
The Luxembourg Rail Protocol to the Cape Town Convention

*Its positive impact on the
cost of financing railway
rolling stock in Africa*

Prepared for



Objectives

1

Develop an assessment of micro-economic benefits for African nations

2

Help RWG, UNIDROIT and their members to consider the country and market impacts of the Luxembourg Rail Protocol

3

Help governments consider the effects and economic benefits of the Protocol before its adoption

4

Complement the legal analysis supporting adoption of the Protocol

Summary

Depending on countries, direct micro-benefits assessed as between 1.6% and 13.5% of the present value of rolling stock



Many additional micro- and macro-economic benefits also expected

Context



1

Global market volume of the rail industry of €163bn per annum, including €53bn in rolling stock

2

Total market for rail supply is set to continue its growth of recent years at 2.7% per year

3

Growth in the rail market is currently constrained by the availability of funding

4

The Luxembourg Rail Protocol improves the availability and cost of private finance for rolling stock

Contents

I. Benefits from the
Luxembourg Rail Protocol

II. Methodology: assessing
direct financing cost
reductions

III. Results



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Contents

I. Benefits from the Luxembourg Rail Protocol

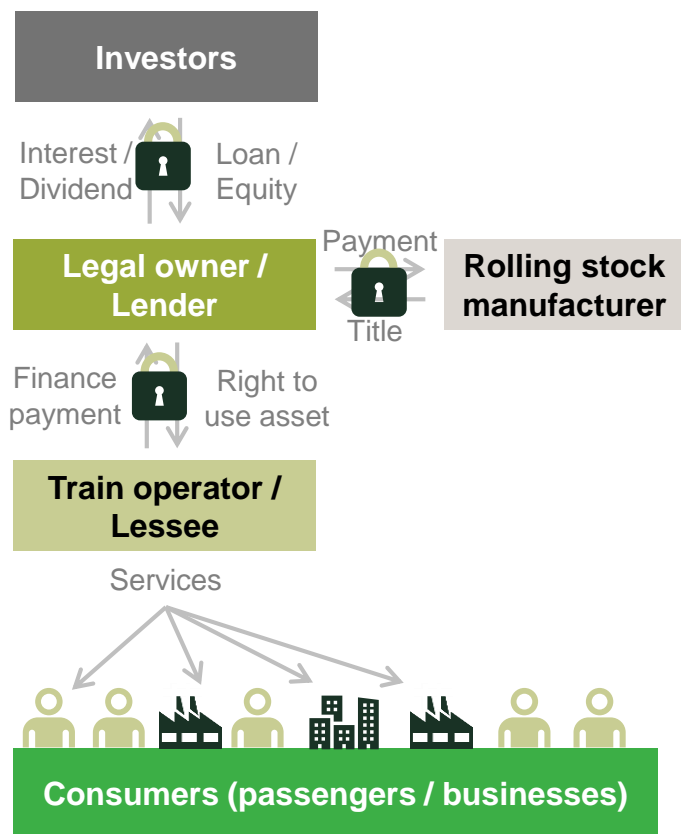
II. Methodology: assessing direct financing cost reductions

III. Results



The Luxembourg Rail Protocol (LRP) (1/2)

Financing the rail industry

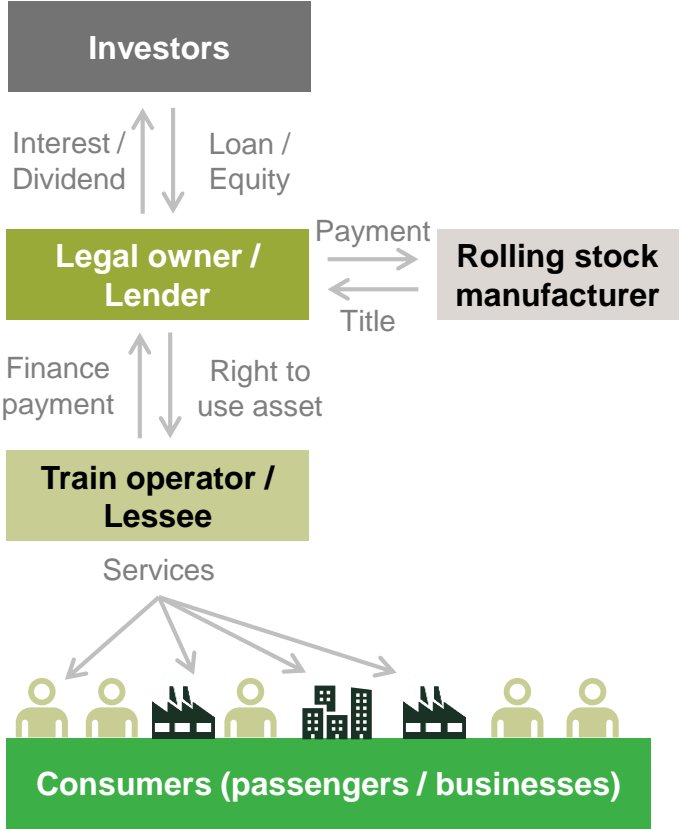


Issues with bringing in private capital due to:

- **uncertainty** around the repossession of collateral for creditors
- **limited** legal infrastructure and tracking of assets
- cross border operational **risks** in light of the absence of national or international public registries showing security interests on rolling stock
- **no common system** for uniquely identifying railway equipment globally and across different types of rolling stock


The Luxembourg Rail Protocol (LRP) (2/2)

Financing the rail industry




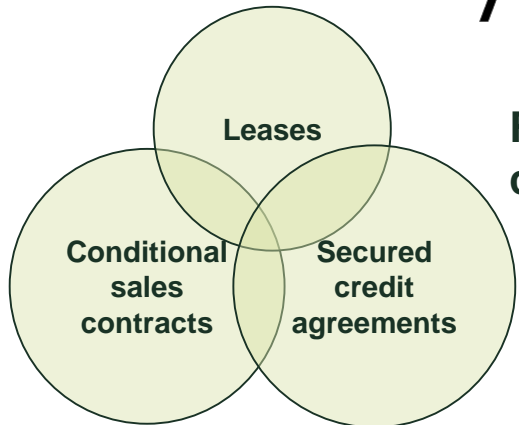
Solution: Luxembourg Rail Protocol
 New global legal system for the recognition and prioritisation of security interests held by creditors

Debtors covered

 All debtors in ratifying states

Vehicles covered

 All vehicles running on tracks, or above, on, or under a guideway



Financing covered

Features of LRP deliver both micro- and macro- benefits

Single central global registry

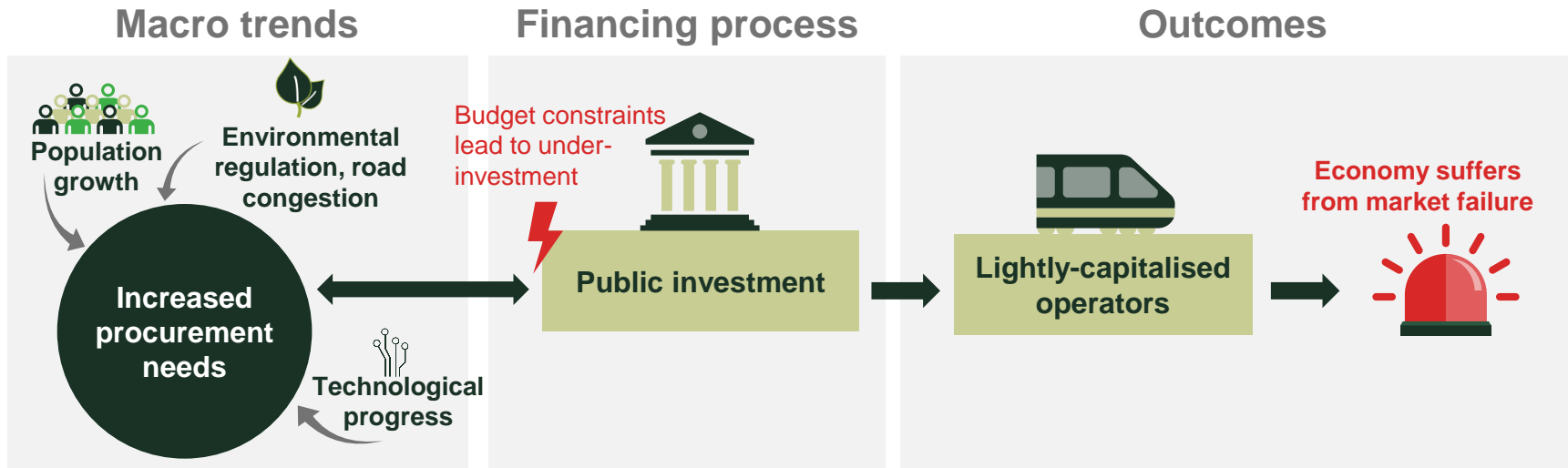
- **facilitates recording** international interests, and universal numbering system
- establishes **clear priority** among **creditors**
- provides for **real time monitoring** – creditors and prospective purchasers can check rival claims to related rail equipment
- **eliminates unnecessary restructuring** of security interests as transactions change

Clear legal framework and enforcement

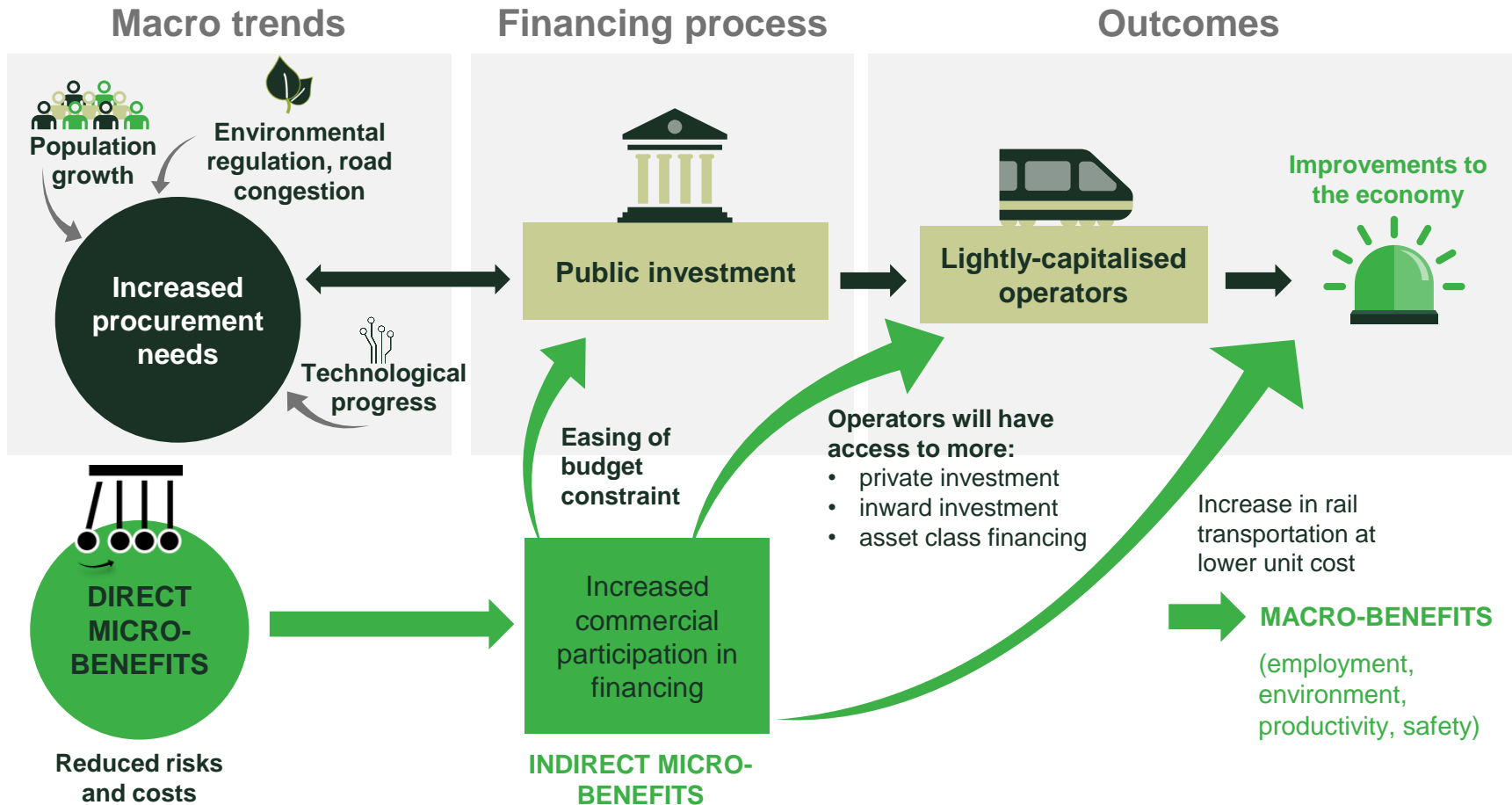
- **covers all debtors based in contracting states** without differentiating between types of financing structures
- provides for **clear creditor rights** on termination, default, and insolvency
- recognises and regulates the **security interests** of financiers and other parties
- opens the way to **secured finance** with recourse only to the **assets**



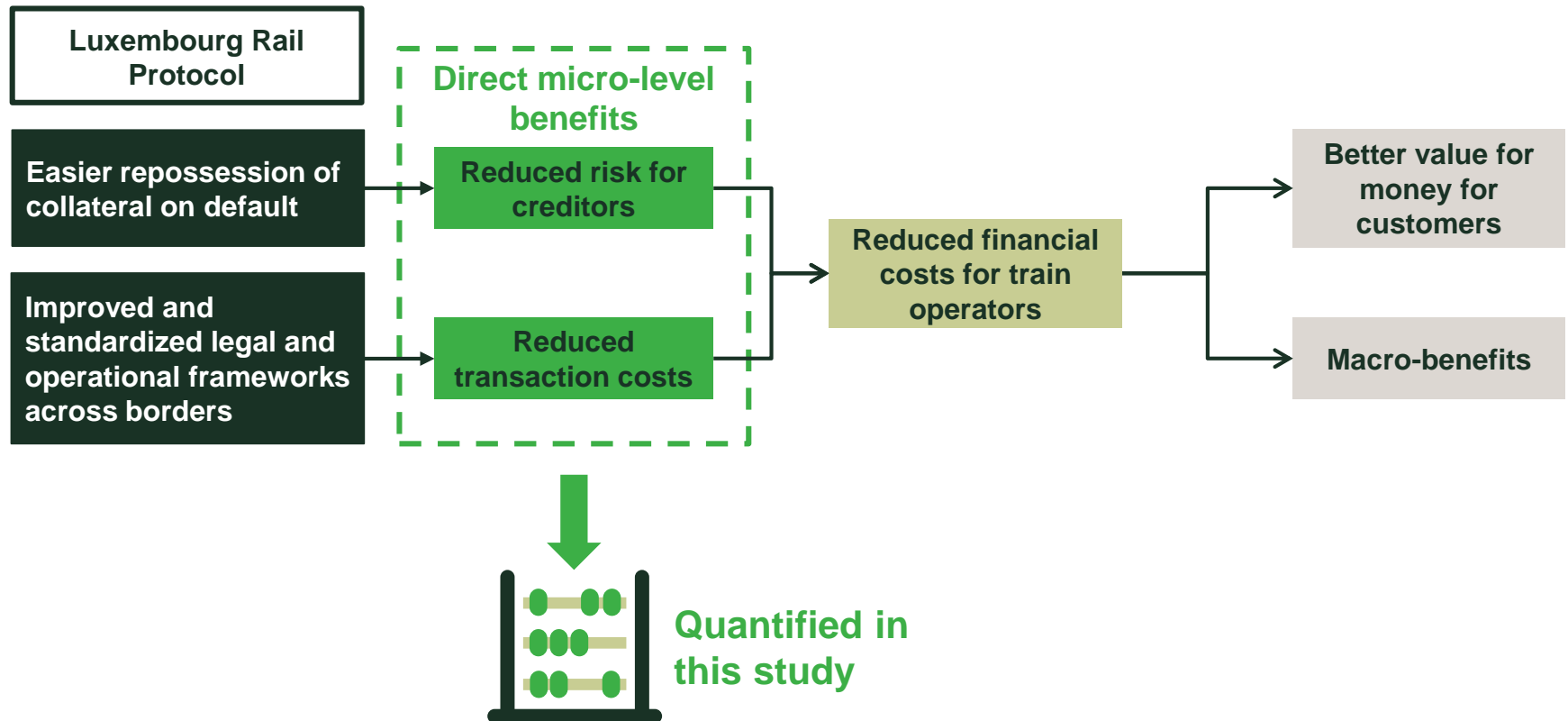
LRP will reduce costs and help growth in rail transport (1/2)



LRP will reduce costs and help growth in rail transport (2/2)



This study focuses on the direct micro-level benefits (1/2)



This study focuses on the direct micro-level benefits (2/2)

Indirect micro-level benefits

- facilitates **operating leases** which
 - open up the market to new competition
 - provide more flexibility for operators
 - drive standardisation of equipment
- potentially cuts **Export Credit Agency finance premiums** (following the example of the Aircraft Protocol)
- the **unique global identifier** enables more efficient asset location and status tracking, leading to savings on insurance, maintenance, and reductions of many other costs
- registration of creditor claims provides **protection for creditors and operators on cross border routes** even without ratification by the state where the rolling stock is located

Not quantified

Macro-benefits

- reduction in polluting greenhouse gases 
- lower unemployment 
- increased productivity and GDP 
- increased transport safety, less congestion 
- new markets for African rolling stock manufacturers and operators 
- regional integration and interoperability
- underwrites the African Continental Free Trade Area and the planned African Infrastructure High Speed Rail Network

Not quantified

Contents

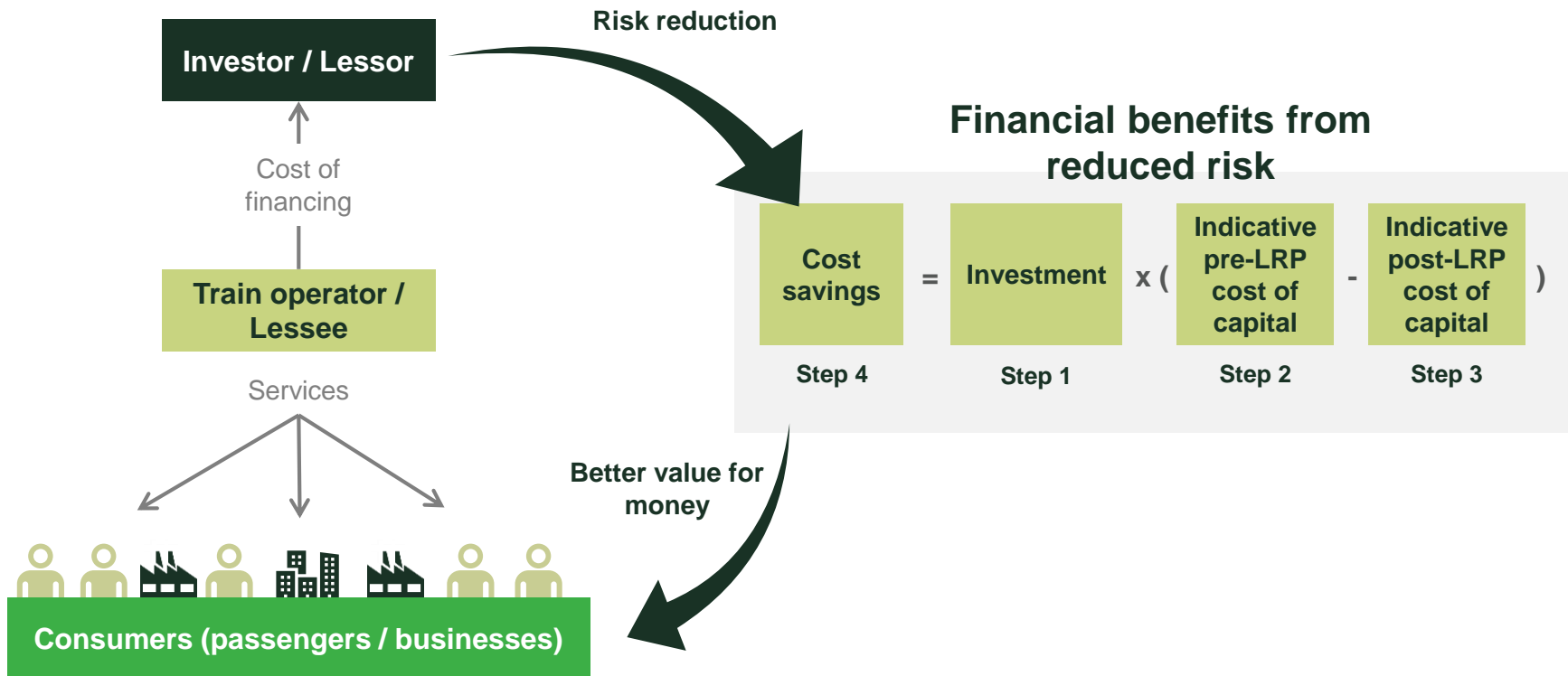
I. Benefits from the
Luxembourg Rail Protocol

II. Methodology: assessing
direct financing cost
reductions

III. Results



Methodological approach

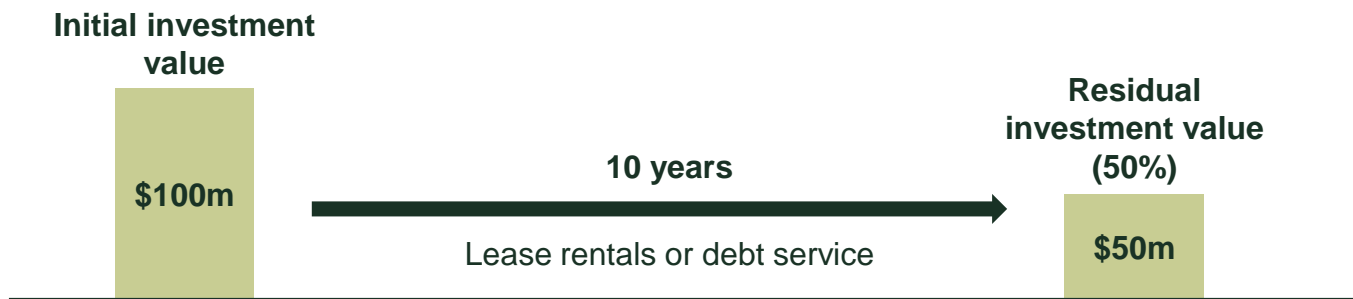




Step 1: Investment to finance

Key assumptions

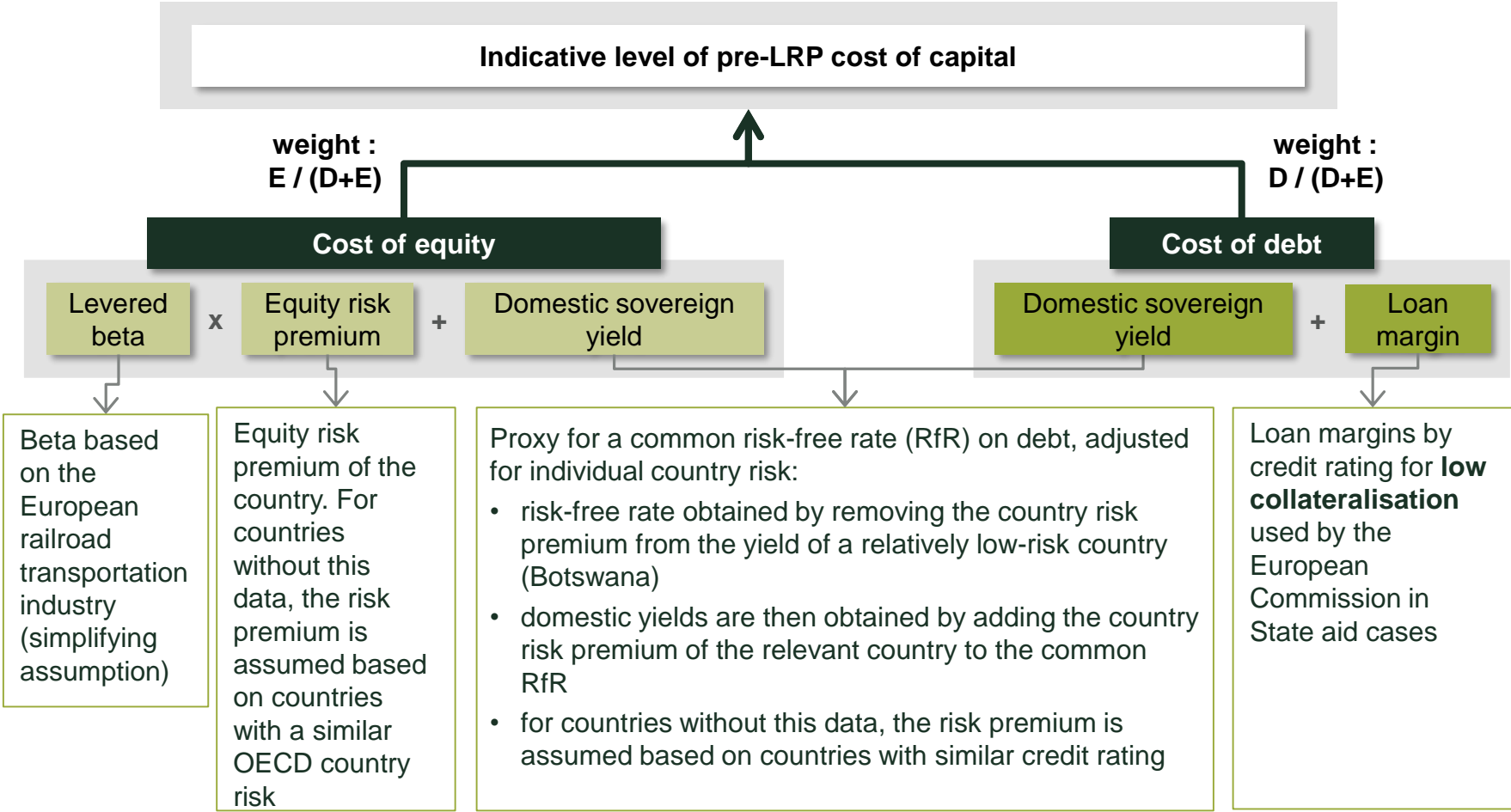
- **investment:** in the absence of precise or reliable information about the value of existing rolling stock or about procurement plans for the countries considered, benefits are assumed for an illustrative value of rolling stock (\$100m) in every country. This can be interpreted as referring to existing rolling stock as well as new purchases. The benefits can be scaled up to the relevant value of rolling stock.
- **source of financing:** it is assumed private finance of rolling stock will take two main forms: i) leasing arrangements ii) borrowing from private creditors. In both cases, this can be representative of existing rolling stock *and* new purchases. In the former case, the lease arrangements are assumed to take the form of a sale-and-leaseback.¹
- **period:** a financing period of 10 years. A residual value of the assets (and associated credit facilities, i.e. principal in the case of a loan) of 50% is assumed at the end of these 10 years (i.e. mirroring an assumed amortisation of the underlying assets over 20 years on a straight line basis).



¹ Note: it is also implicitly assumed that no express or implied state guarantees are provided or taken into account.

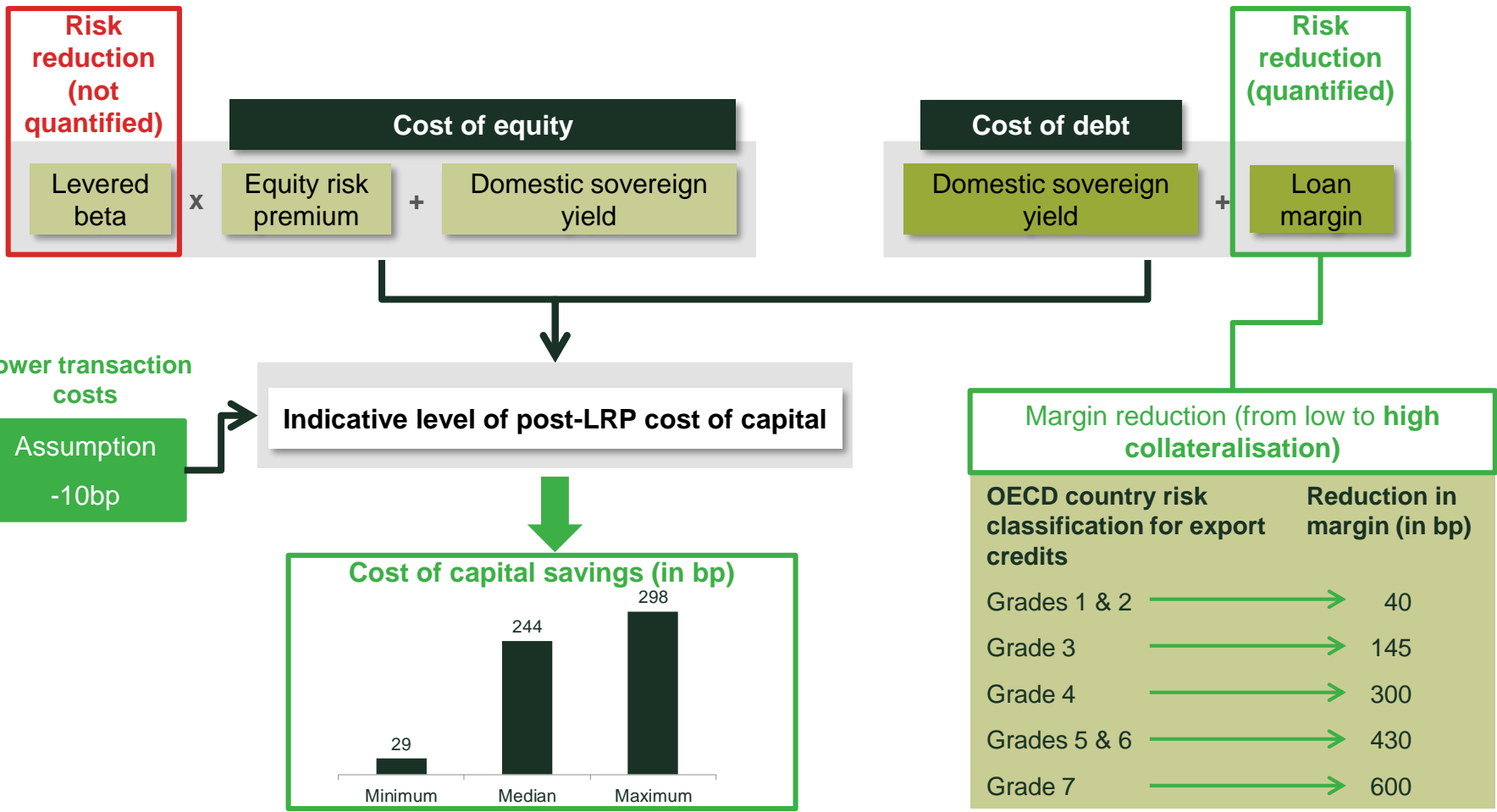


Step 2: Indicative pre-LRP cost of capital





Step 3: Indicative post-LRP cost of capital





Step 4: Financial benefits

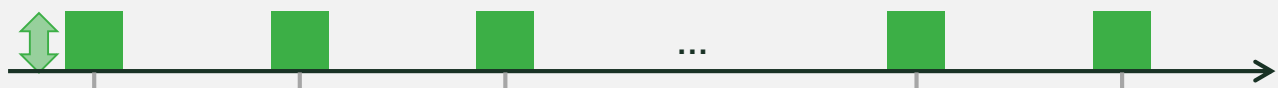
■ Annual cost of financing **pre-LRP** = investment to finance x cost of capital **pre-LRP**

■ Annual cost of financing **post-LRP** = investment to finance x cost of capital **post-LRP**

Annual cost of financing over 10-year period



Annual financial benefits = difference



Present value of financial benefits over the period



Discounted sum

Limitations of the analysis



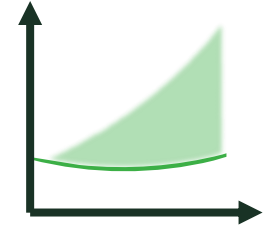
The estimates of the level of cost of capital (both pre- and post-LRP) rely on a number of simplifying assumptions aimed at capturing the varying levels of risk (reflected through the credit rating) of the countries under consideration. Similarly, the calculation of these levels relies on external parameters and data taken as indicative building blocks for the cost of capital.

As such, the estimates of the level of the cost of capital should be interpreted as directional and necessarily have a margin of error driven by specific circumstances.

- **in particular**, the actual cost of capital applicable to operators and stakeholders in the value chain will largely vary according to a number of factors, such as:
 - type of underlying equipment financed and its positioning in non-contracting states
 - availability of external sources of credit support, such as Export Credit Agencies
 - structure and geographic location of the lessor/creditor and lessee/debtor
 - difference in creditworthiness between a particular operator and the country it is located in
 - specific tax and regulatory environments (e.g. exchange controls)
 - market capacity in the country concerned
- variations in the level of cost of capital would therefore imply variations in the level of benefits



Conservative nature of the analysis (1/2)

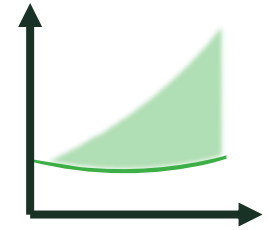


In calculating the direct, micro-economic benefits of the LRP, a number of other potentially positive financial effects have not been taken into account. In the context of African economies, we understand that additional indirect micro-economic benefits (referred to above) are likely to be particularly relevant:

Relevant indirect micro-benefits

- **further reductions in loan margins:** the reduction in margin assumed in our assessment rests on a constant risk rating for each country, but with a different level of collateralisation. We understand from RWG that in relation to Africa, it is likely that there would be a further potential for a reduction in margins resulting from the following benefits:
 - improvement of the credit analysis above the local sovereign debt rating because of the enforceability of creditor claims against the collateral
 - reduction of Export Credit Agency risk premiums, noting that a 10% reduction is given to a number of African states that have adopted the analogous protocol to the Cape Town Convention relating to aircraft under the OECD Aircraft Sector Understanding

Conservative nature of the analysis (2/2)



In calculating the direct, micro-economic benefits of the LRP, a number of other potentially positive financial effects have not been taken into account. In the context of African economies, we understand that additional indirect micro-economic benefits (referred to above) are likely to be particularly relevant:

Relevant indirect micro-benefits

- **improvement in the residual value of rolling stock at the end of the financing term:** we understand the adoption of the LRP will likely accelerate the trend towards operating leasing of rolling stock. This would result in increased equipment standardisation, with a higher residual value compared to the initial value, as it would be easier to remarket standard rolling stock at the end of the financing. This would reduce the rentals payable over the lease term as well as deliver manufacturing economies of scale, and lower unit costs, to the industry
- **securing longer tenor for loans:** the analysis assumes a 10-year term for operating leases and collateralised loans. The adoption of the LRP may ease this time constraint and result in creditors/lessors gradually granting (and export credit agencies underwriting) longer financing terms. The current short financing tenor compared to longer useful asset lives may result in a disproportionately high amortisation of the debt compared to the depreciation of the underlying assets¹

¹ Note: our research shows that the general industry assumption is that the official useful life of rolling stock is between 30 and 35 years (See e.g.: Transnet, 'Annual Financial Statements 2019', p.33, <https://www.transnet.net/InvestorRelations/AR2019/Transnet%20AFS%202019.pdf>). Some rolling stock currently operating around the world can be up to 60 years old. The assumption of an asset life of 20 years can therefore be deemed conservative for new equipment, although it may be more realistic for the refinancing of used equipment.

Contents

I. Benefits from the
Luxembourg Rail Protocol

II. Methodology: assessing
direct financing cost
reductions

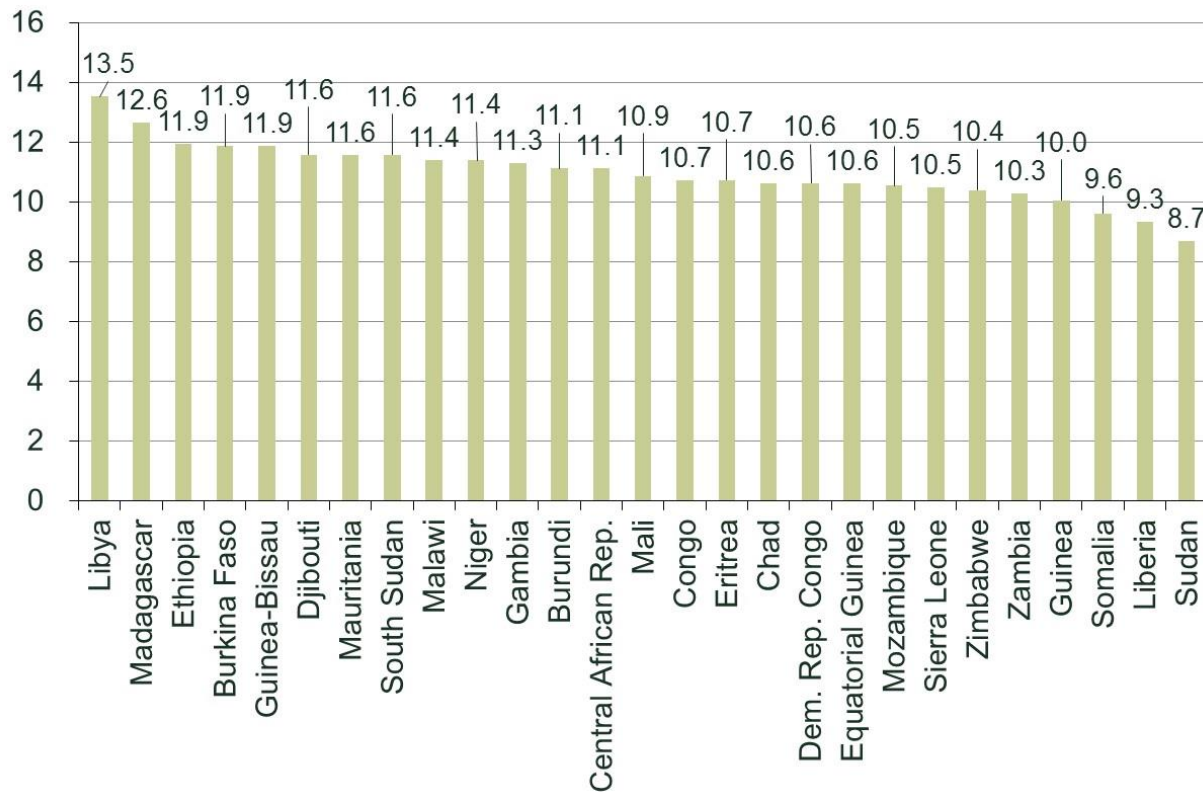
III. Results



Results of the analysis (1/3)

Net present value of benefits (in \$m) for an initial rolling stock value of \$100m

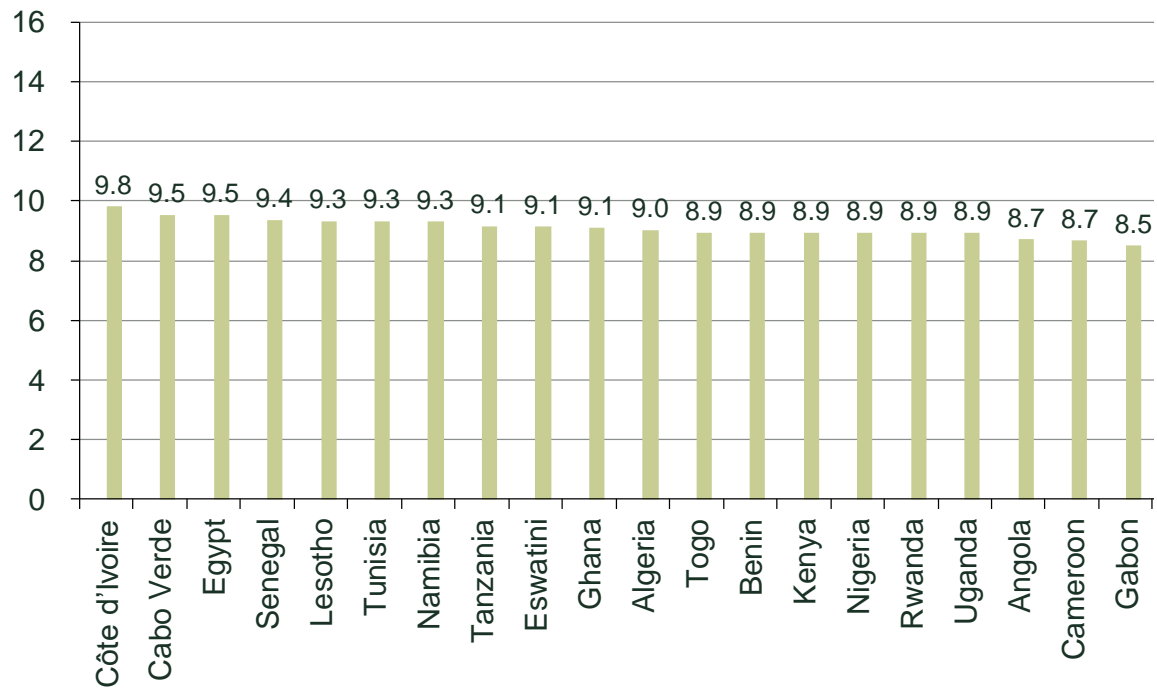
Countries with an OECD country risk classification of 7



Results of the analysis (2/3)

Net present value of benefits (in \$m) for an initial rolling stock value of \$100m

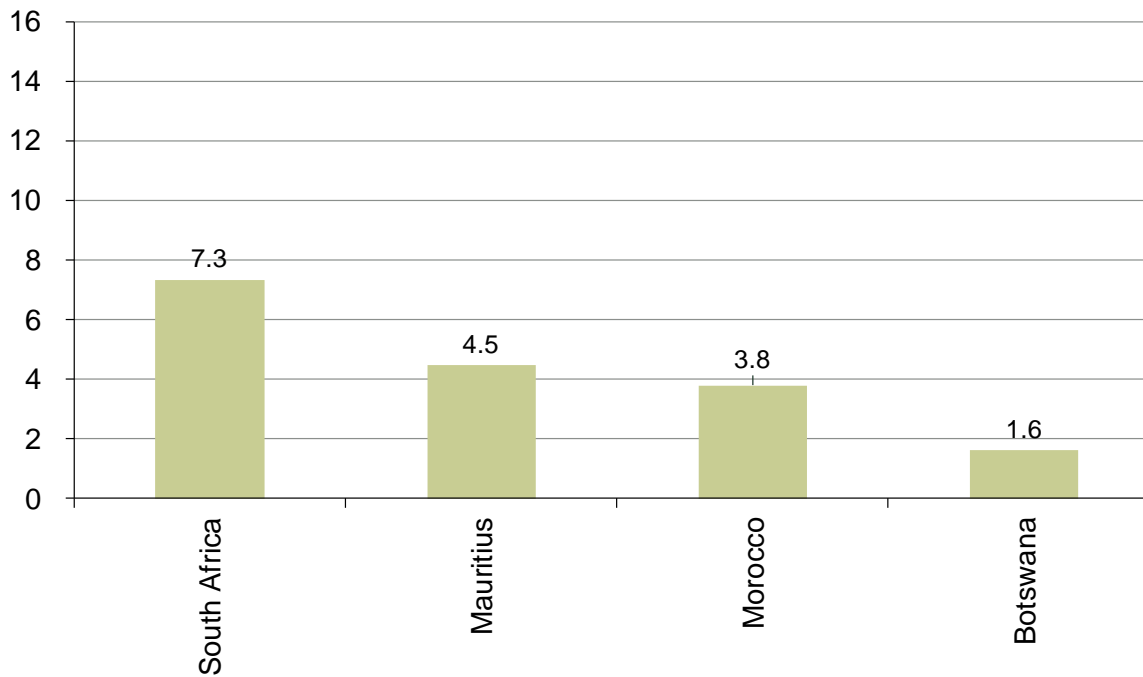
Countries with an OECD country risk classification of 5-6



Results of the analysis (3/3)

Countries with an OECD country risk classification lower than 5

Net present value of benefits (in \$m) for an initial rolling stock value of \$100m



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