the South African Transport Services Act;
- The Public Finance Management Act 1999 (Act No. 1 OF 1999) as amended;
- The Companies Act 2008 (Act No. 71 of 2008);
- The King Code on Corporate Governance II; (King III effective date 01/03/2010);
- Treasury Regulations;
- All regulatory requirements that serve to enable Transnet's regulators in performing their duties in respect of Transnet; and
- All regulatory requirements that serve to enable ODs and Corporate Centre functions in realising their strategic, business and financial objectives.

7. FINANCIAL IMPLICATIONS

The policy will be used to evaluate viability of capital investment projects and to perform valuations for impairment testing of asset values and discounting of long term liability provisions, revaluation of assets etc. on an annual basis for financial statement purposes.



8. RELATED INFORMATION AND GUIDELINES

This policy should be read in conjunction with the following supporting guidelines:

Internal Documents:

- Capital Portfolio Selection Policy;
- Capital Portfolio Monitoring, Control and Review Policy;
- Capital Project Evaluation and Approval Policy;
- Investment Financial Evaluation Guidelines;
- Independent Review of Capital Costs Policy; and
- Financial Interim Review and Post Implementation Review Policy

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**9. ROLES AND RESPONSIBILITIES**

The Chief Financial Officers of the ODs including Transnet Capital Projects will be responsible and accountable for the implementation of this WACC policy.

Policy sponsor:

Group Chief Financial Officer

Policy owner:

General Manager: Group Financial Planning

Approved by:

Group Executive Committee

Contact Persons:

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10. EXCLUSIONS

There are no exclusions to this WACC Policy.

11. DISCIPLINARY ACTION

Breaches of this WACC policy will be seen in a very serious light. Employees who do not conform to the policy or principles and standards may be subject to disciplinary action in terms of the applicable Transnet Disciplinary processes and procedures.

12. COMPLIANCE PRINCIPLES

ODs and Corporate Centre functions must adopt the following principles and standards, which are specified by Transnet and approved by the Transnet Executive Committee:

- Governance;
- Resources & Reporting Lines;
- Competency;
- Training;
- Communication & Consultation; and
- Methods & Practices.

These principles and standards are incorporated in the Transnet Compliance Framework.



APPENDIX 1: THEORY OF WACC

Introduction

The cost of capital is the price a company pays for the funds it uses to finance its investments. Most firms raise several types or components of capital such as ordinary shares, various forms of debt and in some cases hybrid capital such as convertible loan securities. The costs of capital are opportunity costs: the returns investors and lenders require from providing capital to a company rather than in alternative investments of a similar risk.

The methodologies for the calculation of the cost of capital are generally accepted by finance managers, academics and competition and regulatory authorities. The cost of capital for a company is calculated as a weighted average of the cost of the different components of capital used to finance a firm: the costs of each type of capital and the capital structure of the firm (i.e. the proportion of each component of capital used to fund the company). For a company with equity and debt capital the weighted average cost of capital (WACC) can be expressed as: $WACC = w_e r_e + w_d r_d$

where:

w_e = the weight used for equity capital (equity divided by the sum of equity and debt)

w_d = the weight used for debt capital (debt divided by the sum of equity and debt)

r_e = the required return by equity capital investors and;

r_d = the required return by debt capital holders after tax.

The conventions and assumptions typically used in industry as "best practice" in the calculation of the WACC are:

- Competitive neutrality: Commercial state-owned enterprises are usually treated as private sector companies in the calculation of the WACC and the assessment of their profitability.
- Market values rather than book values of equity and debt are used wherever possible and relevant.
- The capital structure weights are calculated on market values of equity and debt capital wherever possible and relevant.



Group Financial Planning

- The weights are based on the target capital structure of the firm – the chosen optimal mix of equity and debt that minimises the company's cost of capital.
- The target capital structure remains unchanged over time.
- The capital components are funds that are obtained from investors and/or lenders. They do not include capital from other sources such as creditors or accruals.
- After-tax returns are calculated using the marginal rate of taxation.

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The Capital Structure

The capital structure is the mix of different types of capital used to finance the investments in a company and has an important effect on the cost of capital. Companies choose a capital structure – the target capital structure – that minimises the cost of capital and reflects both the business and financial risks affecting the company and investors' views.

The issue is a complex one of trade-offs between the benefits, costs and risks (e.g. bankruptcy) of operating and financial leverage and their effects on the required returns by investors. There is no theoretically "correct" capital structure, a fact recognised by competition and regulatory authorities.²

Consequently, a division needs to be able to justify its capital structure based on an analysis of its business and financial risks and factors such as the need for financial flexibility and a sound credit rating, the level of interest rates, and transaction costs and fees of issuing different types of capital.

The Real and Nominal WACC

The cost of capital can be calculated on a real or nominal basis. In principle, when evaluating a capital investment, either a real or nominal rate can be used provided there is consistency in the calculation and its application.

For example, if the cost of capital is used as a discount rate for a capital investment appraisal, real cash flows should be discounted at a real cost of capital and nominal cash flows at a nominal cost of capital.

Inflation in the individual WACC variables has been removed using a seven year average CPI as per the 2014/15 Corporate Plan. This has been done to ensure that there is no double impacting of inflation included in each of the individual WACC variables (i.e. in their nominal values).

² For example, a report commissioned by the U.K. Office of Fair Trading states, "There is no consistent academic evidence, or normative model, that predicts unequivocally what an optimal capital structure might be." Source: Oxera, Assessing Profitability in Competition Policy Analysis, Economic Discussion Paper 6, Office of Fair Trading (2003).



Thus inflation is only added once in the computation of the WACC by converting the final real WACC rates to nominal WACC rates. To this end, all the WACC input variables are in real value terms (see **"Calculated WACC for Transnet and its ODs"**).

The Cost Of Equity Capital

The cost of equity is the rate of return investors require from holding equity shares in the company. Most large companies, their financial advisers and competition authorities generally use the CAPM in their assessment of the cost of equity capital.

Although it has its critics, the CAPM is still probably the best asset pricing model for equities despite the use of other models such as the dividend growth model and the Fama-French three-factor model.

The CAPM states that the required return or opportunity cost of equity capital is the return on risk-free securities (R_f), plus the company's systematic risk (measured by its beta or β) multiplied by the market risk premium ($R_m - R_f$): $K_e = R_f + \beta(R_m - R_f)$

where:

R_f = the nominal risk free rate of interest.

β = the share's beta coefficient (Beta), or equity beta.

R_m = the return on the market index.

The CAPM is based on expected returns by investors. Although estimates of the risk-free rate can be obtained from the money or bond market, the equity risk premium and the firm's beta are not observable in the equity market and the "best practice" convention is to use historical data for these elements of the CAPM in order to estimate the required return.



The Risk-Free Rate Of Return

The risk-free rate is the rate of interest required by an investor seeking a “risk free” return, and practically the most appropriate financial instruments as an estimate are the rates of return on a rand denominated Treasury bill or a government bond. These instruments are free of credit risk and include an expected inflation risk premium to protect investors from expected inflation.

The instrument used should match the period of the contract or the time period chosen to assess the profitability of a project or investment. In the case of Transnet where both the infrastructure and many of the operating assets are long-lived, a twenty year government bond is appropriate. A suitable issue is the SAGB 10.5 12/21/26 R186.

The Market Risk Premium

The MRP is the excess return expected by investors on an equity market portfolio relative to risk-free assets. The MRP is not directly observable from market data because the future returns (dividends and capital appreciation) from equities are uncertain. Consequently, analysts typically use historical data as a basis for estimating expected risk premiums.

Generally in calculating the equity cost of capital, the MRP is considered to be constant over time and assumes on average that investors’ expectations are realised. Consequently, the expected risk premium can be estimated from a historical average of the difference between past equity returns and risk-free rates of interest such as treasury bills or long-term government bonds.

In determining a MRP to be used by Transnet, a geometric average of JSE Securities Exchange market returns on Top 40 listed shares and RSA Government bonds for a five year monthly period from 31 March 2009 to 31 March 2014 were obtained from Bloomberg and used to calculate the MRP of 6.30% used in the calculation of Transnet WACC.

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The Beta Coefficient

In the CAPM model the beta coefficient is used as a measure of the systematic or non-diversifiable risk of a company's ordinary shares. The beta indicates how the price of a company's share responds to changes in the market portfolio. The average market risk for all securities, i.e. the market itself, is a beta of one.

Shares with a beta higher than one are more responsive to market forces and are therefore more risky than the market. The higher the risk the higher is the beta and the expected return on the share. The expected return is also affected by a company's gearing and is reflected in the equity beta of the company³.

The asset beta of a company is the unleveraged beta (i.e. a beta assuming that the company has no debt). The relationship between an asset beta and an equity beta can be determined by a number of methods. Two popular methods include:

- **The conventional method:** Here one uses the equation: $\beta_e = \beta_a(1+D/E)$ where D equals the amount of debt capital and E equals the amount of equity capital. This method for de-leveraging and re-leveraging the beta is also referred to as the practitioner's method or simple/conventional method.
- **The Hamada Method:** Here one uses the equation: $\beta_e = \beta_a(1+(1-t)D/E)$ where D equals the amount of debt capital and E equals the amount of equity capital and t represents the relevant country's tax rate.

The choice of methodology is a subject of much debate in the literature. Transnet adopts the Hamada method in the computation of its WACC for 2014/15.

The equity market's view of the expected beta is unobservable so betas are usually calculated from historical data.⁴ There is considerable debate as to the appropriate calculation of the beta in terms of the statistical methodology, the choice of the market portfolio and appropriate adjustments for different uses of the beta.

³ The beta of a company's shares given its capital structure is its equity beta. A firm that has no debt has an unlevered or asset beta.

⁴ An alternative method is conducting a survey of informed opinion.



The statistical methodology involves using ordinary least squares regression to estimate betas⁵. In addition there is much debate regarding the appropriate data frequency (daily, weekly, monthly returns) and the period (one year, three years, five years or more). Many companies rely on published sources for their beta estimates from suppliers of financial information such as Reuters and Bloomberg.

Bloomberg's default method is to use a two year weekly period, while Reuter's website uses a five year monthly period. Some investment analysts and academics also recommend monthly data for an extended period of time.⁶ Competition and regulatory authorities usually conduct their own estimates where data is available.

For example, the U.K. Competition Commission usually uses monthly returns over an extended period sometimes over ten years. Other economists⁷ have criticised the approach and recommend daily data rather than monthly data over shorter periods of time. There is also disagreement over the definition of the relevant market that should be used, for example whether it should be considered as a country's all-share index or a portfolio of domestic and internationally diversified securities.

There are no definitive answers as to the approach that should be adopted but most analysts in South Africa use a domestic market index such as the all-share JSE index for the calculation. For the purposes of this analysis we have used a five-year-monthly-period to estimate our betas.

A further complication is that Transnet is not a listed company. The same problem occurs for companies wishing to estimate divisional costs of capital in their businesses or privately owned companies. In these circumstances "best practice" is to search for the betas of appropriate "comparators" or proxies, preferably "pure play" firms that are solely concentrated in the same product activities and geographical area as the company.

⁵ The beta can be estimated by regressing total returns of a company's shares on total returns of the market. Beta is defined as the covariance of the company's returns divided by the variance of the market returns.

⁶ For example, Bradfield D., Investment Basics XLVI. On estimating the beta coefficient, Investment Analysts Journal – No. 57 2003.

⁷ CRA London, Cost of Capital Estimation in the U.K.: Best Practice in the Context of Competition Analysis and Price Regulation. (2003).



Competition and regulatory authorities also require the comparator or proxy companies to be in reasonably competitive industries with similar business risks, capital intensity and efficiencies.

The Cost Of Debt Capital

The cost of debt finance consists of the risk-free rate of interest plus the debt premium for the company's debt capital. The debt premium reflects the default risk arising from holding the company's debt. It is directly observable where the company has listed debt securities or otherwise by the use of proxy measures.

Where the company, like Transnet, does have listed debt, the risk premium over the relevant government benchmark can be used for certain of the debt instruments within Transnet's portfolio, i.e. the yield-to-maturity (YTM) of the Transnet bond less the YTM of the relevant government bond. For example, Transnet has bonds listed on the Bond Exchange of South Africa (BESA).

If the company has not issued public debt and the yield on its private debt cannot be estimated from its published financial reports, a proxy is to take its rating issued by authoritative rating agencies such as Standard and Poors or Moodys. The debt premium can then be estimated from the yield spread for that rating (or a similar rating) above the relevant government bond.

Where the company is using short-term debt in its mix of capital, estimates of future short-term interest rates as the debt is rolled over can be obtained from calculating the relevant forward rates. Forward rates can be derived from the government securities yield curve plus an estimate of the debt premium at those future dates or derived directly from the yield curve of securities with the same credit rating.

The post-tax cost of debt capital is normally calculated using the marginal rate of company taxation. For the purposes of computing the Transnet WACC, a simple average of the 2014/15 corporate plan seven year forecast interest rates from Transnet Group Treasury have been used.

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APPENDIX 2: ESTIMATE OF WACC FOR TRANSNET AND ITS OD'S

This section outlines an estimate of the nominal post-tax WACC for Transnet and its divisions based on market data^B at 31 March 2014. The assumptions are:

Assumption 1: Capital structure

We have used a debt to total capital ratio (gearing ratio) of 45%. There is a mandate from the Transnet Board of Directors that the company should maintain a maximum gearing ratio of 50% on a net asset value (as opposed to market value). This gearing was established to prevent a credit downgrade by Transnet's credit-rating agencies.

Theoretically, the equity value of the company for gearing calculation purposes should be based on market value and not book values. However all peer companies used to calculate Transnet's OD beta's, had their beta's de-leveraged based on book values and not market values given amongst other reasons that Transnet is not a listed company and thus does not have a market capitalisation value for its equity, furthermore the target gearing of 45% as discussed above is based on book values rather than market values.

The use of book values ensures that the betas are unlevered and re-levered on a consistent basis. A further assumption is that the capital structure (gearing 45%) applies to all Transnet ODs and is assumed to remain unchanged over the foreseeable future.

Assumption 2: Risk free rate and pre-tax interest rate

The risk-free rate for use in the CAPM cost of equity calculation is the SAGB 10.5 12/21/26 R186 with the five year monthly average Yield To Maturity (YTM) of 8.46% (Real: 2.85%) compounded annually from 31 March 2009 to 31 March 2014. The pre-tax interest rate over the next seven years was estimated by Transnet Group Treasury and equates to an average effective rate of 9.86% (Real:4.18%) over the seven years. This represents a spread ("debt risk premium") of approximately 133 basis points (bps) over the SAGB 10.5 12/21/26 R186 in real terms.

^B Bloomberg Finance LP provided the source for market capitalisation, total debt, betas and bond prices



Assumption 3: Market risk premium

In determining an MRP to be used by Transnet, a geometric mean of JSE Securities Exchange market returns on Top 40 listed shares and RSA Government bonds for a five year monthly period from 31 March 2009 to 31 March 2014 was obtained from Bloomberg and used to calculate the MRP of 6.30% used in the calculation of Transnet WACC. 1. National Energy Regulator ("NERSA") awarded an MRP of 7.03% in their most recent

tariff decision.⁹

2. The Ports Regulator ("PR") in the most recent decision awarded an MRP of 6.3%.¹⁰ **Assumption 4: Betas**

The equity beta for each OD, as set out in **Appendix 2A** was calculated from the asset betas of proxy companies adjusted for the Transnet target gearing of 45%. The equity betas used for each OD are based on the following assumptions:

- **Freight Rail:** The beta for TFR was calculated using a simple average of six North American freight railroad companies' betas. The choice of peers and indices is consistent with the 2012 WACC Policy and has not been re-evaluated.
- **Ports:** A simple average of 21 international ports was used. The 21 port companies were chosen by performing the following:
 - 1) Undertaking an international search using Bloomberg Finance LP of all listed companies with the CGIS sub-sector code "Marine Ports & Services"¹¹ on 29 February 2012 (resulting in identifying 141 listed companies)¹².

⁹ National Energy Regulator Draft Tariff Determination for the year 2014/15

¹⁰ Ports Regulator of South Africa, Record of Decision Tariff Application by the National Ports Authority for the Tariff Year 2013/2014

¹¹ The Global Industry Classification Standard (GICS) is an industry taxonomy developed by Morgan Stanley Capital International (MSCI), and Standard & Poor's (S&P) for use by the global financial community. The GICS structure consists of 10 sectors, 24 industry groups, 68 industries and 154 sub-industries into which S&P has categorized all major public companies. The system is similar to ICB (Industry Classification Benchmark), a classification structure maintained by Dow Jones Indexes and FTSE Group.

¹² The resultant Beta is 0.73 (monthly 5 yearly). During the NPA Tariff application 2012/13, Frontier Economics calculated the asset beta for the Port Sector to be 0.83 (weekly 2 year Blume Beta not utilizing 5 year monthly as utilised in this policy). The latest record of decision (Ports Regulator of South Africa, Record of Decision Tariff Application by the National Ports Authority for the Tariff Year 2012/2013) indicated that an asset beta of 0.5 should be used. In view of the misalignment between what the Regulator deems an appropriate beta and the tariff application, The Regulator has indicated in the decision that:



- 2) From the Identified companies we excluded the following companies, amongst others:
- a. Companies that are regarded as illiquid. This was calculated by taking the average (bid-ask prices over the duration of 5 years or less). In order to be included in the sample, the ratio of bid to ask price needed to exceed 98.5%.¹³
 - b. Companies that are exclusively port operators and/or do not own (or capitalise) the port land infrastructure (in particular berths, jetties and/or approaches).
 - c. Companies in unrelated industries (e.g. container leasing companies, ship builders).
 - d. Peers that do not have available financial information in order to calculate an asset beta.
 - e. Outliers (only one company was identified).
- **Pipelines:** The beta for TPL was calculated using a simple average of thirteen peer companies used by NERSA in its TPL tariff determinations.
 - **Engineering:** Transnet determined the simple average of a sample of three construction and engineering companies listed on the JSE Securities Exchange market.

Assumption 5: Weighting of betas

"...because of the large divergence between the Beta proposed by NPA and that used by the Regulator, as well as the sensitivity of the resultant returns to changes in Beta, believes it critical that the Tariff Methodology process to be commenced after publication of this ROD resolve this matter with all stakeholders prior to the next tariff application."

¹³ Formula used is bid price/ask price.



The Transnet consolidated beta is determined by taking a weighted average beta of the four ODs. The contribution of each OD to the overall Transnet beta is determined by their relative share of assets (average book values over a period of seven years as per the 2013/14 Corporate Plan excluding revaluations); the resulting proportional percentages are set-out below.

Operating Division	Percentage
TFR	48.26
TE	2.55
Ports	37.43
TPL	11.76

Calculated WACC for Transnet and its ODs

The Transnet consolidated WACC is likely to be similar to the average cost of capital for JSE listed companies since Transnet's services are integrated with the entire economy. A WACC of Transnet's top twenty customers have been used as a benchmark and there is evidence that Transnet's WACC rate is not out of kilter with that of its top twenty customers.

For those customers with a WACC rate significantly below that of Transnet like Ford, Toyota, Chevron, Mitsui, Total and Royal Dutch Shell, this is mainly attributable to low cost of debt and/or high proportion of gearing relative to Transnet.

It is usually prudent to consider a range of 1-2% around the calculated WACC as being a reasonable indication of the practical difficulties in estimation. Also of noting in this regard is that, when comparators are used, there is always the risk that they are not sufficiently close in their nature and characteristics to be valid.

In addition, it is important to note that the CAPM is a forward-looking model of expected returns and historical returns may not reflect market expectations nor are expectations necessarily realised.



The following table outlines the WACC for Transnet and its ODs:

Variable	Transnet SOC Ltd	Freight Rail	Engineering	Ports (TNPA and TPT)	Pipelines
Beta Conversion Method	Hamada	Hamada	Hamada	Hamada	Hamada
Debt/Equity Ratio	81.82%	81.82%	81.82%	81.82%	81.82%
Gearing	45.00%	45.00%	45.00%	45.00%	45.00%
Real Risk Free Rate	2.85%	2.85%	2.85%	2.85%	2.85%
Real Pre Tax Debt Interest Rate	4.18%	4.18%	4.18%	4.18%	4.18%
Real Debt Risk Premium	1.33%	1.33%	1.33%	1.33%	1.33%
SA Market Risk Premium	6.30%	6.30%	6.30%	6.30%	6.30%
Equity Risk Premium	6.84%	7.83%	4.92%	6.34%	4.78%
Equity Beta	1.09	1.24	0.78	1.01	0.76
Asset Beta	0.68	0.78	0.49	0.63	0.48
Marginal Tax Rate	28.00%	28.00%	28.00%	28.00%	28.00%
Real Cost Of Equity	9.69%	10.68%	7.77%	9.19%	7.63%
Real Post Tax Cost Of Debt	3.01%	3.01%	3.01%	3.01%	3.01%
Real Post Tax WACC	6.68%	7.23%	5.63%	6.41%	5.55%
Average Inflation	5.46%	5.46%	5.46%	5.46%	5.46%
Nominal Post Tax WACC	12.51%	13.08%	11.39%	12.22%	11.31%

APPENDIX 2A: ESTIMATE OF THE BETAS FOR TRANSNET'S OD'S

TRANSNET FREIGHT RAIL BETA PEERS											
Ticker Name	Relative Index	Business Description	Business Sector	Financial Statements Most Recent Date	Reporting Currency Millions	Debt Value Currency In Millions	Equity Value Currency In Millions	Total Capital Value Currency In Millions	Gearing (%)	Equity Tax Rate Beta	Asset Beta
CSX US Equity	SPX Index	CSX Corporation is an international freight transportation company. The Company provides rail, intermodal, domestic container-shipping, barging, and contract logistics services around the world. CSX's rail transportation services are provided principally throughout the eastern United States.	Railroads	2013/12/27	USD	9 555	10 504	20 059	47.63%	1.62	1.05
CNR CN Equity	SPTSX Index	Canadian National Railway Company operates a network of track in Canada and the United States. The Company transports forest products, grain and grain products, coal, sulfur, and fertilizers, intermodal, and automotive products. Canadian National operates a fleet of locomotives and railcars.	Railroads	2013/12/31	CAD	7 840	12 953	20 793	37.70%	0.37	0.25
KSU US Equity	SPX Index	Kansas City Southern, through its subsidiary, is the holding company for transportation segment subsidiaries and affiliates. The Company operates a railroad system that provides shippers with rail freight services in commercial and industrial markets of the United States and Mexico.	Railroads	2013/12/31	USD	2 189	3 677	5 866	37.32%	1.56	1.15
NSC US Equity	SPX Index	Norfolk Southern Corporation provides rail transportation services. The Company transports raw materials, intermediate products, and finished goods primarily in the Southeast, East, and Midwest and, via interchange with rail carriers, to and from the rest of the United States. Norfolk Southern also transports overseas freight through several Atlantic and Gulf Coast ports.	Railroads	2013/12/31	USD	9 448	11 289	20 737	45.56%	1.10	0.73
UNP US Equity	SPX Index	Union Pacific Corporation is a rail transportation company. The Company's railroad hauls a variety of goods, including agricultural, automotive, and chemical products. Union Pacific offers long-haul routes from all major West Coast and Gulf Coast ports to eastern gateways as well as connects with Canada's rail systems and serves the major gateways to Mexico.	Railroads	2013/12/31	USD	9 577	21 225	30 802	31.09%	1.08	0.85
CP CN Equity	SPTSX Index	Canadian Pacific Railway Limited is a Class 1 transcontinental railway, providing freight and intermodal services over a network in Canada and the United States. The Company's mainline network serves major Canadian ports and cities from Montreal to Vancouver, and key centers in the United States Midwest and Northeast.	Railroads	2013/12/31	CAD	4 876	7 097	11 973	40.72%	0.99	0.66
Average Asset Beta											0.78



TRANSNET ENGINEERING BETA PEERS											
Ticker Name	Relative Index	Business Description	Business Sector	Financial Statements Most Recent Date	Reporting Currency Millions	Debt Value	Equity Value	Total Capital Value	Gearing (%)	Equity Beta	Asset Beta
GRF SJ Equity	JALSH Index	Group Five Limited is an investment holding company with interests in the construction, engineering, manufacturing and property industries. The Company builds commercial structures, public and private housing, roads and earthworks. In addition, Group Five designs systems, develops and manages residential and commercial properties, provides software systems management and other services.	Construction & Engineering	2013/06/30	ZAR	798	2 226	3 024	26.39%	0.75	0.59
MUR SJ Equity	JALSH Index	Murray & Roberts Holdings Limited is an industrial holding company for a group of companies which operate in the construction, materials, transportation and engineering industries. The Company provides a variety of construction and contracting related services, quarry products, freight and passenger transport services and a variety of engineering products.	Construction & Engineering	2013/06/30	ZAR	2 093	8 698	10 791	19.39%	0.48	0.41
AEG SJ Equity	JALSH Index	Averg Limited is the holding company for a group of companies operating in the construction and engineering industries in southern Africa. Operating through subsidiaries, the Group has activities in cement production, steel processing, construction, property development, and civil engineering.	Construction & Engineering	2013/06/30	ZAR	1 912	13 305	15 217	12.56%	0.52	0.47
Average Asset Beta											0.49



TRANSNET PIPELINE BETA PEERS											
Tracker Name	Relative Index	Business Description	Business Sector	Financial Statements Most Recent Date	Reporting Currency Millions	Debt Value	Equity Value	Total Capital Value	Gearing (%)	Equity Beta	Asset Beta
NS US Equity	SPX Index	NuStar Energy L.P. transports and stores crude oil and refined products. The Company operates pipelines, terminals, and oil storage facilities. NuStar operates in North America, Latin America, the Caribbean, the United Kingdom, and continental Europe.	Oil & Gas Refining & Marketing	2013/12/31	USD	2 503	2 381	4 884	51.25%	0.92	0.56
NSH US Equity	SPX Index	NuStar GP Holdings LLC operates oil pipelines, terminals, and storage facilities. Enbridge Energy Partners, L.P. is a master limited partnership that transports and stores hydrocarbon energy. The Company transports crude oil and natural gas liquids to refineries in the midwestern United States and eastern Canada.	Oil & Gas Storage & Transporta	2013/12/31	USD	26	382	408	6.37%	0.81	0.78
EEP US Equity	SPX Index	TransMontaigne Partners L.P. provides integrated terminaling, storage, transportation and related services for customers engaged in the distribution and marketing of light refined petroleum products, heavy refined petroleum products, crude oil, chemicals, fertilizers and other liquid products. The Company operates primarily in the United States.	Oil & Gas Storage & Transporta	2013/09/30	USD	5 085	7 011	12 097	42.04%	0.72	0.50
TLP US Equity	SPX Index	Buckeye Partners, L.P. is an independent pipeline common carrier of refined petroleum products. The Company receives petroleum products from refineries, connecting pipelines, and marine terminals and transports those products to other locations.	Oil & Gas Storage & Transporta	2013/09/30	USD	207	412	619	33.46%	0.68	0.52
EPL US Equity	SPX Index	Reliance Industries Ltd. manufactures petrochemicals, synthetic fibers, fiber intermediates, textiles, blended yarn and polyester staple fiber. The Company also owns a petroleum refinery cum petrochemicals complex in Jamnagar, India that produces a wide range of products such as gasoline, superior kerosene oil and liquefied petroleum gas.	Oil & Gas Storage & Transporta	2013/12/31	USD	2 857	2 741	5 598	51.04%	0.62	0.38
RIL IN Equity	SENSEX Index		Oil & Gas Refining & Marketing	2013/03/31	INR	1 072 190	1 830 040	2 902 230	36.94%	0.93	0.66

Group Financial Planning

TRANSPORT PIPELINE BETA PEERS											
Ticker Name	Relative Index	Business Description	Business Sector	Financial Statement Most Recent Date	Reporting Currency Millions	Debt Value	Equity Value	Total Capital Value	Gearing (%)	Equity Tax Beta	Asset Beta
STPL TU Equity	TUSSE Index	Société de Transport des Hydrocarbures par Pipeline - SOTRAPIL - transports hydrocarbures throughout the republic. Sunoco Logistics Partners L.P. acquires, owns, and operates a group of refined product and crude oil pipelines and terminal facilities.	Oil & Gas Storage & Transport	2013/06/30	USD	0	30	30	0.03%	0.51	0.51
SOL US Equity	SPX Index	Plains All American Pipeline, L.P. is involved in interstate and intrastate crude oil pipeline transportation and crude oil terminaling storage activities. The Partnership is also involved in gathering and marketing activities. Plains owns and operates a seasonally heated, common carrier crude oil pipe-line extending from CA to TX and an oil gathering system in CA.	Oil & Gas Storage & Transport	2013/09/30	USD	2 309	6 319	8 628	26.76%	0.47	0.39
PAA US Equity	SPX Index	Holly Energy Partners, L.P. operates a system of refined product pipelines and distribution terminals primarily in West Texas, New Mexico, Utah, and Arizona. The Company's services include transporting products through its pipeline, terminaling refined products and other hydrocarbons, and storing and providing other services at its terminals.	Oil & Gas Storage & Transport	2013/12/31	USD	7 334	7 793	15 037	48.77%	0.85	0.54
HEP US Equity	SPX Index	Energy Transfer Partners, L.P. owns and operates a diversified portfolio of energy assets. The Company has pipeline operations in Arkansas, Arizona, Colorado, Louisiana, Mississippi, New Mexico, Utah and West Virginia and an intrastate pipeline system in Texas. Energy Transfer also markets propane from retail locations in various states across the United States.	Oil & Gas Storage & Transport	2013/09/30	USD	899	504	1 314	61.62%	0.50	0.25
ETP US Equity	SPX Index	Magellan Midstream Partners, L.P. is primarily involved in the storage, transportation, and distribution of refined petroleum products and ammonia. The Company's asset portfolio includes a pipe line system serving the mid-continent region of the United States, petroleum products marine terminal facilities, petroleum products terminals, and an ammonia pipeline system.	Oil & Gas Storage & Transport	2013/09/30	USD	16 646	16 939	33 585	49.56%	0.91	0.57
MMP US Equity	SPX Index	Bluebird Energy Partners LP owns, operates, and develops a diversified portfolio of complementary midstream energy assets. The Company provides crude oil gathering, transporting, terminaling and storing energy commodities from coast to coast.	Oil & Gas Storage & Transport	2013/12/31	USD	2 487	1 563	4 050	61.40%	0.75	0.38
BKEP US Equity	SPX Index		Oil & Gas Storage & Transport	2013/09/30	USD	274	58	333	82.51%	0.56	0.15
Average Asset Beta											

TRANSNET PORTS BETA PEERS										
Ticker Name	Relative Index	Business Description	Financial Statements Most Recent Date	Reporting Currency Millions	Debt Value	Equity Value	Total Capital Value	Gearing (%)	Equity Beta	Asset Beta
ADSEZ IN Equity	SENSEX Index	Adani Ports and Special Economic Zone operates a shipping port on the west coast of India. The Company's port provides services for bulk and container cargo, crude oil, and railway and other added services.	2013/12/31	INR	115 858	65 386	181 244	63.92%	0.78	0.35
2880 HK Equity	HSI Index	Dalian Port (PDA) Company Limited provides international and domestic cargo handling, transportation, transit, warehousing and other port operations and logistics services. The Company also provides oil and liquid chemicals terminal and related logistics services, tugboat, pilotage, cargo handling and information technology services.	2013/09/30	CNY	10 214	14 601	24 815	41.16%	0.90	0.59
601008 CH Equity	SHASHR Index	Jiangsu Lianyungang Port Co., Ltd. mainly operates port and other related services including loading and unloading, storage, port equipment rentals and maintenance services.	2013/09/30	CNY	2 147	2 575	4 722	45.47%	1.11	0.68
900952 CH Equity	SHASHR Index	Jinzhou Port Co., Ltd. operates the Jinzhou Port, providing loading, unloading, storage, and other shipping related services.	2013/09/30	CNY	3 515	4 159	7 674	45.81%	0.65	0.40
LLXL3 BZ Equity	IBOV Index	LLX Logística S.A. handles logistic and infrastructure activities related to the portuary sector. The Company constructs, develops and manages port complexes for business trades.	2013/09/30	BRL	2 238	829	3 067	72.98%	2.23	0.74
NMTP RM Equity	INDEXCF Index	Novorossiysk Commercial Sea Trade Port owns and operates the Novorossiysk Port on the BlackSea. The Company processes, loads, and unloads cargo. The Port's main cargo is crude oil. Novorossiysk also services dry cargo such as metals, cement, sugar, grain and containers. The Port's location on the Black Sea allows for year round service to a majority of foreign trade sea routes.	2013/09/30	USD	2 206	1 334	3 541	62.32%	0.89	0.38
PPA GA Equity	FTASE Index	Piraeus Port Authority manages the Piraeus harbor. The Company provides services such as loading and unloading cargo, warehousing, and transportation of cars. It provides electricity, water, and other services. Piraeus Port Authority is responsible for maintaining the port and controlling the movement of ships.	2013/09/30	EUR	91	167	258	35.31%	0.55	0.38
POT NZ Equity	NZSE Index	Port of Tauranga Limited activities include the provision of wharf facilities, back up land for the storage and transit of import and export cargo, berthing, cranes, tug and pilotage services for exporters, importers and shipping companies and the leasing of land and buildings. The Group also operates a container terminal and has bulk cargo marshalling operations.	2013/06/30	NZD	226	794	1 020	22.17%	0.70	0.58
600017 CH Equity	SHASHR Index	Rizhao Port Co., Ltd. operates Rizhao ports in Rizhao, Shandong. The company handles, warehouses, and transports containers and bulk and general cargoes.	2013/09/30	CNY	4 365	9 661	14 026	31.12%	0.88	0.66
600018 CH Equity	SHASHR Index	Shanghai International Port (Group) Co., Ltd is a holding company that owns interests in container and port service companies.	2013/09/30	CNY	15 258	54 697	69 955	21.81%	0.94	0.78



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TRANSNET PORTS BETA PEERS										
Ticker Name	Relative Index	Business Description	Financial Statements Most Recent Date	Reporting Currency	Debt Value Currency In Millions	Equity Value Currency In Millions	Total Capital Value Currency In Millions	Gearing (%)	Equity Beta	Asset Beta
200022 CH Equity	SZBSHR Index	Shenzhen Chawan Wharf Holdings Ltd. operates the Chiwan Port in Shenzhen. The Company handles, warehouses, and transports containers and bulk and general cargoes.	2013/09/30	CNY	1 464	4 800	6 264	23.37%	0.98	0.80
OLTH GA Equity	FTASE Index	Thessaloniki Port Authority manages the Thessaloniki harbor. The Company provides services such as loading and unloading cargo, warehousing and offers electricity, water and other services.	2013/09/30	EUR	-	144	144	0.00%	0.54	0.54
600717 CH Equity	SHASHR Index	Tianjin Port Co., Ltd. operates the Tianjin Port and provides related services including loading and unloading, storage, and transportation services. The Company also acts as a freight transportation agency.	2013/09/30	CNY	8 918	16 604	25 523	34.94%	0.96	0.68
600575 CH Equity	SHASHR Index	Wuliu Port Storage & Transportation Co., Ltd. operates the Wuliu Port in Anhui province. The Company provides loading and unloading, storage, and transition services for coal, containers, bulk cargo, and general cargo.	2013/09/30	CNY	18 151	4 837	22 989	78.96%	1.32	0.35
600317 CH Equity	SHASHR Index	Yingkou Port Liability Co., Ltd. operates and manages the Yingkou Port located in Liaoning province. The Company provides cargo loading and unloading, storage, and transportation services.	2013/09/30	CNY	5 226	10 460	15 686	33.32%	0.61	0.45
600279 CH Equity	SHASHR Index	Chongqing Gangjiao Co., Ltd. provides inland water freight and passenger transportation and support services including loading and unloading, storage, and ship repair services. The Company also operates in commercial trading.	2013/09/30	CNY	1 803	2 633	4 436	40.64%	0.95	0.63
NHFA GR Equity	DAX Index	Hamburger Hafen und Logistik AG (HHLA) provides services to the port in the European North Range. The Company's container terminals, transport systems, and logistic services provide a network between overseas port and European hinterland.	2013/09/30	EUR	435	595	1 031	42.24%	1.26	0.83
002040 CH Equity	SZASHR Index	Nanjing Port Co., Ltd. provides loading and unloading, as well as storage services for crude oil, refined oil, and chemical products.	2013/09/30	CNY	240	650	891	26.98%	0.92	0.72
NCB MK Equity	FBMKLCI Index	NCB Holdings Berhad is an investment holding company. The Company, through its subsidiaries, operates a port and provides haulage, freight forwarding, ancillary services, and shipping services.	2013/09/30	MYR	153	1 485	1 638	9.31%	0.34	0.31
SURIA MK Equity	FBMKLCI Index	Sura Capital Holdings Berhad is an investment holding and property development company. The Company, through its subsidiaries, provides, maintains, regulates, and controls port services and facilities.	2013/09/30	MYR	230	840	1 069	21.48%	1.60	1.32
000905 CH Equity	HSI Index	Xiamen International Port Company Ltd. Offers shipping port services. The company loads, unloads, and stores shipping containers, load/unloads general cargo, and offers shipping agency, tallying, tugboat berthing and unberthing, and other port related services. Xiamen also manufactures building materials.	2013/06/30	CNY	1 163	5 285	6 449	18.04%	1.30	1.11
Average Asset Beta										0.63

List of Excluded Companies (Not meeting liquidity filter and/or peer criteria)

ANW US Equity- Aegean Marine Petroleum Network Inc	ALCN EY Equity- Alexandria Containers & Goods;	AHC1 PE Equity- Andino Investment Holding SA;	ATI PM Equity- Asian Terminals Inc;	BTC TB Equity- Bangkok Terminal PLC;	BTC-R TB Equity- Bangkok Terminal PLC;	BPH MK Equity- Bintulu Port Holdings Bhd;	BMS LN Equity- Braemar Shipping Services PLC;	9357 JP Equity- Melko Trans Co Ltd;	9301 JP Equity- Mitsubishi Logistics Corp;	WSON11 BZ Equity- Wilson Sons Ltd;
BLH GR Equity- Bremer Lagerhaus-Gesellschaft AG;	CNMI LN Equity- Camper & Nicholsons Maritime Investments Ltd;	CSAG EY Equity- Canal Shipping Agencies Co;	CMHY US Equity- China Merchants Holdings International Co Ltd;	144 HK Equity- China Merchants International Co Ltd;	8233 HK Equity- CIG Yangtze Ports PLC;	REMO RO Equity- Cia de Remorcare Mariti;	CMVX RO Equity- Convex SA;	LPC NZ Equity- Lyttelton Port Co Ltd;	MARIN KK Equity- Contracting & Marine Services Co KSC;	MAC VN Equity- Marine Supply and Engineering Service JSC;
1199 HK Equity- COSCO Pacific Ltd;	CWT SP Equity- CWT Ltd;	9367 JP Equity- Daibo Koun Co Ltd;	601880 CH Equity- Dalian Port PDA Co Ltd;	DVP VN Equity- Dinh Vu Port Investment & Development JSC;	DXP VN Equity- Doan Xa Port JSC;	IMB13 BZ Equity- Cia Docas de Imbituba;	IMB14 BZ Equity- Cia Docas de Imbituba;	LKPCRA CZ Equity- Luka Ploce DD;	LKRIRA CZ Equity- Luka Rijeka DD;	VENTANA CI Equity- Puerto Ventanas SA;
004140 KS Equity- Dongbang Transport Logistics Co Ltd;	OPW DU Equity- DP World Ltd;	DCIL IN Equity- Dredging Corp Of India Ltd;	EMS NO Equity- Etzen Maritime Services ASA;	EUK2 GR Equity- Eurokal KGA;	EUK3 GR Equity- Eurokal KGA;	FRWARD CI Equity- Portuaria Cabo Froward SA;	002492 CH Equity- Zhuhai Winbase International Chemical Tank Terminal Co Ltd;	ULPLRA CZ Equity- Ulfjanik Plovdiva d.d.;	UASG EY Equity- United Arab Shipping;	UDL MP Equity- United Docks Ltd;
9361 JP Equity- Fushiki Kaifu Unso Co Ltd;	GDPL IN Equity- Gateway Distriparks Ltd;	GMD VN Equity- GEMADEPT Corp;	GSSC EY Equity- General Silos & Storage;	80GM LN Equity- Global Ports Investments PLC;	GLPR LI Equity- Global Ports Investments PLC;	GOLD IT Equity- Gold Bond Group Ltd/The;	WTE-U CN Equity - Westshore Terminals Investment Corp	9365 JP Equity- Tradia Corp;	9351 JP Equity- Toyo Wharf & Warehouse Co Ltd;	VMSI IN Equity- VMS Industries Ltd;

GPV IN Equity- Gujarat Pipavav Port Ltd;	HSB IN Equity- Harbana Ship Breakers Ltd;	HPHT SP Equity- Hutchison Port Holdings Trust;	INTEG MK Equity- Integrax BHD;	ICT PM Equity- International Container Terminal Services Inc;	9359 JP Equity- Isewan Terminal Service Co Ltd;	WISL IN Equity- Western India Shipyard Ltd;	TECO NO Equity- Teco Maritime ASA;	3382 HK Equity- Tianjin Port Developme nt Holdings Ltd;	TOUP FP Equity- Touax SA;
KW JA Equity- Kingston Wharves Ltd;	KGL KK Equity- Kuwait & Gulf Link Transport Co;	LLXL US Equity- Logistica SA;	LGT/A CN Equity- Logistec Corp;	LGT/B CN Equity- Logistec Corp;	LKPG SV Equity- Luka Koper;	WSON LX Equity- Wilson Sons Ltd;	SAPORTL BD Equity- Summit Alliance Port Ltd;	5601 TT Equity- Taiwan Allied Container Term;	601000 CH Equity- Tangshan Port Group Co Ltd;
SVOC BC Equity- Movis Cote d'Ivoire;	M4N GR Equity- Muehlhan AG;	NMDC UH Equity- National Marine Dredging Co;	601018 CH Equity- Ningbo Port Co Ltd;	9066 JP Equity- Nissin Corp;	NTH NZ Equity- Northland Port Corp NZ Ltd;	000905 CH Equity- Xiamen Port Development Co Ltd;	SPN NZ Equity- South Port New Zealand Ltd;	9303 JP Equity- Sumitomo Warehouse Co Ltd/The;	VPK NA Equity- Korinkilke Vopak NV;
OCL BD Equity- Ocean Containers Ltd;	OCN LN Equity- Ocean Wilsons Holdings Ltd;	SODE BU Equity- Odessos Shiprepair Yard AD;	9317 JP Equity- Ohnami Corp;	PICTPS PA Equity- Pakistan International Container Ltd;	PICT PA Equity- Pakistan International Container Ltd;	871 HK Equity- Xiangyu Dredging Holdings Ltd;	STINO US Equity- Sino- Global Shipping America Ltd;	SPL LN Equity- SKIL Ports & Logistics Ltd;	SOCF RO Equity- Socep SA;
PSCS OM Equity- Port Service Corp;	PRTX3 BZ Equity- PortX Operacoes Portuarias SA;	PXTPY US Equity- PortX Operacoes Portuarias SA;	PUERTO CI Equity- Puerto de Lirquen SA;	RMT SP Equity- Ridmers Maritime;	9355 JP Equity- Rinko Corp;	9324 JP Equity- Yasuda Warehouse Co Ltd/The;	004367 KS Equity- Sebang Co Ltd;	SICL IN Equity- Sical Logistics Ltd;	600794 CH Equity- Zhangjiag ang Freetrade Science and Technolog y Co Ltd;
RAJA ID Equity- Rukun Raharja Tbk PT;	9353 JP Equity- Sakurajima Futo Kaisha Ltd;	SPSI OM Equity- Salaah Port Services Co SAOG;	STBP11 BZ Equity- Santos Brasil Participacoes SA;	004360 KS Equity- Sebang Co Ltd;	004365 KS Equity- Sebang Co Ltd;				

APPENDIX 3: HURDLE RATES - REASONS AND DERIVATION

This appendix addresses two issues:

- Provides reasons as to why a hurdle rate is required.
- Derives a hurdle rate for Transnet and its ODs.

Reasons for using hurdle rates

There a number of reasons for adding a hurdle rate premium to the WACC which include the following:

- Adjusting for the uncertainty in accepting or rejecting projects when returns appear to be marginal. The discount rate or hurdle rate is the minimum acceptable rate of return a firm expects to earn on an investment given its cost of capital. Projects that exceed the hurdle rate are accepted and those below rejected.
Companies often deal with marginal projects where the IRR is close to the cost of capital or alternatively the NPV is close to zero. In these cases some companies often reject projects. An alternative approach by many companies is to use a hurdle rate higher than the cost of capital which acts as a 'buffer' to protect the company from projects that will be unprofitable.
If the IRR is greater than the hurdle rate a company has some confidence that the return, after taking into account the uncertainty with all investment projects, is likely to add financial shareholder value.
- The calculated WACC does not adequately cover all of the risks involved in the capital investment decision. All estimates of WACC are subject to measurement errors and the inadvertent exclusion or mis-specification of risks. Examples are estimates of the variables in the CAPM model used for the cost of equity, the choice of a time horizon for debt capital and the choice of capital structure.
- The WACC reflects the expected returns to holders of capital but does not always reflect the entire user costs of the capital provided to a company. A number of risks support an increase in the WACC, for example:
 - ✓ The project/activity's risk may be higher than the average risk for the company.
 - ✓ The size of the investment may be abnormally high for the company.



- ✓ The uncertainty of outcomes in long-term projects may not be covered in the WACC: the "unknown unknowns".
- ✓ There may be the existence of real options in the business, for example the value of not expanding until later.
- ✓ Accounting for future increases in WACC if interest rates and risk aversion in financial markets increase may lead to re-financing risks.
- ✓ Capital rationing (limited resources available to a company from the capital markets).
- ✓ There may be a number of transaction costs if new equity or debt is raised.
- ✓ Regulatory uncertainty and risk (i.e. Port Regulator of South Africa, Nersa).

Derivation of Hurdle Rates

Project discount rates are higher than those for operating assets, because of operational gearing produced by the cost and time involved in capital project development and the inevitable downside residual risk that is seldom fully captured in the cash flows due to amongst other things the difficulty of identifying potentially, low probability, but extreme events. Further adjustments to the discount rate is required for unusual technical risk, if not captured in the cash flows. For these and other reasons the hurdle rates based on WACC plus premiums are recommended.

Given the uncertainty surrounding the cost of capital/WACC and because of the difficulty involved in estimating unbiased future cash flows, it is thought better to add a contingency premium of 1.0% and be more conservative to encourage investments that add value/reduce potential loss to the shareholder.

A 1.0% point is added to the required return as profit margin and to reward the shareholder for the investment risk exposure as a result of investing in the project.

A 1.0% point is added to the required return on Greenfield investments (0.5% for brownfield investments), because of operational gearing produced by the cost and time involved in project implementation and the "inevitable" downside residual risk that is seldom fully captured in the cash flows due to difficulty of identifying potentially, low probability, but extreme events.



APPENDIX 4: USE OF THE WACC FOR ACCOUNTING PURPOSES

This appendix addresses two issues:

- Discusses how to obtain a pre-tax WACC rate for impairment purposes utilising a post-tax WACC rate.
- Discusses for the purposes of International Financial Reporting Standards (IFRS), whether is it acceptable to use a Transnet Group-wide WACC to calculate Individual OD's profitability as opposed to an individualised OD WACC.

Converting Post tax WACC to Pre-tax WACC

In terms of IAS 36, pre-tax rates are required to be used in impairment calculations; Furthermore IFRS requirements in general require the use of pre-tax discounting rates given that any resulting cash flows or changes in cash flows would have to be included in the financial statements before tax rather than after tax.

There are many alternatives that one can look at (e.g. remove all tax inputs in the WACC computation, gross up a post-tax WACC to pre-tax, Using goal seek on cash flows etc.) however it is important to note that any conversion of a post-tax WACC to a pre-tax WACC will not yield an exact after tax NPV of cash flows that agree to the after tax NPV of cash flows computed using a post-tax WACC. Given that an after tax NPV of cash flows based on post-tax WACC and an after tax NPV of cash flows based on pre-tax WACC need to tally, the following example illustrates how to obtain a before tax NPV of cash flows using a post-tax WACC.

Post-Tax Net Present Value Of Cash Flows											
Post-Tax WACC	12.51%										
Year	0	1	2	3	4	5	6	7	8	9	10
Free Cash Flows	-5 000	455	3 000	2 003	3 002	1 000	4 500	3 000	22 002	12 200	1 222
Taxation	-	-127	-840	-561	-841	-280	-1 260	-840	-6 161	-3 416	-342
Free Cash Flows After Tax	-5 000	328	2 160	1 442	2 161	720	3 240	2 160	15 841	8 784	880
PV factor	1.000	0.889	0.790	0.702	0.624	0.555	0.493	0.438	0.390	0.346	0.308
Present Value: Free Cash Flows After	-5 000	291	1 707	1 013	1 349	399	1 598	947	6 172	3 042	271
Post-Tax Net Present Value	11 788										
Pre-Tax Net Present Value Of Cash Flows											
Post-Tax WACC	12.51%										
Year	0	1	2	3	4	5	6	7	8	9	10
Free Cash Flows	-5 000	455	3 000	2 003	3 002	1 000	4 500	3 000	22 002	12 200	1 222
Taxation	-	-	-	-	-	-	-	-	-	-	-
Free Cash Flows Before Tax	-5 000	455	3 000	2 003	3 002	1 000	4 500	3 000	22 002	12 200	1 222
PV factor	1.000	0.889	0.790	0.702	0.624	0.555	0.493	0.438	0.390	0.346	0.308
Present Value: Free Cash Flows Before	-5 000	404	2 370	1 407	1 874	555	2 219	1 315	8 572	4 225	376
Pre-Tax Net Present Value	18 317										
PV Of Taxation	-6 529										
Post-Tax Net Present Value	11 788										
Proof Check (B9-B20)	-										



Group Financial Planning

The cash flows reflected in "Row 17" in the above example indicate an amount that would be the before tax NPV of cash flows for accounting/IFRS purposes. The above illustrates that the pre-tax WACC and post-tax WACC are exactly the same rate when applied at correct cash flow levels to arrive at the same post-tax NPV.

Using the Transnet WACC for discounting OD cash flows.

Previously individual ODs have used a Group WACC in performing their impairment calculations. The Group WACC by its very nature is representative of the Group's underlying risks and a portfolio of the underlying division's risks. The underlying divisions of Transnet have differing risk profiles as each division is in a different kind of transport business (e.g. rail operations versus port operations). It is therefore important to determine the individual WACC for the ODs within Transnet.

IAS 36 specifically states that when undertaking an impairment calculation, the discount rate should take into account "the risks specific to the asset for which the future cash flows have been adjusted". It is not acceptable to use a Group overall WACC to evaluate cash flows within different business units as each business unit has its own specific risk profile.

If this was acceptable the statement would not require for impairment purposes, the breaking-up of Transnet Group cash flows into individual divisible Cash Generating Units (CGU). Instead the statement would merely require one Group Impairment Calculation, using the Group WACC.

Thus, every OD should apply its individualised WACC in its impairment calculations as opposed to a Group calculated WACC as the Group's WACC consists of a diversified risk pool, which is not unique to the specific OD.