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TANZANIA

LOGISTICS RISK REPORT

INCLUDES THE BMI OPERATIONAL RISK INDEX

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Tanzania Logistics Risk Report Q4 2016

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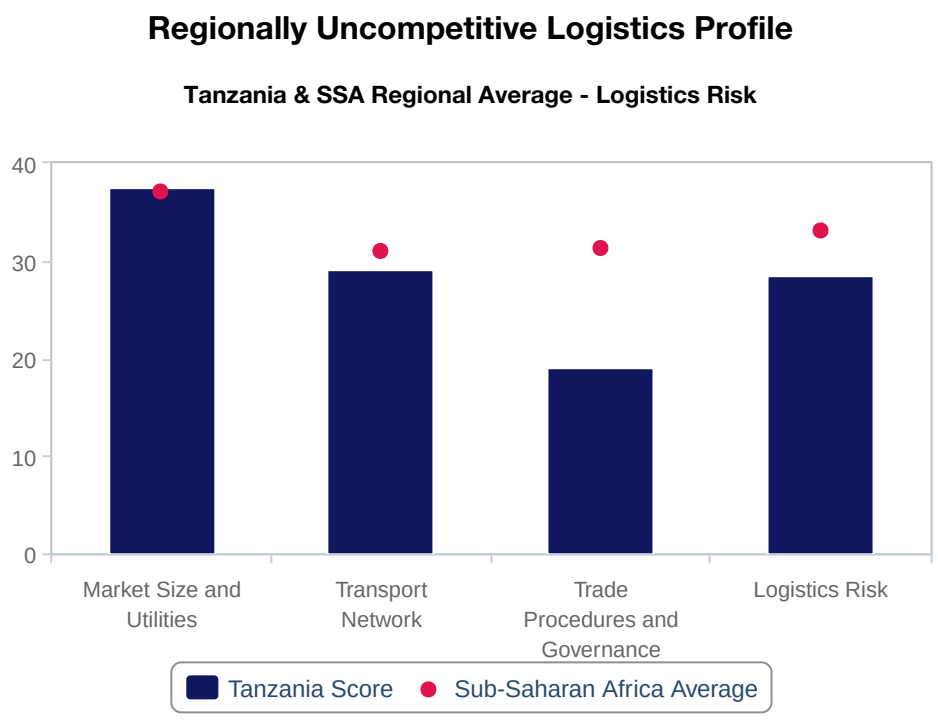
BMI View

BMI View: *Due to its strategic location, Tanzania's transport system serves as an important link in regional trade, enabling landlocked neighbours to access maritime trade routes through Tanzania. However, firms still face high trade costs due to weak inland connecting routes and port congestion that together raise the risk of supply chain disruptions. Meanwhile costly and time-consuming trade bureaucracy significantly dents price competitiveness for firms operating in the country compared to those in neighbouring Kenya. Though Tanzania offers competitive packages in terms of pricing and accessibility for a number of important utilities, notably water and electricity, reliability of energy supplies is a key drawback for energy-intensive operations. These factors contribute to the country's uncompetitive score of just 28.6 out of 100 for Logistics Risk, ranking the country 32nd out of 48 countries, well behind Mozambique and marginally ahead of Uganda. This represents the country's lowest score and regional ranking in the BMI Operational Risk Index, highlight the severe supply chain risks that firms will continue to face as various transport and electricity infrastructure developments slowly come online.*



Note: 100 = Lowest risk; 0 = highest risk. Source: BMI Logistics Risk Index

Trade Procedures and Governance (19.1/100): Businesses in Tanzania face costly and time-consuming export and import procedures that significantly dent the country's logistical competitiveness in contrast to neighbouring Kenya. The main impediment to trade efficiency is the severe congestion at the main port in Dar Es Salaam as firms encounter lengthy port and terminal handling procedures. In addition, frequent accidents, multiple road blocks as well as poor road and rail quality slows transit speeds and raises risks of supply chain disruption as well as inflated transit costs along vital inland transport routes. This state of affairs significantly drags down the country's logistical appeal and risks are compounded by onerous trade bureaucracy and high border compliance costs. The combined trade costs are among the highest in the East-African sub-region, such that Tanzania ranks in an uncompetitive 42nd place out of 48 Sub-Saharan Africa (SSA) countries for this sub-pillar.

Transport Network (29.1/100): A key risk to investors in Tanzania stems from the country's underperforming transport network, which is preventing it from fulfilling its role as a gateway for regional trade in East Africa and creating supply chain delays for Tanzania's importers and exporters. While a number of projects are under way to improve the existing network, investors in the short-medium term will face port congestion, increasing the cost of imports and exports, and poor quality transport infrastructure exacerbating risks of cargo damage and shipment delays.

Market Size and Utilities (37.6/100): Tanzania's utilities sector still reflects its status as a developing country, with water shortages, blackouts and slow internet download speeds representing significant risks to investors. While the country does have some of the lowest electricity costs in the region, lengthy and frequent power cuts mean businesses are often reliant on back-up diesel generators at extensive cost. Furthermore, access to water is variable across the country, with even the capital, Dar es Salaam, experiencing on average just nine hours of water per day.

Table: Tanzania - Logistics Risk

	Market Size and Utilities	Transport Network	Trade Procedures and Governance	Logistics Risk
Tanzania Score	37.6	29.1	19.1	28.6
Sub-Saharan Africa Average	37.1	31.0	31.3	33.1
Sub-Saharan Africa Position (out of 48)	19	26	42	32
Global Average	49.7	47.1	49.2	48.6
Global Position (out of 201)	156	156	192	180

Note: 100 = Lowest risk; 0 = highest risk. Source: BMI Logistics Risk Index

BMI's Operational Risk Index quantitatively compares the challenges of operating in 201 countries worldwide. The index scores each country on a scale of 0-100, with 100 being the lowest risk state. The entire index consists of 20 sub-index scores and 79 individual surveys and datasets, which all contribute to the headline score. A full methodology can be found at the end of the report.

SWOT

SWOT Analysis

Strengths	▪ Tanzania's airports play a vital role in the country's expanding tourist sector and are steadily increasing their role in trade supply chains. ▪ Low electricity costs drive down set-up and operational costs for businesses.
Weaknesses	▪ Heavy taxes contribute to the rising cost of fuel, which increases transportation costs for investors, while high trade costs particularly for imports, dent competitiveness. ▪ Access to water is poor, with some areas of the country experiencing just five hours of water per day. Sanitation rates are even worse, threatening the health of the labour force. ▪ Download speeds are low compared with neighbouring countries Kenya, Rwanda and Mozambique, limiting the productivity of companies that require internet connectivity for their operations. ▪ High trade growth has caused congestion at the nation's ports and has led to supply chain delays and increased transport costs.
Opportunities	▪ Mobile broadband subscribers are increasing, and there are already a number of mobile operators driving m-commerce and financial banking products, increasing investment opportunities in the country. ▪ Rail is expected to play a growing role in freight transport owing to new routes between Tanzania and neighbours Rwanda and Burundi, as well as routes built out of the country's mining bases; this will decrease the pressure on road freight and aid in tackling congestion. ▪ Expansion to the country's ports and airports will help to reduce congestion and meet growing demand.
Threats	▪ The country is highly reliant on hydropower for electricity. This decreases the reliability of electricity supply during periods of drought.

SWOT Analysis - Continued

- Projections indicate that by 2025, Tanzania will experience water stress due to population growth and the resulting increase in consumption.
- Greater need for imported fuel to meet rising demand will push up fuel prices, increasing transport costs for investors.

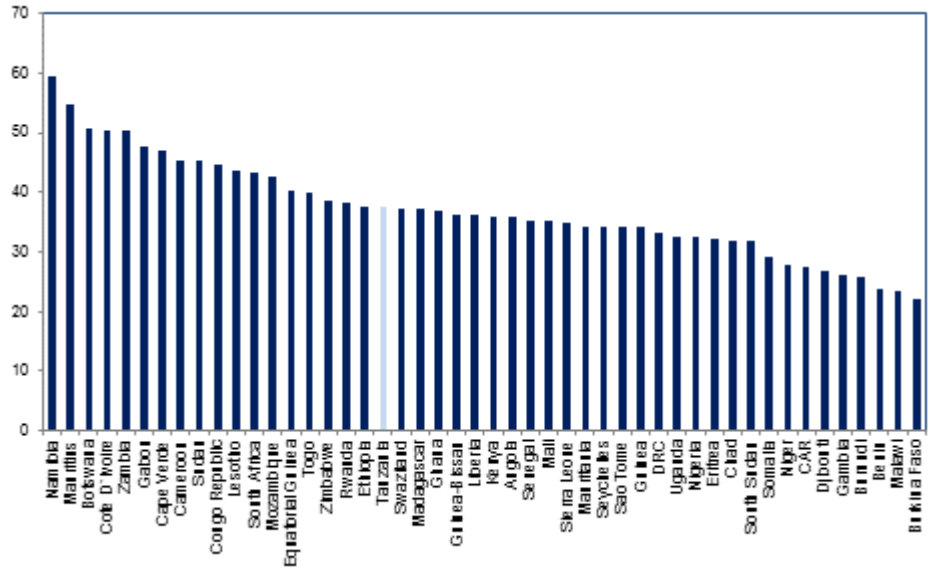
Market Size And Utilities Analysis

Market Size And Utilities

BMI View: *Tanzania's utilities sector still reflects its status as a developing country, with water shortages, blackouts and slow internet download speeds representing significant risks to investors. While the country does have some of the lowest electricity costs in the region, lengthy and frequent power cuts mean businesses are often reliant on back-up diesel generators, which, considering the country's high fuel prices, can considerably raise operating costs in energy-intensive industries. Furthermore, access to water is variable across the country, with supply disruptions frequent, even in major cities such as Dar es Salaam. These risks are factored into the country's score of 37.6 out of 100 for Market Size and Utilities, which places it 19th in the region, marginally ahead of Kenya but behind Mozambique.*

Inadequate Utilities Provision Signals High Overheads For Energy-Intensive Industries

Sub-Saharan Africa - Market Size And Utilities Risk



Note: 100 = Lowest risk; 0 = highest risk. Source: BMI Logistics Risk Index

Latest Market Size And Utilities Analysis

- Economic growth is projected to reach 6.7% during 2016 and 2017, boosted by major public and private investments in infrastructure. The availability of gas for electricity generation from the Mtwara pipeline that was completed in 2015 will provide more stable and cheaper power supply to industries, stimulating domestic production. In addition, public support for agriculture, in particular the introduction of out-grower schemes by government agencies and private firms, as well as the provision of fertiliser and other inputs to farmers, are expected to contribute to overall GDP growth in the medium term. The development of water utilities such as the Upper Ruvuu Treatment Plant Expansion Project and the Arusha water supply system expansion will help alleviate some risks for water-reliant businesses near these locations, however, stronger and more robust water management framework is needed to address increasing water scarcity that was recently exacerbated by drought conditions in 2015-2016. The government has demonstrated a commitment to public-private partnerships in agriculture, infrastructure and services, while foreign investors are also showing interest in these arrangements.
- With a penetration rate of 71.5% in 2016, the Tanzanian mobile market has strong growth potential, which will be driven by the focus on mobile payment and advanced data networks. The arrival of **Halotel**, backed by **Viettel**, will boost rural coverage in the country, benefitting business connectivity. Halotel promises to reach 95% coverage by the end of 2016, while **Tigo** is planning nationwide LTE coverage. Tigo, becoming the second largest player following its acquisition of **Zantel**, has greater economies of scale to make these investments. The expanding internet connectivity of the country via mobile links is leading to greater internet knowledge and expertise among the country's workforce and is also opening up new opportunities in supply chains for better cargo tracking.
- There have been no developments in the domestic refining sector and Tanzania has no domestic refining capacity and no projects are under proposal or development, which will leave the country highly import reliant over the medium-long term. In June 2016, the Energy and Water Utilities Regulatory Authority (EWURA) raised the retail price of petrol by 4.49%, diesel by 1.95% and kerosene by 1.84%. The increase reflected the improved crude price over Q216, consequently firms operating in the country will face increasing energy costs over the medium term, which can be exacerbated by currency depreciation.

Utilities Cost And Reliability

Although firms already enjoy competitive electricity costs, weak transmission and distribution infrastructure, particularly in rural areas and small towns, as well as over-reliance on hydropower raise severe power reliability challenges. Businesses therefore need to install private back-up power sources, where most rely on diesel-powered generators that require fuel which is costly in Tanzania by regional standards. These factors considerably heighten operating costs for energy-intensive operations in key industries such as tourism, mining, commercial farming activities and transport services and telecommunications. As such, Tanzania places 24th regionally for Electricity and Fuel, with a score of 45.0 out of 100. The promise of natural gas production and increasing investment in thermal power infrastructure in the long term will provide a major boost to Tanzania's utilities competitiveness.

Over the medium term, firms will enjoy significant growth in mobile and internet penetration rates, which could facilitate improvements in the country's download speeds and coverage in the medium term. The

advent of mobile financial services will boost financial inclusion and present new business opportunities for firms in the tertiary sector. However, businesses face challenges emanating from the country's dwindling freshwater reserves, where risks are more acute in rural areas, which threaten industries such as agriculture and tourism. Meanwhile the telecommunications sector remains underdeveloped at present compared to countries such as Rwanda and Kenya where businesses enjoy greater connectivity. Consequently, we score Tanzania a low 30.1 out of 100 for Telecommunications and Water, which places the country in 24th position out of 48 states in the SSA region.

Electricity

Though electricity costs are low by regional standards, businesses operating in the country face frequent power blackouts even in major cities such as Dodoma and Dar es Salaam, which can result in high productivity losses, necessitating the use of back-up generators. The country is highly reliant on hydropower, which leaves it vulnerable to drought, while weak transmission and distribution infrastructure means service interruptions are a regular occurrence. In addition, limitations in grid access mean that energy-intensive businesses have to locate their operations near major cities or provide their own power supply at a considerable additional cost. In the long run the electricity sector will receive a further boost from the increasing integration into the regional power pool, ongoing domestic capacity upgrades as well as the liberalisation of the industry, thereby allowing private partners to generate and distribute electricity in the country. However, thus far, private companies have been unable to effectively compete with the state-owned **Tanzania Electricity Supply Company** (TANESCO) and its monopoly over the sector. As a result, businesses seeking to invest in the power industry may face high entrance barriers to the market.

Table: Tanzania - Electricity Risks

Source	
Energy mix (2016 BMI estimates): Hydropower (38.6%), thermal: natural gas (52.2%), coal (3.6%) and oil (3.5%).	▪ Energy generation is mostly supplied by thermal energy sources and the remainder of installed network capacity is mainly reliant on hydropower, while renewable energy sources are limited. High reliance on hydropower raises risk of supply disruptions during periods of drought. The Tanzanian power sector will become increasingly diversified on the back of increased gas and coal-fired generation, while the government seeks to decrease reliance on hydropower. Increased gas supply from new discoveries will help to drive further investment into gas-fired capacity.
Partially import-reliant	▪ The availability of gas for electricity generation from the Mtwara pipeline that was completed in 2015 and the country's vast resources will provide more stable and cheaper power supply to industries, stimulating domestic production in the long run. Due to the country's current limited generation capacity and high prevalence of blackouts, electricity auto-production (use of fuel-powered generators and solar panels) is common, raising operating costs.

Tanzania - Electricity Risks - Continued

Source

- The country's inability to meet its electricity generation needs domestically means it has to import electricity from its neighbours, such as Zambia, Uganda and soon Kenya (upon completion of the transmission link in 2019) which leads to reliability risks. Electricity imports from Tanzania's neighbours have been inconsistent, in part because these countries also depend on hydropower, which exposes these states to power shortages during droughts. Tanzania is set to sign a 400MW power purchase agreement with soon-to-be energy-rich Ethiopia according to Tanzanian authorities in September 2016. This will be followed by the installation of power generation and transmission facilities, which are expected to serve the region's power needs for next 25 years.

Availability

24% of the population has access to electricity

- Tanzania's low electrification rate ranks it 32nd out of 48 states regionally for this indicator, between Ethiopia and Rwanda.
- Access to electricity varies according to location due to structural discontinuities of the national grid exacerbated by years of underinvestment in maintenance and new infrastructure. Though 70.6% of the urban population have access to electricity, rural electrification is critically low at 3.8%. Companies based in rural areas will face the extra outlays of installing diesel and solar power generation. Government efforts to increase electrification rates will help boost small-scale distributed renewable energy solutions.
- Despite these risks for businesses, once they are connected to the grid, the initial connection process for companies is relatively easy, with four procedures required to get electricity, taking 109 days, which compares well against the SSA average of 130.1 days.

Reliability

Typical monthly power outages: 9.2

Value lost to electrical outages: 17.6% of total sales

Transmission and distribution losses: 22.2% of total output

- Tanzania has experienced numerous drought-related power crises in past decade. The value lost to electrical outages is the second highest in SSA, behind CAR with 25.1% of total sales and significantly higher than Kenya (7.1%), Zambia (7.5%) and Uganda (11.5%). Furthermore, the reliability of the electricity grid is low, with frequent brownouts and blackouts disrupt business operations and raising overhead costs considerably. In 2011, TANESCO had to institute rolling blackouts of up to 12 hours, forcing about 50 factories to close down and lay off their employees.
- Tanzania's discovery of natural gas will also enhance the country's long-term energy security. The country is estimated to have over 53.2trn cubic feet of gas reserves off the southern coast, generating considerable interest from foreign investors. The construction of a backbone interconnector between Tanzania, Kenya and Uganda will enable improved power distribution and trade between the countries. This will be further enhanced should the construction of another transmission line between Tanzania and Kenya be completed at Singida.
- Over the short-to-medium term, increasing demand leaves Tanzania heavily reliant on energy imports from Uganda and Zambia and resultantly, the country more vulnerable to power shortages and rising prices. In an effort to enhance the reliability of the power supply, Tanzania is working on increasing its hydropower and thermal power plants as well as transmission efficiency and coverage, however many projects face delays due to fiscal constraints and considerable state dominance and bureaucracy in the sector. These gains are likely to only be significantly felt by businesses over the medium-long term (beyond 2020).

Cost

Tanzania - Electricity Risks - Continued

Source

USD0.10 per kilowatt hour (KWh)	▪ The current estimated aggregate cost of USD0.10/KWh, places Tanzania 19th out of 48 states in SSA based on electricity cost-competitiveness, behind Burundi (USD0.09/KWh) and ahead of Kenya (USD0.12/KWh). Additionally, the tariff structure remains opaque; therefore, despite receiving limited electricity some days, businesses may be charged a fixed tariff rate. Meanwhile, the frequency of blackouts necessitates energy auto-production making Tanzania unattractive for energy-intensive industries and economically inhospitable for small to medium sized enterprises. Investors must therefore be aware of this extra-cost outlay that is required to ensure a reliable power source for operations. ▪ The government heavily subsidises electricity costs, though these have not been enough to meet TANESCO's rising operational costs, creating losses that accrue to billions. These losses are unsustainable, and, consequently, the company has submitted an application for a power tariff hike that will likely see rising costs based on consumption as opposed to the current standard tariff structure. If this extra cost is passed on to consumers, the country's electricity costs will rise, decreasing Tanzania's competitiveness and attractiveness to investors. ▪ Furthermore, the highly subsidised and state-dominated power sector means that foreign and private sector participation in the sector will remain limited, perpetuating power supply challenges over the medium to long term.

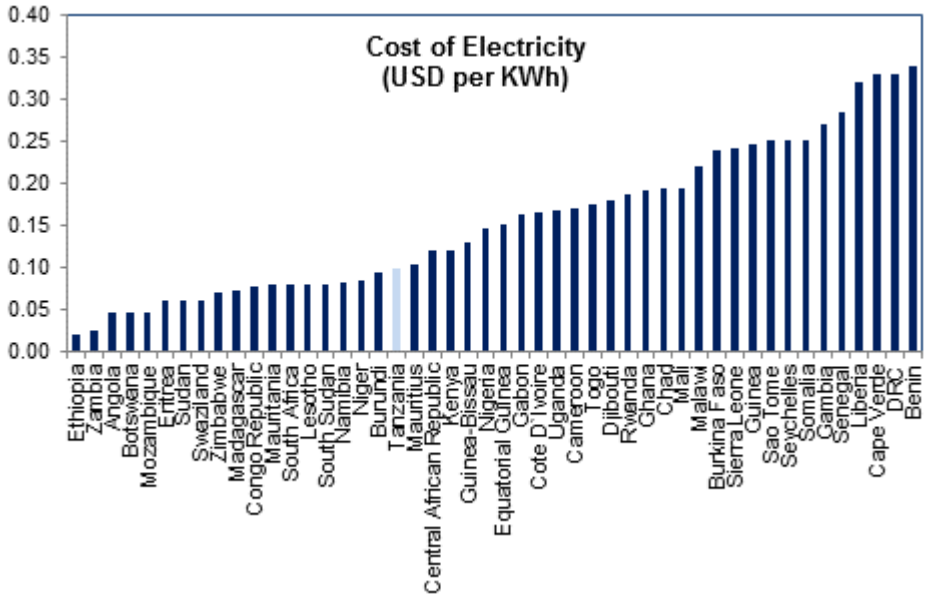
Other Risks

	▪ Increasingly adverse climatic conditions over the medium-to-long term will raise risk of perennial droughts devastating hydropower production. Theft of power from the grid by remote and informal communities results in heavy losses from the system. ▪ Despite government's plans to use natural gas to boost the ailing power grid, we note this is unlikely to impact on energy infrastructure and the surrounding supply chain logistics in the short term. Our Oil & Gas team highlights a weak oil price environment and an uncertain regulatory picture will hinder progress in the country's natural gas sector. ▪ Although Tanzania has opened the door to wider private sector participation, the broader business environment remains challenging and companies will face a number of bureaucratic and regulatory barriers to entry. The physical state of infrastructure is also poor, and substantial investment is needed in upgrading and expansion. For gas, there are concerns over the security of feedstock supply, and for renewables start-up costs are often prohibitively high.

Source: BMI, World Bank

Benefits Of Regionally Competitive Electricity Tariffs Offset By Unreliable Utilities

SSA - Cost Of Electricity (USD Per KWh)



Source: National statistics, BMI

Fuel

Despite having vast gas resources and the region being rich in oil, several factors will limit downstream expansion in Tanzania, including domestic price caps and poor connectivity between regional markets. Tanzania is heavily dependent on imported refined oil products, increasing its vulnerability to shortages in the event of disruptions to the fuel supply chain. High import reliance also means that fuel prices are high and rise and fall in tandem with global oil prices, while the state has limited fiscally capacity to insulate the market from sharp exogenous price shocks. Transport-reliant and energy-intensive businesses will have to maintain private fuel storage capacity in order to mitigate the risk of shortages and sporadic scarcity-induced fuel price shocks, the frequency of which is heightened outside of major urban areas.

Table: Tanzania - Fuel Risks

Source

No refineries in operation. Complete import reliance.

- The country has recently discovered vast gas reserves therefore theoretically ensuring ample fuel supply to meet business needs over the long term as supporting infrastructure is developed and industrial use of this commodity increases.
- Steady investment into exploration and a string of major discoveries will likely lead to significant reserves growth in the coming years, however muted investor interest on the back of low global oil and gas prices, regulatory barriers and fiscal constraints will slow the commercialisation of the country's hydrocarbon reserves, while the non-operational TIPER Refinery requires significant upgrades.
- There have been no developments in the domestic refining sector in 2016; Tanzania has no domestic refining capacity and no projects are under proposal or development. Tanzania is therefore heavily dependent on imported refined fuels which leave it vulnerable to shortages if there is disruption to the supply chain. Fuel is sourced from Saudi Arabia, the UAE and India with Saudi Arabia providing the vast majority. As of September 2016, Tanzania will adopt the bulk procurement system for the import of liquefied petroleum gas (LPG). Bulk procurement was brought in to make the importation of petroleum products easier, help regulate prices and promote efficiency in the sector.

Availability

Refined Petroleum Net Exports: -60,600 b/d

- Given the small size of the domestic market, the retail sector is relatively competitive. The leading market shares are held by **Puma Energy** (11.67%) and **Oryx Energy** (10.29%); other major companies include **Camel Oil**, **Total**, **Oilcom**, **Gapco**, **Mogas**, **Lake Oil** and **Engen**. The TIPER Refinery has faced significant viability concerns over the past few decades and is no longer operational, due to financing constraints, which diminishes the prospects of domestic refined resources in the medium term. In the absence of domestic refining capacity, Tanzania is set to become increasingly dependent on imported fuels such that investment in expansion and upgrading of existing import and storage infrastructure will be needed to support this growth in demand.
- Internally, Tanzania has a product pipeline system that transports petroleum products from the port of Dar es Salaam to inland areas. Storage capacity is limited, consequently fuel shortages remain prevalent raising lead times and productivity losses for businesses. The port at Dar es Salaam is the main entry point for fuels, accounting for around 99% of all imports in 2014, with the remainder transiting the Sirari border. The government has also been improving its oil terminals and extending domestic storage capacity, including an additional 100,000 cubic metres at the mothballed TIPER refinery in Dar es Salaam.
- We forecast a strong rise in net fuels imports, reaching 112,000b/d by 2025 driven by robust demand on the back of economic growth, rising industrial electricity demand and increasing urbanisation. Tanzania also re-exports a significant portion of fuels, around 30,000b/d, largely to Malawi, Kenya, Rwanda, Burundi, the DRC and Zambia.

Reliability

- Consumption growth looks strong for both refined fuels and gas, albeit from a comparatively low base supported by an expanding population and economic development. Oil consumption continues to outstrip gas, although development of the country's substantial gas resources could tip the balance, as the power sector reorients its generating capacity. Gas consumption will be met domestically, as planned gas-fired capacity expansion in the power sector will drive strong gas demand growth, but a lack of

Tanzania - Fuel Risks - Continued

Source

refining capacity will see an increased reliance on imported fuels, meanwhile irregular allocation of storage space raises risk of sporadic shortages.

- The transport sector is the largest contributor to fuel consumption, in addition to thermal power plants and diesel generators, which are used as back-ups during power shortages. Fuel consumption will rise in tandem with increasing vehicle ownership, hydropower constraints and industry growth. Improved diversification of electricity supply will reduce power-reliance on oil, freeing up domestic supply of the commodity for industrial use at sustainable prices.
- In particular, we forecast a robust increase in liquefied petroleum gas (LPG) consumption in the residential sector, driven by continued urbanisation and a shift away from traditional biomass and waste. Currently, biomass (largely charcoal and firewood) represents around 88.0% of primary energy consumption. In contrast, oil and gas represent just 12.0%. This leaves significant upside risk to fuels consumption from increased fuel switching.

Cost

USD0.72 per diesel litre

- The price of fuel in Tanzania is relatively inexpensive, less than the regional average of USD0.93 per diesel litre. In addition the impact of subdued global oil prices significantly reduces costs for investors that rely on road freight.
- However, fuel scarcity is a lingering concern, and sporadic shortages have potential to artificially inflate prices, which raises overheads considerably for energy-intensive firms. Limitations in fuel storage and inefficiency at the ports mean that businesses and consumers may experience higher fuel prices as suppliers pass on the cost of increases in storage costs to consumers
- Domestic fuel prices in Tanzania, both retail and wholesale, are subject to the monthly Cap Prices, issued by the Energy and Water Utilities Regulatory Authority (EWURA). The caps are adjusted in line with changes in international oil prices and fluctuations in FX rates. The intention is to preserve fair prices for consumers and minimum fixed margins for oil marketing companies (OMCs). However, OMCs have opposed the caps, arguing they limit the profitability of the sector. In June 2016, EWURA raised the retail price of petrol by 4.49%, diesel by 1.95% and kerosene by 1.84%. The increase reflected the improved crude price over Q216.
- The weak oil price, however, will benefit energy-intensive industries like manufacturing and heavy industry, given that fuel forms a high proportion of a firm's cost base and is usually sourced from diesel-run generators. This will drive expansion and investment bodes well for infrastructure development, as manufacturing drives development of factories, labour facilities, supply chain logistics and access to facilities.

Other Risks

- Due to regional insecurity there is a significant risk of piracy and terrorist attacks targeting oil tankers and storage facilities. Strike action in the transport sector, mainly ports, will also disrupt supply chains and raise delays and storage costs.
- One of the main problems facing Tanzania's fuel sector is the high cost of delivery of petroleum products into the country. This is largely due to the fact that most of the imported product is transported by roads that are of poor quality, increasing transport costs, as well as the high tax component in the price structure, which can be up to 55% of the 'freight on board' price. In addition further currency depreciation will increase the cost of fuel.

Tanzania - Fuel Risks - Continued

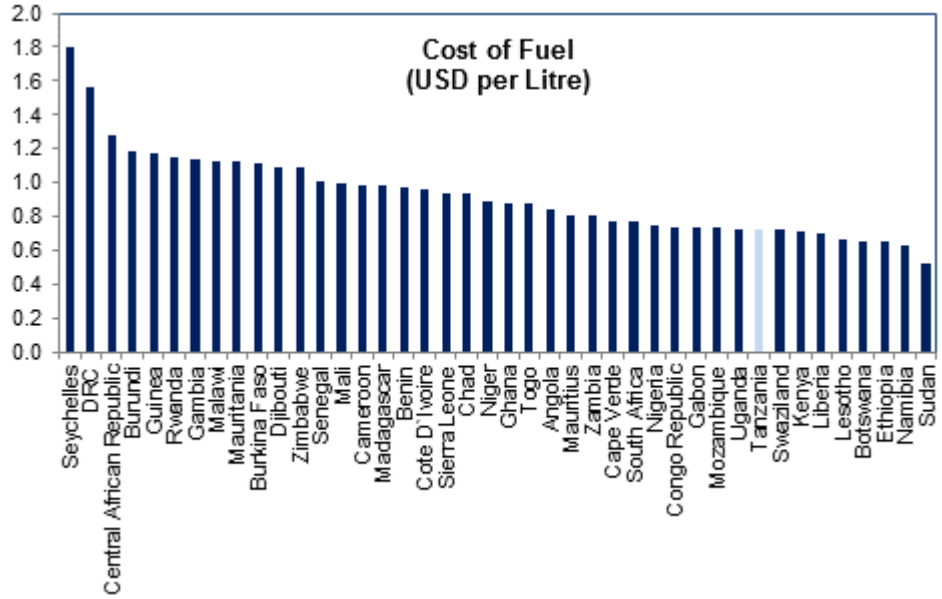
Source

- Development of the Tanzanian downstream will remain heavily constrained by a small domestic market, low level of infrastructure, poor regional connectivity and domestic fuel price caps.

Source: BMI, Global Petrol Prices

Rising Fuel Costs Will Dent Sub-Regional Competitiveness

SSA - Cost Of Fuel (USD Per Diesel Litre)



Source: National statistics, BMI

Telecommunications

Businesses operating in Tanzania face challenges with regards to internet connectivity due to the limited telecoms infrastructure and years of underinvestment in the sector. Risks are particularly acute in rural areas where mobile and wireline coverage is severely restricted. Even in urban areas service disruptions may occur due to power supply interruptions and connectivity costs remain high. Over the medium term, the arrival of **Halotel**, backed by **Viettel**, will boost rural coverage in the country, while ongoing investment in fibre and telecoms infrastructure and the development of mobile financial services bodes well for e-commerce and retail sectors in the long term. Like many other states in SSA, Tanzania's population has gained access to the internet via mobile connections, rather than more costly broadband operations, with the number of 3G/4G users set to increase considerably over the medium term. Nevertheless the market remains uncompetitive for e-commerce compared to regional leaders such as Kenya and Rwanda.

Table: Tanzania - Telecommunications Risks

Source	
The main telecommunications companies that operate in the country are **Tigo, Halotel, Airtel, Vodacom, and Zantel** Fixed line: **Tanzania Telecommunications Company Limited (TTCL)**	▪ There are several players in the Tanzanian mobile market, while the fixed line market is dominated by state-run TTCL. Demand for mobile data and financial services remains robust and growth will be led by rising incomes and the dominance of the private sector in the telecommunications sector. ▪ The government has harnessed fibre-optic cabling, ICT centres and other facilities to improve the running of the government and its services, bringing both direct and indirect benefits to businesses by lowering delays in basic bureaucratic procedures while delivering e-health and education to the Tanzanian workforce. • In the private sector Tigo has acquired Zantel, and Viettel has launched services under the Halotel brand. This will drive subscription growth in the market through greater investment and wider coverage. Business opportunities via mobile platforms, are already starting to emerge, with products such as **M-Pawa**, which allows customers to save and borrow money using their mobile phones, as well as a mobile money transfer service by Tigo, which allows **Tigo Cash** and **Tigo Pesa** subscribers in Rwanda and Tanzania to use transferred funds to access a range of services including airtime top-ups, transport, utilities payments, cash withdrawals and transfers.
Availability	
3.8 broadband subscribers per 100 people (BMI 2016 estimate); mobile penetration rate: 71.5% of the population; 0.3 telephone lines per 100 inhabitants	▪ Overall internet penetration rates are among the lowest regionally at 4.4% of the population, (well below Kenya's 39%) indicating a large untapped online consumer market. There is room for growth in mobile services in Tanzania, especially in rural areas, which represent around two-thirds of the country's population. The National ICT Broadband Backbone (NICTBB) is still ongoing and is likely to eventually lead to fibre networks being available to consumers and businesses. This will remain a small part of connections, especially relative to dedicated mobile broadband, but we still expect continuous growth in the segment, with more than 3mn subscribers and a penetration rate of just under 5% in 2020.

Tanzania - Telecommunications Risks - Continued

Source

- In 2015, Tigo, Airtel, Vodacom and Zantel made their mobile financial services (MFS) systems fully interoperable while Tigo joined Smile in launching LTE in the market (the latter only offering data services). Vodacom will make its network 4G-ready while waiting for the right licence and authorisation to launch, and fixed incumbent TTCL is also looking to launch its 4G network by 2017. This extra competition will drive subscription growth in the Tanzanian market and improve connectivity between supply chains. **BMI** expects sustained growth in the mobile broadband market over the medium-to-long term. We expect mobile subscriptions to grow to 52.0mn in 2020, reaching a penetration rate of 83.5%, with the main driver for that growth being 3G and 4G connections, which by then will represent 30.2mn subscribers.
- The entry of Halotel into the market will be a major boost to growth in the country, as we expect the Vietnamese company to follow a similar strategy as in its other African subsidiaries, Mozambique, Cameroon and Burundi. In those markets, Viettel has focused on bringing connectivity to rural areas via voice and data networks, and doing so in Tanzania would enable the operator to reach a large untapped market. Viettel will invest USD1bn in 3G networks in the country and plans to cover 95% of the population by the end of 2016.

Reliability

- Though the telecommunications network has been improving recently, over the medium term it will remain inadequate by international standards due to the underdevelopment of mobile services while fixed line infrastructure remains outdated. Fixed line download speeds in Tanzania are an estimated 5.5Mb/s which is lower than Kenya's (7.5Mb/s), Ethiopia (8.35Mb/s) and Rwanda (10.1Mb/s). While connectivity does vary according to location, slow download speeds reduce the productivity of businesses and decrease the connectivity available to these businesses to contact other operations, either domestically, regionally or globally.
- The fixed voice market suffers from a lack of investment, with incumbent TTCL focusing more on its fledgling mobile operation than on its fixed network. We believe the trend will continue through to 2020, and greater mobile uptake will also lead to increased fixed-mobile substitution for the few remaining households still predominantly using fixed line services. Businesses in rural areas will have to rely on mobile and satellite connections for connectivity, while those in urban areas will have to supplement fixed line connections with mobile back-up connections due to the high likelihood of service disruptions and slow speeds.
- Investment in 4G technology and strong demand for data products will support 3G/4G market growth and boost the availability of high-speed connections for businesses and consumers in the medium term.

Cost

Fixed broadband internet tariffs USD47.90 per month

- Businesses face moderately low telecommunications costs over the medium term and many consumers access the internet via lower cost mobile connections. Tanzania ranks ninth regionally for fixed broadband internet tariffs, cheaper than regional peers such as Rwanda (USD760. 60) and Zambia (USD157.60), but costlier than South Africa (USD32.30) and Zimbabwe (USD21.90).
- Increased competition, user growth and the development of telecommunications infrastructure will help to drive down internet and telephony costs over the medium to long term.

Tanzania - Telecommunications Risks - Continued

Source

- As for fixed broadband, the market has been driven by an increase in the number of individuals and households subscribing to the service. The market will always be hindered by the price of equipment, with a Smartphone far cheaper than a notebook, but there remains some traction, especially in the business segment.

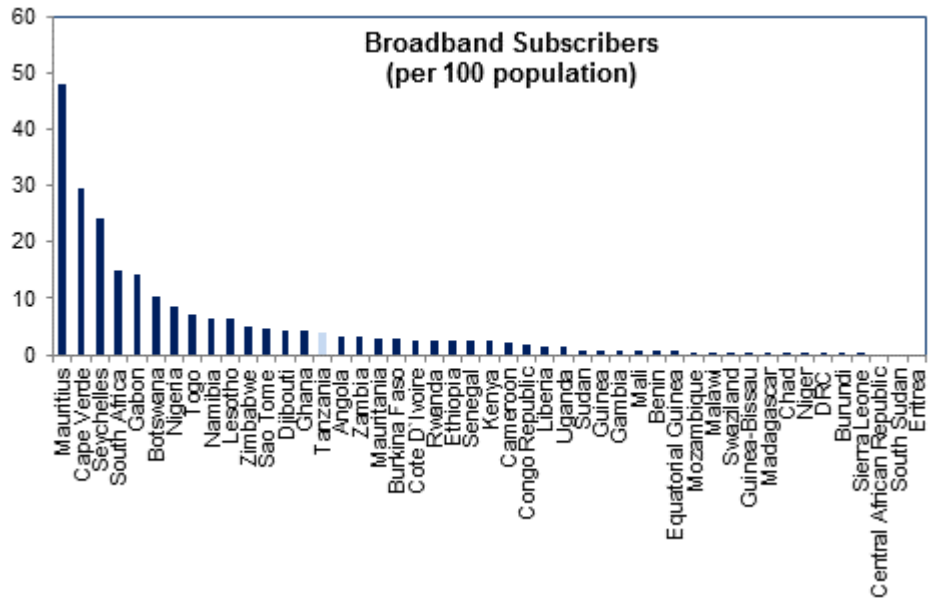
Other Risks

- As the country becomes more connected, companies will increasingly require robust cybersecurity protection. The threat of cybercrime remains significant due to the low number of secure servers of 1.5 per 1mn people and high risk of organised crime and regional terrorism.
- Internet access is not subject to government censorship at present; however a rise in political risks may prompt the government to shut down internet connectivity during periods of turmoil.

Source: BMI, World Economic Forum's Global Information Technology Report 2015

Rising Internet Connectivity Will Boost Business Environment

SSA - Broadband Subscribers (Per 100 People), 2015



Source: BMI

Water Availability

Poor water availability poses a high risk to investors in Tanzania. Water supply and basic sanitation in Tanzania is characterised by low levels of access, in particular in high density peri-urban settlements and in rural areas, as well as poor service quality. The country's water sector is highly fragmented and underfunded, with many utility companies barely able to cover their operational and maintenance costs due to low tariffs and poor efficiency. In addition, there are significant regional differences, with the greatest water coverage found in major cities such as Arusha and Tanga. Climate change, unsustainable water usage and rising regional water demand will make water resources even scarcer in the long run, while weak maintenance and poor infrastructure results in frequent water cuts. As a result, large water-intensive industries such as commercial farming, textiles, and energy production may focus their attention elsewhere in SSA for investment or assume the high costs of building water storage infrastructure and securing private supplies. The poor quality of Tanzania's water also multiplies operational costs, further reducing the country's appeal to foreign investors, while increasing urbanisation rates add further stress to urban supplies. Poor access to clean drinking water increases the risk of workers contracting water-borne diseases, especially in rural areas and among low-income households. Consequently, businesses will face additional expense due to the necessity to provide bottled or filtered water to employees in many regions or risk enduring significant productivity losses due illness-induced absenteeism.

Table: Tanzania - Water Risks

Source	
Renewable internal freshwater resources per capita: 1,621 cubic metres (cu m)	▪ Tanzania ranks 24th regionally for water availability per capita in the region, between Senegal and Togo. The country's size gives it a varied climate with wide differences in rainfall. ▪ Lakes alone cover about 7% of Tanzania's land and Tanzania has access to Lake Victoria, Lake Tanganyika and Lake Nyasa as well as inland lakes: Lake Rukwa, Lake Eyasi and Lake Manyara. However, country is vulnerable to drought conditions and flood risks and the lack of infrastructure and a proper water management framework means that Tanzania will fail to harness its water potential, hence much is wasted. ▪ Furthermore in rural areas there is a dearth of infrastructure such as pipelines in place, limiting access to water, with only 1,840 square metres of irrigated land available. These issues will therefore impact investors, particularly those in water-intensive industries, which require reliable water supply for their operations and so will decrease Tanzania's attractiveness for certain industries. This decreases the available locations for investors to set up operations, particularly for those sectors where water resources are a

Tanzania - Water Risks - Continued

Source

necessity, such as in the agricultural, energy production and manufacturing sectors.
- Diminishing water resources also have a negative impact on the power sector that relies on hydropower.

Availability

63.2% of the total population has access to improved drinking water

- Despite having considerable renewable internal freshwater resources, access to water and sanitation remains low in Tanzania due to years of mismanagement of this sector and limited investment in supporting infrastructure. Roughly just half of the population has access to an improved water source, with stark differences between urban areas (about 77.2%) and rural areas (45.5%).
- A combination of drought, unsustainable usage, underinvestment as well as unsafe environmental practices has conspired to make raw water sources unproductive, deterring water-intensive industries.
- Access to sanitation is even lower than access to water, with just 16% of the population having access to toilets; this is poor by regional standards compared to Kenya and Rwanda where 30% and 62% of the population, respectively, have access to improved sanitation facilities. This is particularly problematic to the health of the labour force in densely populated, unplanned settlements and raises significant labour risks compared to regional peers. It is estimated that 12.1% of total deaths in Tanzania are water, sanitation and hygiene-related. This causes considerable cost to employers in terms of high absenteeism and staff turnover rates.

Reliability

- Of the 20 urban water supply and sanitation authorities that operate in Tanzania, just three are able to provide continuous water supply (Arusha, Songea and Tanga). In 11 other cities, water is supplied for at least 19 hours per day. In Babati and Mtwara, there is water supply for 12 hours per day, while the lowest figures come from the cities of Kigoma, Lindi and Singida. In the capital city, Dar es Salaam, water is supplied on average for nine hours per day. Furthermore, out of the rural water supply coverage, about 30% of the installed capacity of water facilities was non-operational due to factors such as drought and obsolete facilities. This limits the available locations for investors to set up operations, specifically those where water resources are a necessity, such as agriculture.
- Projections indicate that by 2025, Tanzania will experience water stress (defined as average per capita water resources below 1,500 cubic metres) due to population growth and the resulting increase in consumption. During the dry season, which usually lasts from June to October, the country already faces capacity problems as even large rivers can dry up or their

Tanzania - Water Risks - Continued

Source

flows decline substantially. This once again varies according to region, with some parts of the country receiving heavy rainfalls of 3,000mm per year, while others, such as the Dodoma Region or the Rift Valley, experiencing yearly rainfall averages of 600mm, thereby impacting future water reliability and heightening risk for sectors such as agriculture in the longer term.

- Tanzania's water resources are also under increased pressure from the relatively high freshwater withdrawals made. Although industry only accounts for 0.5% of freshwater withdrawals, the consumption patterns of the population will increasingly clash with the needs of water-intensive industries like agriculture and tourism, thereby enhancing the impact of water shortages on business operations. Specifically, the agriculture industry accounts for as much as 89.35% of total freshwater withdrawals, indicating the importance of the sector to employment and the national economy. In light of this state of affairs, growing competition between the population, agriculture and other industries will greatly constrain the future contributions of agriculture to GDP in particular.

Cost

Water: USD0.56 per cu m for industrial users

Wastewater: USD0.22 per cu m

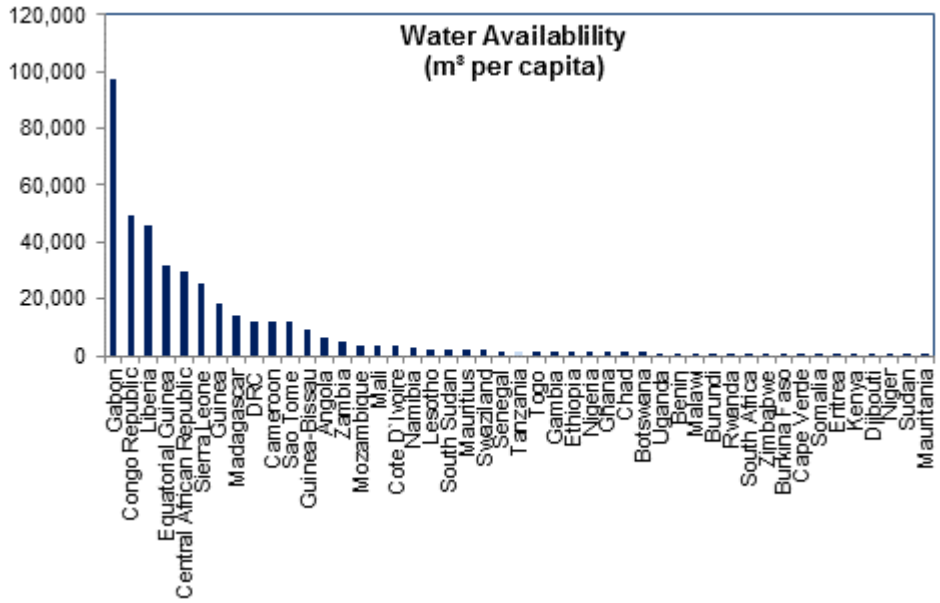
(2016 Dodoma estimates)

- Decentralisation has meant that responsibility for water and sanitation service provision has shifted to local government authorities and is carried out by 20 urban utilities and about 100 district utilities, as well as by Community Owned Water Supply Organisations in rural areas. Water tariffs are set by each region's water authority with areas such as Arusha facing water charges of USD0.67 per cu m. Though tariffs are relatively low, increasing water scarcity will exert upward pressure to tariffs in the long run.
- The dearth of potable water resources, particularly in rural areas means that businesses must erect water reservoirs. Key staff, particularly in non-urban areas will have to be supplied with filtration facilities. The lack of clean drinking water and sanitation systems in many areas is a severe public health concern, raising labour costs due to absenteeism and high staff turnover.
- Water scarcity heightens the country's electricity shortages due to hydropower reliance, raising energy costs. Increasing drought risks and desertification, pressure on urban services and inefficient water management will further restrain freshwater access. Water supply problems also mean firms often pay private water haulers exorbitant amounts to receive water for operations.

Source: BMI, CIA World Factbook

Limited Water Supply Compounded By Dearth Of Supporting Infrastructure Dents Market Appeal

SSA - Renewable Internal Freshwater Resources (cu m Per Capita)



Source: World Bank

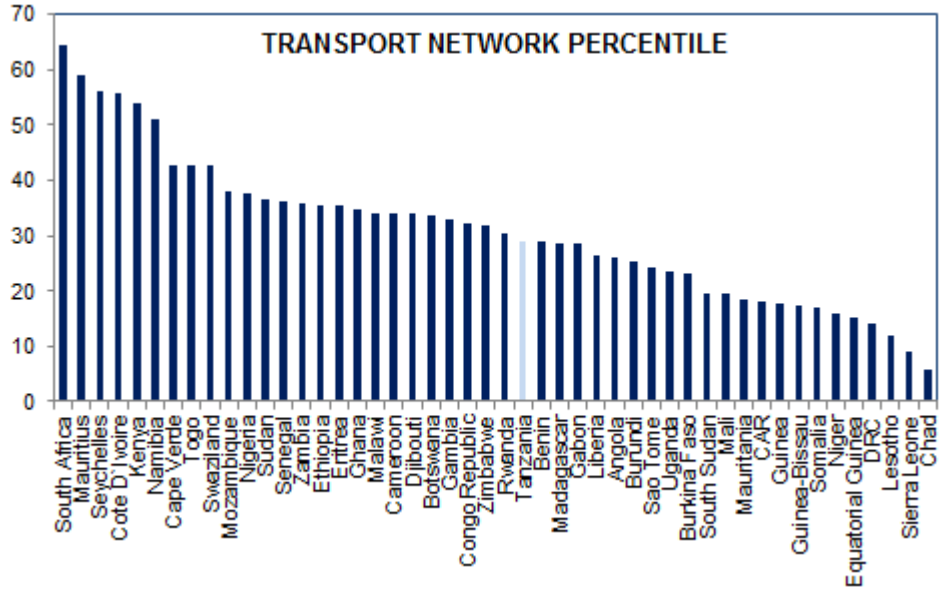
Transport Network Analysis

Transport Network

BMI View: *The country's role as a regional transit hub to landlocked East African countries is limited by the poor state of its transport network which is characterised by weak rail infrastructure, numerous unpaved roads, high rates of traffic accidents and severe port congestion. Businesses operating in Tanzania face significant supply chain risks, though over the medium term ongoing transport infrastructure developments will alleviate the acute bottlenecks at the country's ports and along major sub-regional transit routes. Consequently, BMI awards Tanzania a low score of 29.1 out of 100 for Transport Network, demonstrating the current poor state of its infrastructure from a global and regional perspective. This ranks the country 26th out of 48 states in Sub-Saharan Africa (SSA), between Rwanda and Uganda.*

Underdeveloped Transport Connections Raise Logistics Costs

Sub-Saharan Africa - Transport Network Risk



Note: 100 = Lowest risk; 0 = highest risk. Source: BMI Logistics Risk Index

Latest Transport Network Analysis

- Dar es Salaam is the economic hub of Tanzania and is essential to freight transport, with much of the country's road haulage volumes originating from, going to, or passing through or close to the city. The port of Dar es Salaam is the key entry point to Tanzania and its hinterland. The city's smooth-running is therefore important for the efficient transportation of goods in the country. This efficiency will be boosted over the medium term as evidenced by recently announced government plans to spend almost USD2bn on building new roads including the construction of flyovers and bridges as well as a bus rapid transit system to tackle the crippling traffic problem in the city.
- **Export Import Bank China** will lend Tanzania USD7.6bn for a 2,560km railway that will help Tanzania's landlocked neighbours including Burundi, Rwanda and Uganda transport goods to its port on the Indian Ocean and increase regional rail connectivity. The standard gauge line will become a major trade artery in East Africa and this comes at a time when Kenya is also developing its standard gauge rail system, which will provide an added boost to regional freight transit. Two other lines will branch off to Musongati in Burundi and to Mwanza port on the shores of Lake Victoria to service Ugandan shippers, while the line to Kigali will ultimately connect to the eastern Democratic Republic of the Congo.
- Tanzania's plans to develop its logistics infrastructure face significant challenges that will hinder the country's ambitions to become a regional trade hub. Though supply chain efficiency will gradually improve over the long term, considerable uncertainty surrounding planned projects, such as the USD10bn Bagamoyo port, indicates that logistics risks will leave the country uncompetitive compared to regional peers such as Kenya over the medium term (*see ' Poor Logistics Infrastructure Impedes Regional Competitiveness', March 10 2016).*
- Our Infrastructure Key Projects Database reflects a strong project pipeline for transport sector, thereby underpinning our view for significant improvements in the country's logistical appeal over the medium-long term. The transport sector will continue to benefit from external funding flows, stemming from development banks and foreign firms. Ongoing upgrades will help to ease some of the logistics capacity constraints currently faced in the country. Construction is underway at Dar es Salaam Port, the country's main port which is responsible for around 95% of all Tanzania's export and import volumes. As part of the country's Vision 2025, the government is seeking to increase its port capacity to 28mn tonnes by 2020 from 14.6mn tonnes handled in 2014. Berths one to seven at the port are currently being upgraded at an estimated cost of USD596bn, and two more are due to be built in 2017.
- We also expect work to begin on Tanga Port in the near term, in order to facilitate the export of Uganda's crude oil reserves to international markets. In April 2016, the Ugandan government announced its decision to build a pipeline from its Lake Albert Rift Basin through Tanzania ending at Tanga Port, rather than through Kenya to Lamu Port *(see 'Two Pipelines To Be Developed', April 27).* Currently Tanga has no oil export facilities and is geared primarily towards agricultural exports.

Extent and Quality of Transport Network

Tanzania's transport network is severely limited and therefore lacks the capacity to accommodate the country's growing needs due to years of underinvestment in transport infrastructure. This has left businesses operating in the country, largely reliant on an ailing road network characterised by few major highways and severe congestion in major cities such as Dar es Salaam and Dodoma. Furthermore high-bulk freight remains reliant on colonial era rail infrastructure which further limits trade options and leads to long lead

times, while the air transport sector is severely underdeveloped in stark contrast to the burgeoning air transport sectors in Kenya and Ethiopia. In this way, the country obtains a low score of 22.3 out of 100 for Extent of Transport Network, ranking 29th out of 48 countries in SSA, ahead of Uganda and Rwanda. Despite the absence of navigable waterways, Tanzania's relatively competitive ports significantly uplift the country's score in comparison to regional peers such as landlocked Uganda and Rwanda; however, Dar es Salaam port will continue to face significant competition from Kenya's recently upgraded Mombasa port. Developments in cross-border rail and road infrastructure within East Africa will result in more fluid freight movement in the long term.

The quality of the country's roads and rail is uncompetitive and has resulted in considerable supply chain disruptions due to slow transit speeds and heavy congestion, resulting in high risk of accidents, derailments and cargo damage. Congestion remains a key concern particularly at major ports, such as Dar Es Salaam and Tanga that still face capacity constraints and limited facilities to cater to the East Africa region's nascent hydrocarbons sector. Tanzania receives a score of 35.9 out of 100 for Quality of Transport Network, ranking it in a low 20th position out of 48 SSA states, behind Kenya and Rwanda but ahead of Mozambique and Uganda. Large rail developments, particularly those connecting Tanzania with its immediate East African neighbours combined with significant port upgrades, are set to significantly uplift the country's logistical appeal and in the long run help to support the agriculture and extractive sectors.

Roads

Road-based supply chains in Tanzania face heightened risks from the country's numerous dirt track roads, which cause high rates of traffic accidents and leave transporters vulnerable to cargo damage and theft. Further pressure on the country's road stems from Tanzania's role in regional transportation, facilitating links for the country's landlocked neighbours such as Malawi, Uganda, Rwanda, Zambia, Burundi and the eastern region of the Democratic Republic of the Congo (DRC) through regional roadways such as the Central Corridor to Tanzania's ports. While the country has a higher-standard network of tarmac and all-weather roads connecting major towns, these face severe congestion risks which slows traffic down considerably, extending lead times particularly for cross-border freight adding to transportation costs. Moreover, Tanzania's limited rail networks mean that roads provide the main source of transportation for domestic supply chains, and there have been a number of investments into improving the facilities for storing and loading trucks in order to reduce delays and improve delivery times. We expect further developments of the Central Corridor highway and rail projects that connect Dar es Salaam and Dodoma with the rest of the region will improve the country's logistical appeal in the long run and go some way in increasing traffic particularly along major highways.

Table: Tanzania - Road Risks

Internal Coverage	
Total road network: 86,472km	▪ Roads are the major transport mode for freighted goods and therefore provide vital supply chain links for businesses. Though main urban areas and ports are all well connected by major roadways, and land border crossings are served by main highways, Tanzania has one of the least extensive road networks in the region, and transport options are further inhibited by the dearth of sufficient paved roads. ▪ Businesses based in urban centres benefit from a well-connected road network, which ensures rudimentary national and regional connectivity, linking the coast to the capital city and regional corridors and thereby limiting expenses incurred for road transport. However, companies based in rural areas do not enjoy the same level of national connectivity; in 2010, only 24% of the country's rural inhabitants lived in close proximity to an all-weather road, translating into increased difficulties for firms dependent on transport capabilities between rural and urban areas. ▪ Investment continues to flow into logistics capacity upgrades, particularly rail and road infrastructure, which will improve Tanzania's logistical efficiency over the medium to long term, facilitating growth in regional and international trade.
International Connections	
Good connections to all neighbouring states with major infrastructure upgrades underway to better connect Tanzania with Rwanda, Uganda, the DRC and Burundi.	▪ Businesses based in Dodoma and Dar es Salaam benefit from being at the epicentre of major regional road links. There is one main trans-African highway, the Cairo-Cape Town Highway, running through Tanzania which directly connects the country to Kenya and Zambia. ▪ Given Tanzania's geographical location and the regional importance of the country's ports, it is an important transit route for landlocked African states, including Rwanda, Burundi, Uganda, the DRC and Zambia. However trade efficiency is inhibited by the country's limited road networks and bottlenecks at regional border posts. ▪ Tanzania's road network faces increasing demand from countries such as the DRC and Rwanda. Almost 50% of all of Rwanda's trade imports passed through the port of Dar es Salaam via the Central Corridor route, which is 200km shorter than the northern alternative.
Infrastructure Quality	
92% of the roads are unpaved	▪ Less than a 10th of the total network is paved and the rest of the roads vary from gravel to dirt rural tracks, which inhibits trade efficiency. There are fewer paved roads further away from the main economic hubs in the country. ▪ The main 'trunk' roads are numbered 'A' or 'B' and link the major centres. However, their classification does not necessarily mean that they are either paved and/or in good condition, thereby heightening risk of delays to domestic supply chains. The best roads are from Arusha across the border to Nairobi, Arusha to Dar es Salaam, and Dar es Salaam to Zambia and Malawi, highlighting the investment made to ensure Tanzania's gateway role. In Zanzibar, the major road that loops around the island is tarred and in good condition, however, limited multimodal connectivity (linking ports with rail and road transport); significantly raise the cost of trade. Heavy trucks face additional disruptions during rainy periods due to the lack of drainage.

Tanzania - Road Risks - Continued

Internal Coverage

- Over the medium term, businesses working around the commercial capital of Dar es Salaam will also enjoy improved connectivity and better quality roads following the completion of USD2bn worth of roadway improvements and reforms as well as ongoing rail developments that will partially alleviate road congestion. In May 2015, the Tanzanian government announced its intention to lower congestion in the city by constructing new roads and establishing a rapid transit bus system. Within this, new bridges and interchanges will also be constructed, thereby lowering transport costs for local firms and facilitating trade throughout the country and the region.

Usage

Accounts for 99.8% internal freight tonnage

- Much freight crosses the major borders, however, heavy congestion and numerous police checkpoints and border posts, lead to long delays for freight. This increases costs to shippers through consequent delays to freight transport.
- The sector is overwhelmingly the most important in the Tanzanian freight mix, with volumes dwarfing both air and rail freight. Road freight will increase by 3.8% to 228.6mn tonnes in 2016 and growth will average 3.7% over the medium term (2016-2020), raising pressure on the ailing road networks as ongoing transport investments will fail to keep pace with demand. Tanzanian vehicle sales will grow 20.0% in 2016 driven by robust private consumption and strong growth in the construction industry. Increased road freight demand will be driven by an uptick in private consumption, high population growth, industrial growth, increasing regional integration and rising vehicle ownership.
- Consequently, internal supply chains in the country, particularly those traversing major cities and linking key ports, will endure considerable delays due to traffic congestion, a risk which must be factored into operations, while road developments gradually come online.

Disruption

Tanzania - Road Risks - Continued

Internal Coverage

32.9 road deaths per 100,000 people (World Health Organization)	▪ Poor road conditions mean that investors face significant risk from the country's high rate of traffic accidents, which at 32.9 road deaths per 100 people is the fourth highest in SSA, marginally behind Malawi (35), Liberia (33.7) and the DRC (33.2). A number of road deaths have involved large vehicles, such as inter-city buses and lorries, suggesting heavy cargo vehicles face increased risk of accident than smaller vehicles. ▪ A large number of road accidents are due to roaming animals and poor adherence to road traffic rules, where the latter is exacerbated by corruption at major police checkpoints and road blocks. This gives rise to elevated cargo and vehicle insurance and replacement costs, which will raise operating costs for transport-reliant businesses, but increase growth in the general insurance sector. ▪ Bribes are often solicited at the numerous police roadblocks exacerbating delays and costs, while traffic violations and highway robberies are common and drivers are advised against travelling at night, which limits trade potential. The high crime and terrorism risks in the East and Central Africa region further restrain road travel, raise security costs and extend delays.

Source: BMI, CIA World Factbook, World Health Organization

Well-Connected Road Links Offer Regional Trade Options

Map Of Tanzania's Main Road Links

Source: d-maps

Railways

Tanzania's railways are in a poor condition, with breakdowns and cancellations of already infrequent services common. The network, however, plays an important role in regional trade, reinforcing road connectivity, particularly for bulk freight. Freight traffic densities are comparable to neighbours such as Uganda, Kenya and Zambia, despite being considerably lower than South Africa's traffic flows. Over the next five years, Tanzania will allocate an estimated USD7.6bn to build a new railway network, which is expected to meet demand for cargo transport within Tanzania and to landlocked neighbouring countries,

including Rwanda, Uganda, Burundi, and the DRC. Additionally, this project will relieve pressure on over-congested and poor quality roadways, thereby diversifying transport options for regional traders**.**

Table: Tanzania - Rail Risks

Internal Coverage	
Total railway network length: 4,567km, mostly narrow gauge	▪ Tanzania Railways Corporation operates the Central Line, which runs between Dar es Salaam, through to Dodoma and western Tanzania. The line splits at Tabora in the middle of the country; one branch continues to Kigoma on the shores of Lake Tanganyika, while the second branch goes north to Mwanza on Lake Victoria. The extent and capacity of the railway network remains limited, which restricts transport options for businesses as well as the speed and the weight it is able to carry. ▪ The route between Dar es Salaam and Mbeya in the southwest and on to Kapiri Moshi in Zambia is run by the Tanzania and Zambia Railway Authority (TAZARA). There is a break-of-gauge at Dar es Salaam to the Tanzania-Zambia Railway Authority 1,067mm line in Zambia, which will delay supply chains as gauges must be changed, increasing time and transport costs. A second link is at Kidatu, where the TAZARA line meets the Kidatu branch. ▪ The refurbishment of existing rail networks and regularisation of disparate gauges will reduce delays to supply chains. A number of projects are underway to expand and update Tanzania's railway infrastructure, boosting supply chain connections over the medium-long term, though road will likely remain the main freight mode.
International Connections	
Existing links to Zambia via Mbeya. Developing and upgrading links to Kenya, Rwanda, Burundi with connections to DRC via Kigoma, and Uganda via Mwanza	▪ New railway connections in the East African region will encourage rail freight transport. The similarities in track gauges within the East Africa sub-region make cross-border rail transport swifter and cheaper because bogies do not have to be changed. From Tanga, a line to Kenya is currently not in use; however, plans to rehabilitate the line, along with the central line, will improve efficiency in Tanzania's rail network, as well as enable landlocked countries greater access to the Port of Dar es Salaam. ▪ Export Import Bank China will lend Tanzania USD7.6bn for a 2,200km railway that will help Tanzania's landlocked neighbours including Burundi, Rwanda and Uganda transport goods to its port on the Indian Ocean and increase regional rail connectivity. The standard gauge line will become a major trade artery in East Africa and this comes at a time when Kenya is also developing its standard gauge rail system, which will provide an added boost to regional freight transit. In addition, it is estimated that transport costs from the Port of Dar es Salam to Rwanda and Burundi will drop by 40%, once the Central Corridor is complete, reducing inland transportation and handling costs for investors and reducing overall trading costs. ▪ Two other lines will branch off to Musongati in Burundi and to Mwanza port on the shores of Lake Victoria to service Ugandan shippers, while the line to Kigali will ultimately connect to the eastern Democratic Republic of Congo. The Tanzania-Zambia Railway Authority (TAZARA) is set to be taken over by China, with privatisation the strategy chosen to revive the 1,860km single-track railway line constructed in the 1970s.

Tanzania - Rail Risks - Continued

Internal Coverage

Infrastructure Quality

- Rail disruptions are frequent due to obsolete rolling stock and deteriorating infrastructure. This combined with the country's multifarious geographical features and the high cost of maintenance, means train speed is limited to 45km/h, highlighting the low transport efficiency and extended delays that firms face.
- Meanwhile, the construction of a modern, high-capacity standard-gauge railway network (Central Corridor) and continued rehabilitation of deteriorated sections of the railway network is expected to transform the transport industry in the East Africa region. Rail within the region is predominantly used to transport largely minerals and agricultural produce.
- Infrastructure developments for the rail sector will also boost its attractiveness to supply chains, and factors such as this support our comparatively positive outlook for the wider freight sector. Better connectivity within the country, as well as the improvement in its trans-national connections will substantially boost the sector's attractiveness to supply chains and drive up tonnage volumes. In addition, as new ports come online, and the planned Mtwara hydrocarbon port expansion is completed, in conjunction with the production of Tanzanian offshore oil, there will be increased volumes of domestic oil and gas available, which will need to be transported around the country. In addition to purchasing new locomotives, the Central Corridor project will also equip trains with a cargo tracking system to increase efficiency and enable businesses to know the geographic position of their cargo at all times.

Usage

- Rail freight will enjoy healthy growth in 2016 and throughout the medium term, with the mode mainly facilitating transport for the country's largest industry, agriculture. Strong growth in the areas of agriculture and raw materials will continue to drive rail transport growth and continuing investment from China will see the completion of the Central Corridor, boosting regional trade.
- We forecast rail freight to increase by 4.3% in 2016 to 432,510 tonnes and growth to average 4.3% over the medium term (2016-2020). Rail transport development will partially alleviate road congestion over the medium term.

0.2% of total internal freight

Disruption

- Disruptions are more frequent during rainy seasons and flood risks will remain elevated due climate change dynamics. Adverse weather conditions weaken rail installations, contributing to the slowness of trains. This is compounded by country's difficulties maintaining the rail infrastructure raising risk of supply chain disruptions due to derailments and accidents.
- The planned cross-border rail developments are exposed to security risks such that freight will be exposed to cargo theft and property destruction.
- Lastly, in spite of an extensive project pipeline to improve the country's transport infrastructure, we believe that a number of these projects will be cancelled or suffer severe delays due to financial or political issues. Additional risks stem from the continued rail worker strikes due to non-payment. This not only halts transportation of goods, driving up costs and delays for supply

Tanzania - Rail Risks - Continued

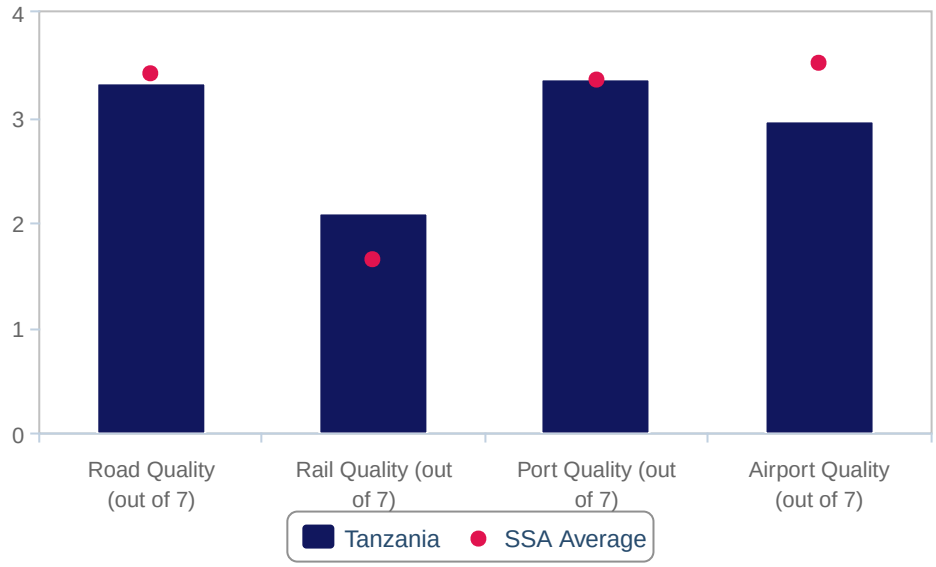
Internal Coverage

chains, but will also potentially result in certain groups looking to other freight methods, or even opting to switch to other country's ports altogether.

Source: BMI, CIA World Factbook

Weak Rail Quality Exacerbates Road Risks

Tanzania & Regional Average Infrastructure Quality



Note: 1 = Lowest score; 7 = highest score. Source: World Economic Forum's Global Competitiveness Index, 2015-2016

Ports and Inland Waterways

The country has three major Indian Ocean ports, with a number of minor ports. Dar es Salaam is Tanzania's main port, receiving around 95% of all Tanzania's export and import volumes. Tanzania is a regional gateway and well-placed for trade with Rwanda, Uganda, the DRC and Burundi, supporting the port throughput volumes. However, the country's port infrastructure is inefficient and despite modernisation, severe congestion increases delays and costs for supply chains. The expansion of existing port facilities and the construction of new ports should enable Tanzania to rival the attractions of Kenyan ports. In this way,

construction is under way at Dar es Salaam Port, the country's main port which is responsible for around 95% of all Tanzania's export and import volumes. As part of the country's Vision 2025, the government is seeking to increase its port capacity to 28mn tonnes by 2020. As a key link in the transport supply chain, increased efficiency and throughput at the Dar es Salaam port is both essential to meet the economic growth prospects of Tanzania and the landlocked countries it serves. Port and rail development plans will go a long way in enhancing Tanzania's competitiveness within the region as a logistics hub. According to the World Bank, if the Port of Dar es Salaam attained the same level of efficiency as that of Kenya's Port of Mombasa, the Tanzanian economy would gain nearly USD1.8bn a year, while the regional economy would garner USD800mn annually. However at present, weak management, operational inefficiencies and capacity limitations mean that the port of Dar es Salaam often experiences heavy congestion and workers' strikes, such that trade-reliant firms experience frequent delays which greatly increase cargo surcharges and operational costs.

Table: Tanzania - Ports and Inland Waterways Risks

Internal Coverage

The major ports in Tanzania include Dar es Salaam, Tanga, Zanzibar and Lindi on the Indian Ocean. (Lake Tanganyika, Lake Victoria, and Lake Nyasa (Lake Malawi) are the principal avenues of commerce with neighbouring countries. Total length of navigable inland waterways: 0km	▪ Dar es Salaam port is the only international container seaport in Tanzania, and it is one of the most important in the region with road and rail access to maritime trade routes and supply chains reaching land-locked countries in the sub-region. ▪ Dar es Salaam is the fourth largest container port on Africa's eastern seaboard after Durban in South Africa, Mombasa and Djibouti. The government is looking to improve efficiency and capacity at the country's main ports with significant improvements to be seen at Tanga and Dar es Salaam. The Bagamoyo Port (under construction) is intended to become an international port and will alleviate pressure on Dar es Salaam and Mombasa's ports. Once it becomes operational, the Bagamoyo Port will become Africa's largest port, handling over 20mn containers annually. This will prove important in competing with neighbouring ports and supports our positive outlook. ▪ Additionally, Tanzania offers traders a total of 17 dry ports, reflecting the country's importance as a trade hub for neighbouring landlocked economies. Tanzania's inland waterways play a minimal role in the country's supply chains. Lake Victoria plays the greatest role in sub-regional trade, with ferries carrying rail wagons and vehicles from Uganda to Tanzania. The ferries are the main means of transport between Tanzania and Uganda, as well as between northern Tanzania and south-western Kenya. Lake Tanganyika, once a rival to Lake Victoria as a waterway, now provides only short commercial traffic runs between Kigoma (near DRC) and Bujumbura (Burundi) and Zambia. These routes offer some diversification options for regional supply chains, which for the most part are reliant on road.

International Connections

Tanzania - Ports and Inland Waterways Risks - Continued

Internal Coverage

Liner Connectivity: 9.67 (highest global score is 167.5 by China, highest regional score: 37.1 by South Africa)

- According to the, AP Moeller-Maersk, the world's largest container line, Mediterranean Shipping Co and Mitsui OSK Lines are among companies that use the port, which increases the port connectivity to global maritime trade routes.
- Moreover, Dar es Salaam is also the second largest in East Africa, separating Tanzania from many of its land-locked neighbours and boosting its logistics competitiveness within the context of the sub-region. This relatively strong connectivity is demonstrated by Tanzania's ranking for Liner Connectivity 17th out of 48 SSA states, ahead of Mozambique (9.51) and behind Kenya (13.66).
- The government plans to construct a 2,561km standard gauge railway connecting the port of Dar es Salaam to Tanzania's land-locked neighbours, Rwanda and Burundi, at a cost of US7.6bn, which should boost volumes at both the port and in the rail freight sector. Tanzania is set to become an LNG exporter, which will increase shipping activity in the country, with LNG carrier vessels transporting the gas.

Infrastructure Quality

- Dar es Salaam has faced difficulty in responding to explosive growth in Africa's container and dry bulk traffic over the last decade. Congestion is prevalent at the port. Dar es Salaam's port constraints have also been exacerbated by the oversaturation of Kenya's Port of Mombasa, with Dar es Salaam having to handle greater volumes than were previously handled at the Kenyan port.
- Years of underinvestment coupled with robust growth in traffic, means port infrastructure has endured significant damage. Added to this are inefficiencies in labour productivity, corruption, limited inland route connectivity, clearance delays and a lack of mechanisation.
- The government is concentrating efforts to enhance the port of Dar es Salaam's infrastructure and business through investment in facilities and improving international trade relations and connectivity. Berths one to seven at the port are currently being upgraded at an estimated cost of USD600mn, and two more (berths 13 and 14) are due to be built in 2017. Furthermore, the ongoing anti-graft drive led by Magufuli's government will reduce operational inefficiency and endemic corruption over the medium term. This will make the port more competitive and help enhance its gateway role.

Usage

Port of Dar es Salaam tonnage throughput : 19.3mn tonnes;

(2016 BMI estimates)

- Tanzania's ports are in need of substantial infrastructure investment in order to keep up with both local demand and regional demand, owing to the importance of the country's ports to trade destined to and from landlocked neighbours such as Malawi, Uganda, Zambia, Rwanda, Burundi and the DRC. High demand for fuel imports, rising regional integration, increasing agricultural output and manufacturing growth as well as the region's nascent oil and gas industries are key factors that are driving maritime and rail freight.

Tanzania - Ports and Inland Waterways Risks - Continued

Internal Coverage

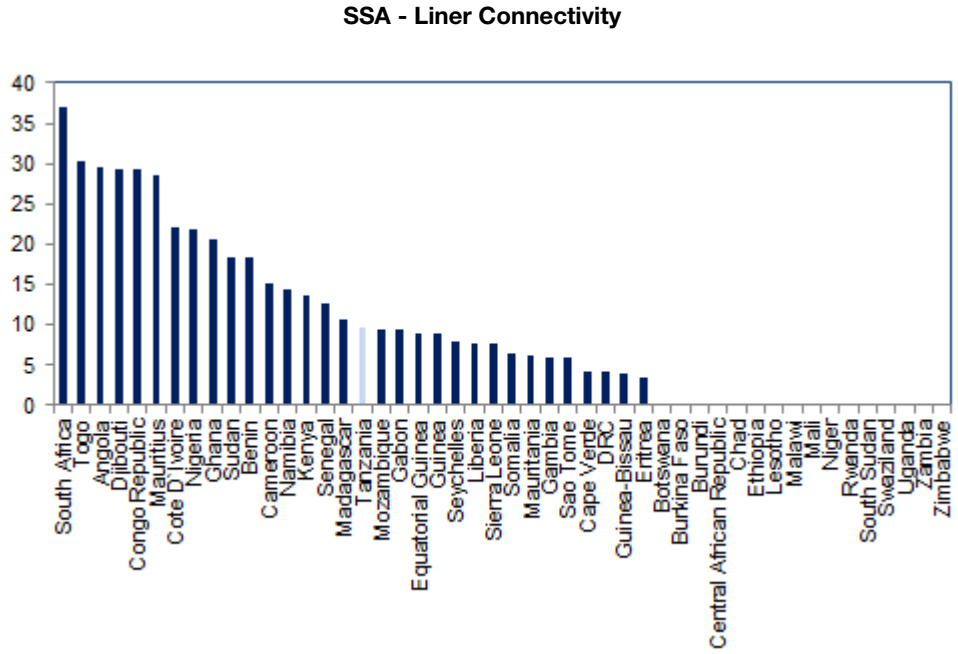
- Out of the country's three major Indian Ocean ports, Dar es Salaam is Tanzania's main port, receiving around 95% of all Tanzania's export and import volumes. We forecast container traffic at Port of Dar es Salaam to increase by 7.2% to 182,144 twenty foot equivalent units (TEUs) in 2016 and tonnage throughput growth at 8.2% reaching 19.5mn tonnes. Over our medium-term forecast period to 2020, we expect the port of Dar es Salaam's average y-o-y tonnage growth to come in at 8.0%, reaching 26.5mn tonnes, while container throughput is pencilled in to grow on average by 9.8% y-o-y, to reach 271,168TEUs.
- Shippers face relatively high costs by regional standards which limits the use of the country's ports causing a great deal of traffic to be diverted to other ports in the region. Indeed, the cost of shipping to Tanzania is around 25% higher than rates to the larger competing ports in Southern Africa. This is mostly attributable to port inefficiencies brought about by inadequate investment in infrastructure.

Disruption

- Protests and workers strikes at the main ports cause significant delays for businesses reliant on maritime trade, with bottlenecks holding up exports and disrupting production for businesses requiring imported inputs. Risks of political violence, piracy and terrorist attacks remain high within the region, threatening port infrastructure, important pipelines, cargo and labour safety. Cargo theft and kidnap-for-ransom attacks, raise insurance requirements and hazard duty and captivity pay requirements, which will raise costs of maritime operations and traded goods.
- There is a risk that investment may fail to keep pace with an increase in freight, leading to congestion and supply chain delays. Upgrades are also necessary in light of the challenges posed by flooding. In 2015, cargo clearance from the Port of Dar es Salaam was nearly stalled due to heavy flooding, which left cargo trucks debilitated in flooded roads. Without upgrades, businesses could face considerable delays in lead times and heightened trade costs during periods of heavy rain.
- Tanzanian President John Magufuli dismissed the head of the country's port authority and the permanent secretary in the transport ministry as part of an anti-graft campaign in the country at the end of 2015, following the disappearance of more than 2,700 shipping containers at the port. Prolonged instability at Tanzania Ports Authority (TPA) has potential to undermine the competitiveness of the port of Dar es Salaam over the near term. The knock-on effect of the instability is that cargo is being lost to other regional rivals.

Source: BMI, World Bank, UNCTAD, International Association of Ports and Harbours

Overburdened Port Infrastructure Increasing Congestion In Maritime Trade



Source: UNCTAD

Airports

Tanzania's airports suffer from poor quality and low safety standards. Tanzania's airports have already reached capacity in terms of the number of passengers; as a result, the quality of the country's airports has deteriorated due to needed infrastructural improvements and expansions. Businesses also face a threat of unsafe flights, particularly due to the frequent use of unpaved runways and a low usage rate of radars, increasing the risk of plane troubles or damages. This is due to a lack of expansion in airline fleets, as well as extremely limited airport infrastructure, as although there are 26 mainland airports these are largely focused on tourist traffic rather than freight and offer little in the way of cargo facilities. Demand for air freight is low, and until sustained investment is made into improving and expanding the airport infrastructure, airfreight tonnage will remain subdued. Nevertheless, consumption levels will enjoy robust growth over the next several years, supporting an expansion in air freight volumes. We project modest growth in Tanzanian air freight throughout the medium term.

Table: Tanzania - Air Transport Risks

Internal Coverage	
Total of 166 airports. Only 10 have paved runways of which two airports have runways of at least 3,047m needed for the largest planes in service to land. Main airports: Julius Nyerere International Airport (Dar Es Salaam) Kilimanjaro International Airport (northern Tanzania)	▪ Mainland Tanzania (excluding Zanzibar) has 26 airports. These airports are primarily equipped to cater for the country's booming tourist industry, as opposed to for commercial purposes, and therefore operate limited freight options. Julius Nyerere International Airport is the principal airport serving Dar es Salaam, the largest city in Tanzania. ▪ Tanzania has limited air capabilities compared to regional peers such as Ethiopia, Nigeria, South Africa, Angola and Ghana. Air transport will only hold a very small share of the country's freight mix over the medium term as the mode is underdeveloped and faces lack of investment by the national carriers. However, this also suggests great scope for expansion and an opportunity for strong growth in the future. The construction of a proposed four lane motorway connecting Arusha city with Kilimanjaro International Airport (KIA) will help to drive both the tourist industry and air freight volumes in the medium-to-long term. ▪ The Kilimanjaro International Airport is a key cargo airport, providing services such as cargo acceptance and documentation, warehousing, cargo delivery, special cargo handling, cargo palletization and cold storage facilities. Equity Tanzania and United Aviation Services are registered companies based at the airport and provide full logistic support, including meet-and-greet services to commercial and private jets.
International Connections	
Air passengers carried per capita: 0.03;	▪ Tanzania has regular international air connections with major international airports in the region; however the national carrier only offers domestic air services at present. ▪ Investors also benefit from the availability of several connections to Europe, the Middle East and Africa, namely South Africa, Ethiopia and Kenya as well as Egypt, the UAE, Oman, Turkey, Germany and the Netherlands. The main international passenger airlines running regular flights from Tanzania are Qatar, Etihad, KLM, Swissair, Turkish Airlines, Ethiopian Airways, Kenya Airways and South African Airways. ▪ The main airport is well connected and has flights to destinations in Africa, Europe and the Middle East. It is predominantly a passenger airport; however, major cargo lines serving the airport include Astral Aviation, Martinair Cargo, Etihad Airways and Safair.
Infrastructure Quality	
	▪ Air freight carries a negligible proportion of Tanzania's freight, and according to our forecasts this will not change over the medium-term, despite growth in the sector. Tanzania's airports suffer from poor quality and low safety standards. This highlights the uncompetitive state of Tanzania's airport when it comes to air freight, which is due to the country's primary focus on the tourism sector. ▪ The limited size of the airports compared to regional peers such as Kenya and Ethiopia means businesses reliant or air freight and travel will face high costs and capacity restrictions.

Tanzania - Air Transport Risks - Continued

Internal Coverage

- Tanzania's domestic air transport services have a poor safety record coupled with a lack of strong regulatory oversight. The Julius Nyerere International Airport expansion project by Swissport is expected to be ready in 2016, with the terminal's handling capacity increasing to 80,000 tonnes. Longer-term growth prospects are increasingly positive. There is a raft of new developments ongoing at new and old airports throughout Tanzania at present. Although these are primarily aimed at the burgeoning tourism sector - which is experiencing even more rapid growth due to the security troubles which are denting the Kenyan tourist sector - we expect that air freight will also benefit. More tourists will necessitate the import of more consumer goods, and the facilities will be able to hand a certain quantity of cargo in addition to passengers, even if it is just bellyhold.

Usage

Air freight volumes: 2.3mn ton-km

- The dearth of cargo-focused airport infrastructure renders sector's freight role minimal compared to other freight modes such as road and rail and we expect growth in air freight to average 4.6% over the medium term (2016-2020). Pharmaceuticals and consumer electronics form the bulk of the imports, and perishable foodstuffs represent the key airfreight exports. With regards to exports, we highlight that Tanzania's exports (and the transit cargos coming from the EAC states and other states which are reliant on Tanzania's ports) are largely limited to agricultural and mining commodities, with little in the way of airfreight cargos.
- In the near term, the outlook for air freight demand is relatively bright. Private consumption will be the main engine of economic growth. A large and growing consumer base with gradually rising incomes and improved internet connectivity will drive retail expansion and demand for electronics which in turn could spur demand for air freight serves. The upshot of lower fuel costs will mean more cash in consumers' pockets, which should in turn translate into increased spending on other goods and services, including consumer goods transported by air, although overall demand will remain low.
- Increasing passenger operations in Tanzania offer belly hold cargo options for air freight. Air passenger volumes have been growing over the past eight years, from 1.72mn passengers in 2004 to 3.62mn in 2012. Currently, 44.1% of tourists arrive by air, and this is expected to increase in the medium term, presenting new retail opportunities.

Disruption

- The financial performance of the national carrier has been characterised by large losses since inception, due to poor management, state intervention and corruption, raising safety and reliability concerns.

Source: BMI, CIA World Factbook, World Bank

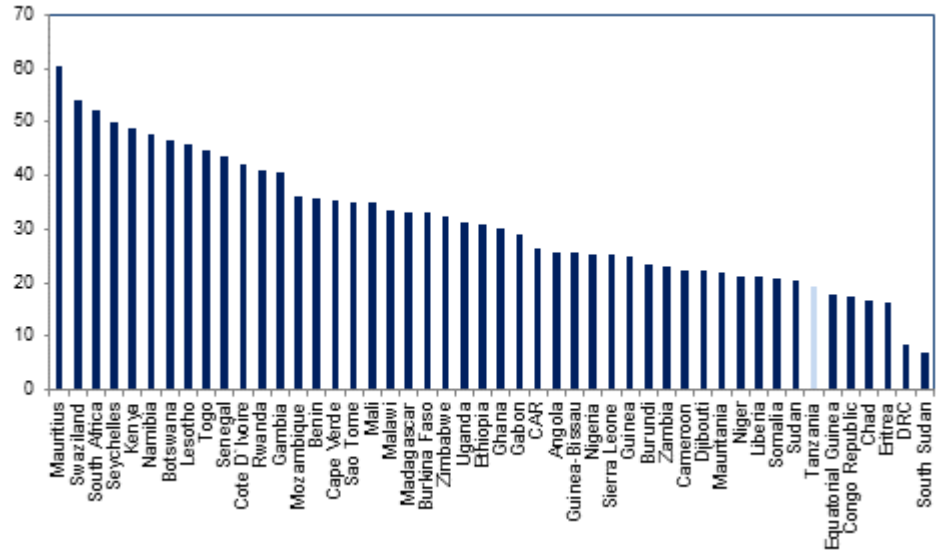
Trade Procedures And Governance Analysis

Trade Procedures And Governance

***BMI View**: Businesses in Tanzania face costly and time-consuming export and import procedures that significantly dent the country's logistical competitiveness in contrast to neighbouring Kenya. The main impediment to trade efficiency is the severe congestion at the main port in Dar es Salaam as firms encounter lengthy port and terminal handling procedures. In addition, frequent accidents, multiple road blocks as well as poor road and rail quality slows transit speeds and raises risks of supply chain disruption as well as inflated transit costs along vital inland transport routes. This state of affairs significantly drags down the country's logistical appeal and risks are compounded by onerous trade bureaucracy and high border compliance costs and for imports in particular lead times are almost double the regional average. Tanzania therefore ranks in an uncompetitive 42nd place out of 48 Sub-Saharan Africa (SSA) countries with a low score of 19.1 out of 100 for Trade Procedures and Governance Risk. Over the medium term, investors in Tanzania are set to benefit from an increasingly competitive export system by regional standards, stronger rail and road links enabling the swifter movement of high bulk freight and high levels of trade facilitation due to the country's membership of a number of regional and international trade institutions.*

High Trade Costs Dent Regional Competitiveness

Sub-Saharan Africa - Trade Procedures And Governance Risk



Note: 100 = Lowest risk; 0 = highest risk. Source: BMI Logistics Risk Index

Latest Trade Procedures And Governance Analysis

- A rapidly expanding economy and increasing consumption is benefiting freight transport in Tanzania, such that we expect healthy growth across freight modes in 2016 and throughout the medium term. Enhanced trade relations in the EAC, the increase in FDI in the region, and Tanzania's gateway role to landlocked East African countries support our positive outlook to the country's trade growth (8.1% in 2016, before aggregating to 6.2% y-o-y to 2020). Ongoing infrastructure development projects, in ports, rail, and road will accommodate the anticipated robust economic growth, with foreign investment playing an important role in funding several projects. This will lower the costs of connectivity for firms in the long run. Over the medium term, we see regional imports continuing to boost road freight tonnage in Tanzania. This is largely based on our expectations that the promise to remove all bottlenecks along the central corridor will prove to be a boon for long haul truck firms and supply chains in the region, which face numerous non-tariff barriers, such as roadblocks and weigh bridges. The bottlenecks mean that it currently takes 3.5 days to transport goods between the Rusumo border (near Rwanda) and Dar es Salaam.
- The introduction of inland container depots and car freight stations, although developed to benefit the maritime freight sector, also offer opportunities for other modes, as the connections between these inland sites and the ports have been expanded or newly developed, providing additional bonus for road and rail freight operators in the form of better infrastructure and more fluid freight transit. Moreover, construction has been completed on a 228km highway project, which links the towns of Tunduma, Laela and Sumbawanga in Tanzania. The upgraded road will improve road freight access to Malawi, Zambia and the DRC.

- A major downside risk to our Freight outlook is the recent introduction of additional VAT and taxes that has significantly increased overheads for shippers and dents the country's trade appeal. According to statements released by the Tanzania Ports Authority (TPA) in September 2016, the recent introduction of a Value Added Tax (VAT) on transit goods and auxiliary services over and above tourism tax and pre-existing customs tariffs has decreased business at the Dar es Salaam port by 42% since July 2016. The introduction of these measures has led to cargo diversion to other regional competing ports with many shippers redirecting their traffic through nearby Mombasa. This has also led to job losses in various sectors, including freight forwarding and clearing companies, and inland container depots.

Ease and Costs of Trade

Tanzania's poor performance in the realm of Transport Network assessment reflects the moderately high risks importers and exporters face in terms of Costs and Connectivity, for which it merits a score of 25.7 out of 100, ranking a low 39th place out of 48 states in SSA. Major detractions to trade competitiveness include weak rail and road infrastructure, hindering efficient high-bulk trade compounded by the dearth of air transport options and considerable congestion at major ports which raises storage costs and risk of cargo damage. The recent imposition of taxes in 2016 on transport, tourism and auxiliary services will continue to detract from the country's logistical appeal in the short- to medium-term.

Tanzania is less competitive in the Ease of Trading pillar which highlights the relatively high number of documents needed and costs involved in order to import a container. Investors also face high levels of bureaucracy particularly for imports where it can take up to a month to complete documentary and border compliance procedures, while trade lead times remain regionally uncompetitive, particularly in comparison to Kenya. Consequently, Tanzania scores a low 12.5 out of 100, ranking 40th in the region, between Angola and Cameroon.

Table: Tanzania - Export And Import Procedures

Nature Of Export Procedures	Duration, hours	Cost, USD	Nature Of Import Procedures	Duration, hours	Cost, USD
Border compliance	96	1160	Border compliance	402	1,350
Documentary compliance	96	275	Documentary compliance	240	375
Totals	192	1,435	Totals	642	1,725

Source: World Bank

Table: Tanzania - Trade Procedures and Governance Risks

Border Compliance

- Border compliance is the most time-consuming element of cross-border trade, due to bureaucratic inefficiency, particularly at ports creating additional administrative work for businesses and prolonging the trading process.
- Though time it takes to carry out border compliance for exports is regionally competitive against the SSA average of 108 hours, it still falls behind Kenya's 21 hours for the same process. Import procedures are particularly time-consuming where it could take a total of 27 days to carry out import procedures of which border compliance constitutes 63% of the total lead time.
- High customs charges, considerable delays at ports and terminal handling charges make the country an uncompetitive portal for imports. The major trade costs in Tanzania are associated with border compliance, standing at USD1, 160 for exports and USD1,350 for imports, this is uncompetitive against the regional average of USD542 and USD160 for each respective border compliance process. This drives up the cost of imported goods (where total import costs are almost double the regional import procedures costs of USD994) and heightens companies' initial start-up costs, as a business typically must import goods to develop operations. This will perpetuate the country's low levels of industrialisation.

Documentary Compliance

- Over the medium term, businesses in Tanzania will increasingly benefit from streamlined trade procedures particularly for exports supported by the move to automation. Central to this modernisation is the newly created customs administration system - Tanzania Customs Integrated System (TANCIS) that enables importers and exporters to electronically submit all the necessary documentation for processing pre-clearance, clearance and release of goods, through a single window system. Since its introduction in 2014, this has reduced delays and enhanced transparency thereby mitigating risks of bribery solicitation.
- Consequently, document preparation is the least time-consuming element of the process of trading in Tanzania, representing 50% of the total lead time in export procedures and 37% for import procedures.
- Documentary compliance costs are competitive against the SSA averages of USD246 for exports and USD351.

Ports and Inland Transport

- The cost and risks involved in using the country's weak inland transportation networks combined with high handling expenses and significantly weigh on the country's trade competitiveness particularly in contrast to neighbouring Kenya that has a Transport Network score of 53.9 out of 100, versus Tanzania's paltry 29.1 out of 100 in BMI's Logistics Risk Index.
- Furthermore, congestion around the port is generally very high, leading to delays in supply chains and increased costs to investors. The new railway line should help to reduce these congestion levels somewhat, providing investors with an alternative route to transport goods.
- The weak state of the country's roads and rail infrastructure means firms face significant supply chain delays with inbound and outbound freight where average domestic transport speeds stand at 3.6km/h. However the development of inland container depots and car freight stations has significantly reduced transport bottlenecks in recent quarters, ensuring more fluid and cost-effective domestic freight transit. We believe that given the country's robust infrastructure project pipeline hinged on transport developments, rail transport is set to see a significant boost in the coming quarters, alleviating some pressure off the country's roads and boosting intra-regional high-bulk freight transit efficiency.

Tanzania - Trade Procedures and Governance Risks - Continued

Corruption And Other Risks

- Businesses face some risk of being solicited for bribes when dealing with any government department. This is slowly being alleviated in the case of customs procedures due to the streamlined nature of the process and the increasing provision of online support services. This mitigates trade-related legal costs.
- Strike action at the ports is a risk that must be factored in at it significantly extends lead times, raising storage and security costs considerably.
- The recent imposition of an 18% VAT on transport and auxiliary services in 2016 significantly reduces the attractiveness of Tanzania as a portal for imports and will dent regional trade.

Source: BMI, World Bank

Methodology

Logistics Risk Index Methodology

BMI's Risk/Reward Indices provide a comparative regional ranking system that evaluates the ease of doing business and operational risks and limitations for potential investors in a given market. Our Logistics Risk Index quantitatively compares the challenges of operating in 201 countries worldwide. The index scores each country on a scale of 0-100, with 100 the lowest risk.

Each country has a headline Logistics Risk Index score, which is made up of three categories of analysis, each further broken down into sub-categories. The individual categories and sub-categories are also scored out of 100, with 100 the best.

The Logistics Risk Index score is calculated using the average of the **Transport network**, **Trade Procedures and Governance** and **Market Size and Utilities** scores.

Market Size and Utilities: this indicator assesses the quality and availability of electricity and fuel, and their costs, and considers the availability of water, industrial usage, and evaluates the quality and extent of the telecommunications networks and internet penetration. A well developed utilities sector enables the smooth running of supply chains.

Transport Network: this indicator assesses the extent and quality of road, rail, air and waterway transport networks within a country, which indicate capacity and ability to transport raw materials and finished goods around a country.

Trade Procedures and Governance: this indicator assesses the time and cost required to import and export goods by container. In addition, a country's air freight volumes and connectivity to shipping networks is used to gauge its potential as a shipping or freight hub. An ideal market would have strong freight connections and low levels of trade bureaucracy.

Table: Weighting Of Indicators (%)

Indicator	Weighting
Transport Network	33 of which
Quality of Transport Network	50
Extent of Transport Network	50
Trade Procedures and Governance	33 of which
Ease of Trade	50
Costs and Connectivity	50
Market Size and Utilities	33 of which
Electricity and Fuel	50
Telecommunications and Water	50

Source: BMI