



Infrastructure for South Africa

An assessment of the obstacles and solutions to greater infrastructure investment

26 March 2021

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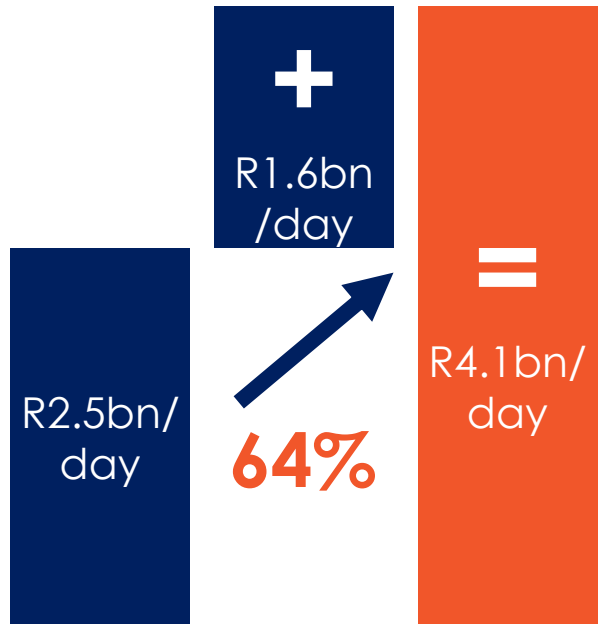


Note: This slide deck should be read in conjunction with the full report which has further detail, disclaimers and references.

Intro: The scale of the challenge

Key takeout: The scale of investment increase needed is substantial requiring macro interventions

To reach 30% of GDP infrastructure investment target of the NDP, we would need to boost investment massively



Which would fund a solar plant to power 20,000 homes...



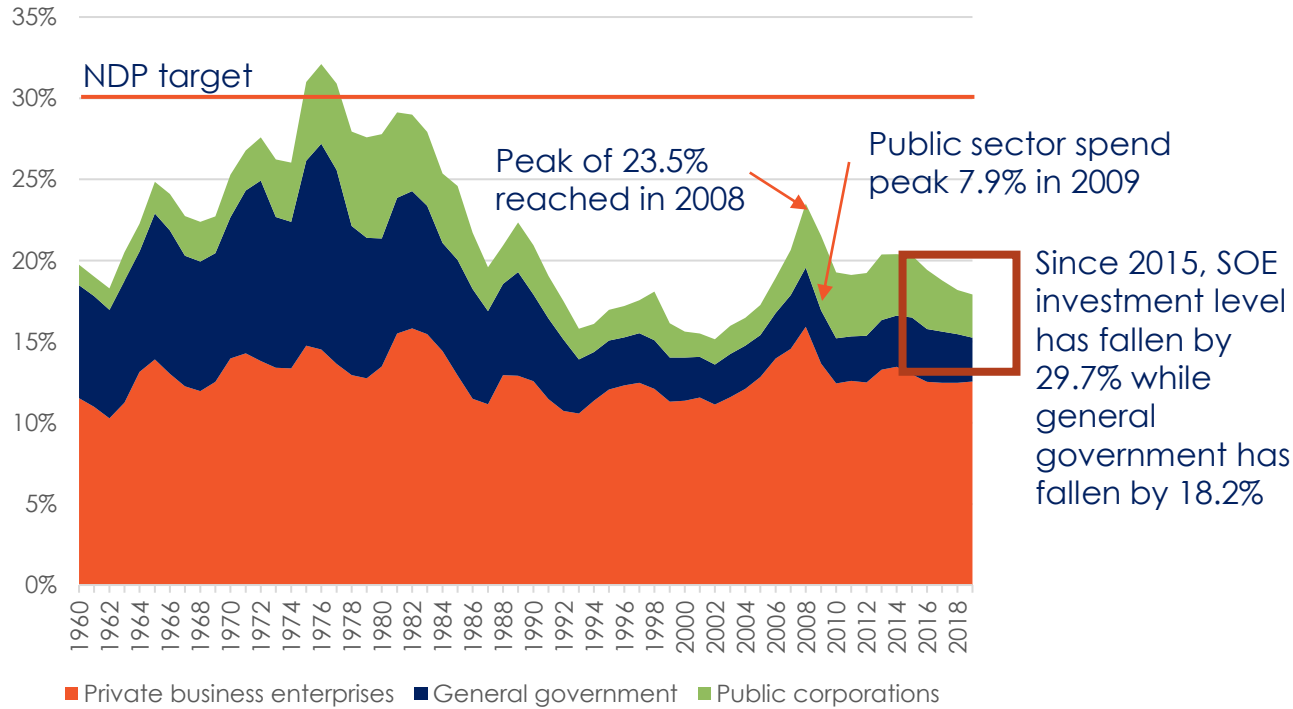
or a new university...

...every day

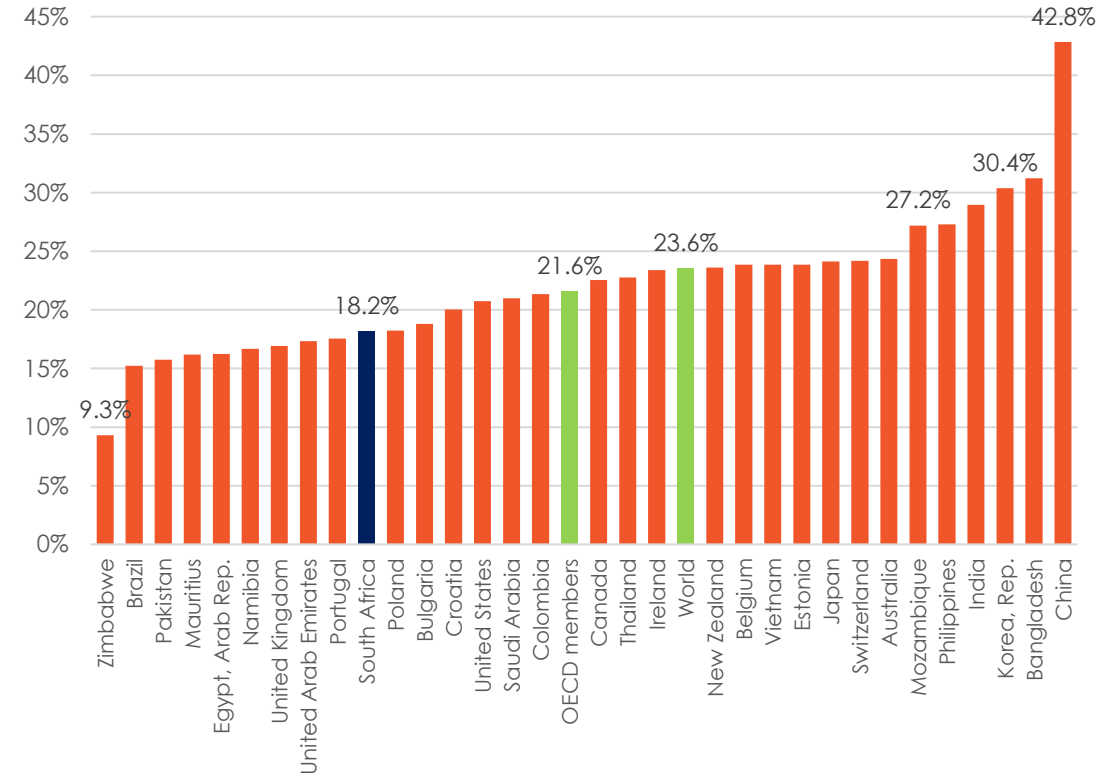
Diagnostic: How are we doing?

Key takeout: SA infrastructure spending is below global average and declining

- We have consistently fallen below the NDP's 30% of GDP target
(gross fixed capital formation as a percent of GDP)



- SA ranks behind global averages for infrastructure investment, particularly against fast-growing economies
(gross fixed capital formation as a percent of GDP)

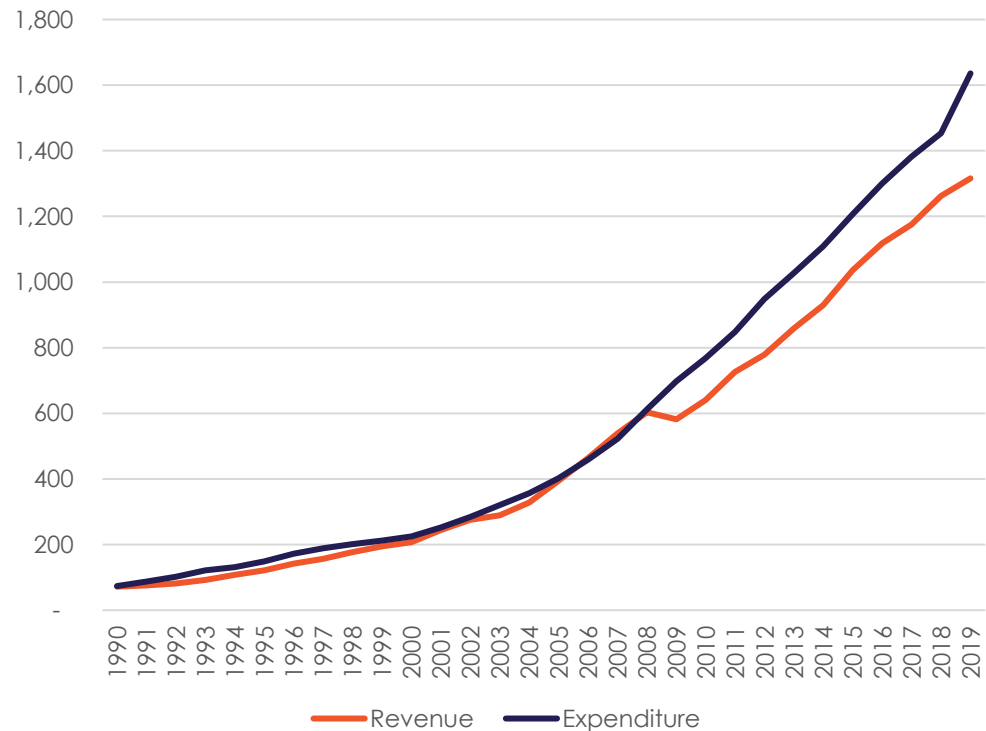


Diagnostic: Public sector

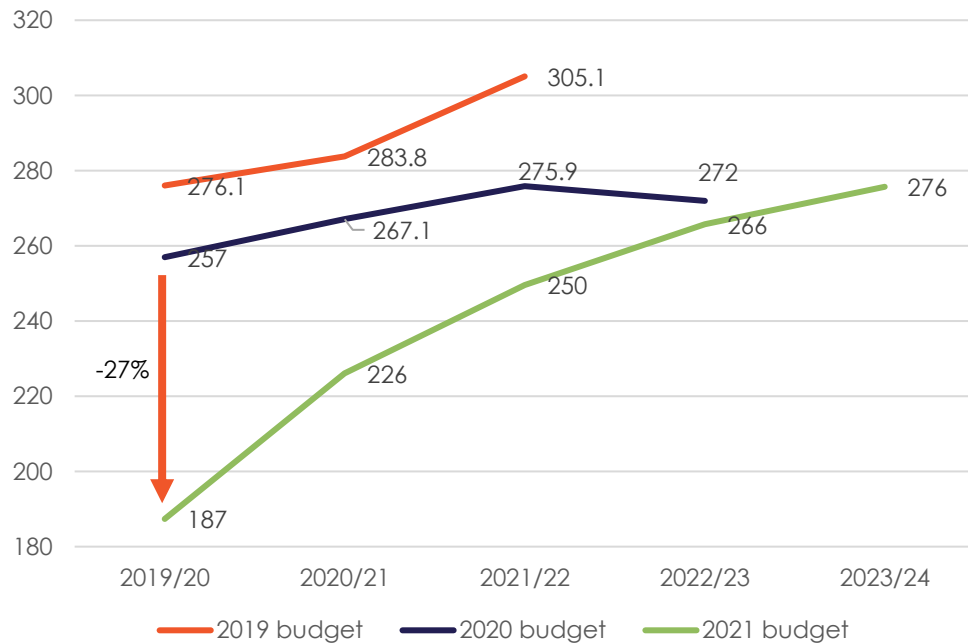
Key takeout: Financial pressures are clear, but underspending of budget reflects capacity constraint

- Financial pressure on both general government and on SOEs is material, though in general government there is a capacity constraint in managing projects through complex National Treasury requirements.

National government consolidated revenue and expenditure (Rbn)



Revisions in infrastructure spending year by year (Rbn)
(Three year MTEF total was R865bn in 2019, R815bn in 2020, R791bn in 2021)



Reflects both a skills shortage and financial constraint:

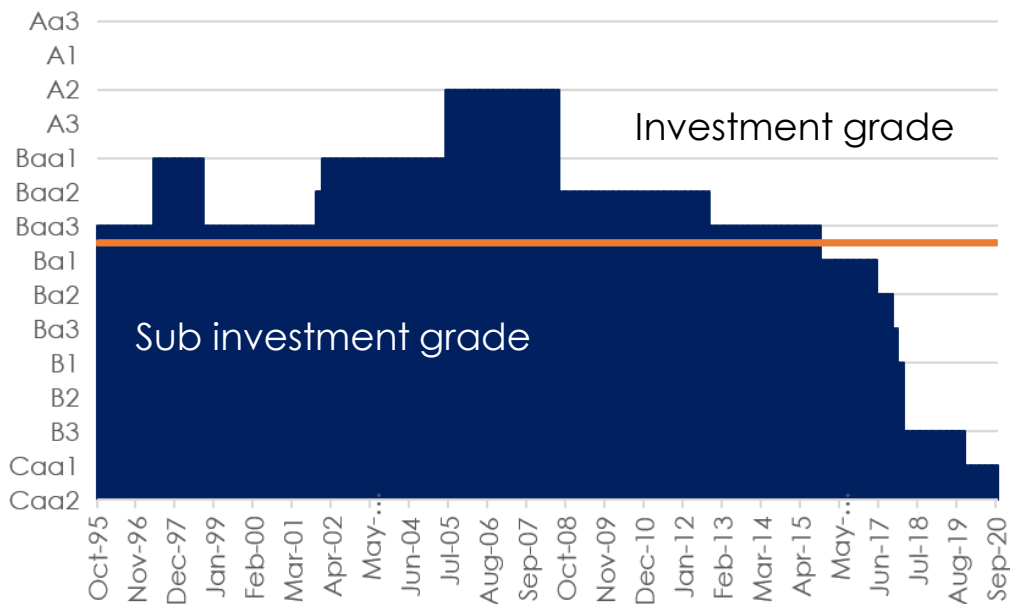
- On ave from 2015/16-2018/19, state **spent only 85% of capital budgets**.
- In 2016/17, **no metros spent more than 80%** (with worst spending 55%).
- Budget revisions reflect this capacity constraint more than an actual decline in spending amounts (except for SOEs)

Diagnostic: Public sector

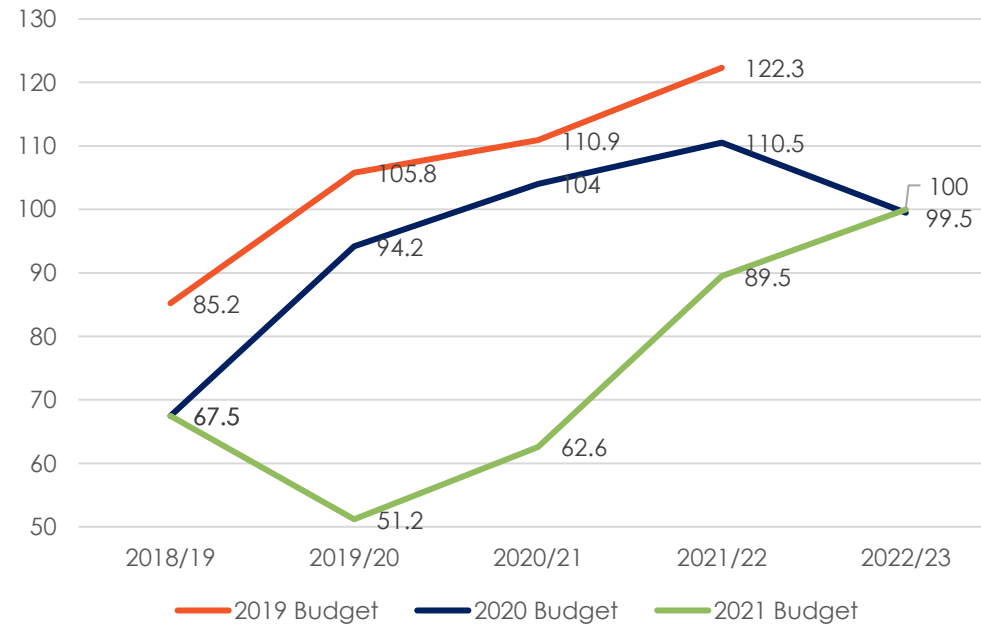
Key takeout: SOE financial challenges have reduced investment and this will continue

- SOE balance sheets are highly strained and they have been unable to raise capital in debt markets which is a critical constraint to greater investment

Eskom foreign currency debt credit rating (Moody's)



2019 to 2021 infrastructure spending budgets for SOEs across MTEF (Rbn)

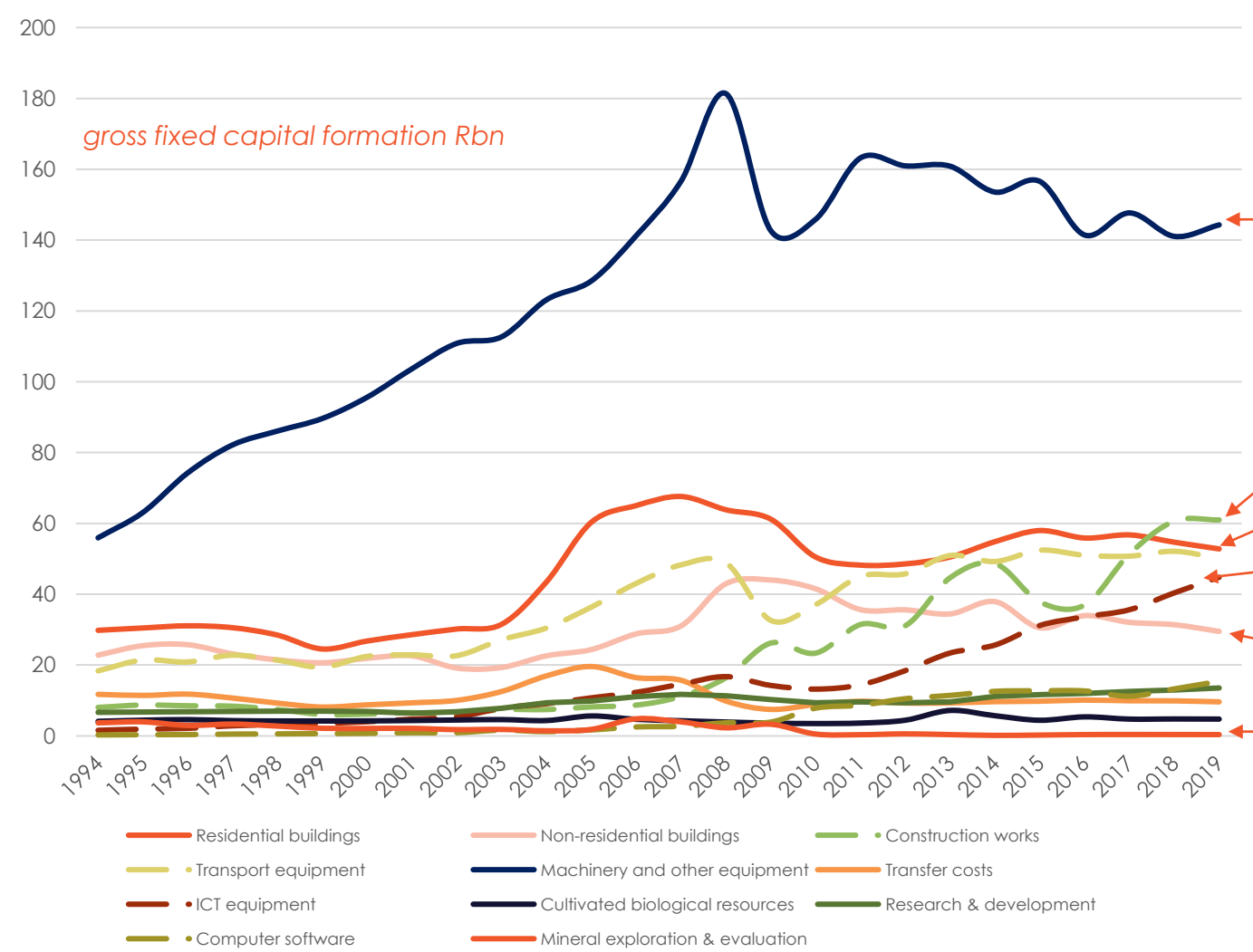


Problems with value for money received

- Poor project management, excessive costs, delays, synchronisation failures, corruption.
- Exceptions: new universities were on budget and on time. RE IPPs on budget and on time.
- Key differentiator is quality of oversight and planning.

Diagnostic: Private sector

Key takeout: Spending driven by sector themes. Mining weak, ICT strong. Policy plays a key role.



- At more granular level, certain trends are clear in private sector spending that track policy and economic issues.

Machinery and equipment has fallen 20% from peak, along with general deindustrialisation

Construction works (roads, bridges) has been a growth area (perhaps substituting for public sector)

Residential buildings have been robust despite 2008

ICT equipment has been a major growth area (includes network infrastructure)

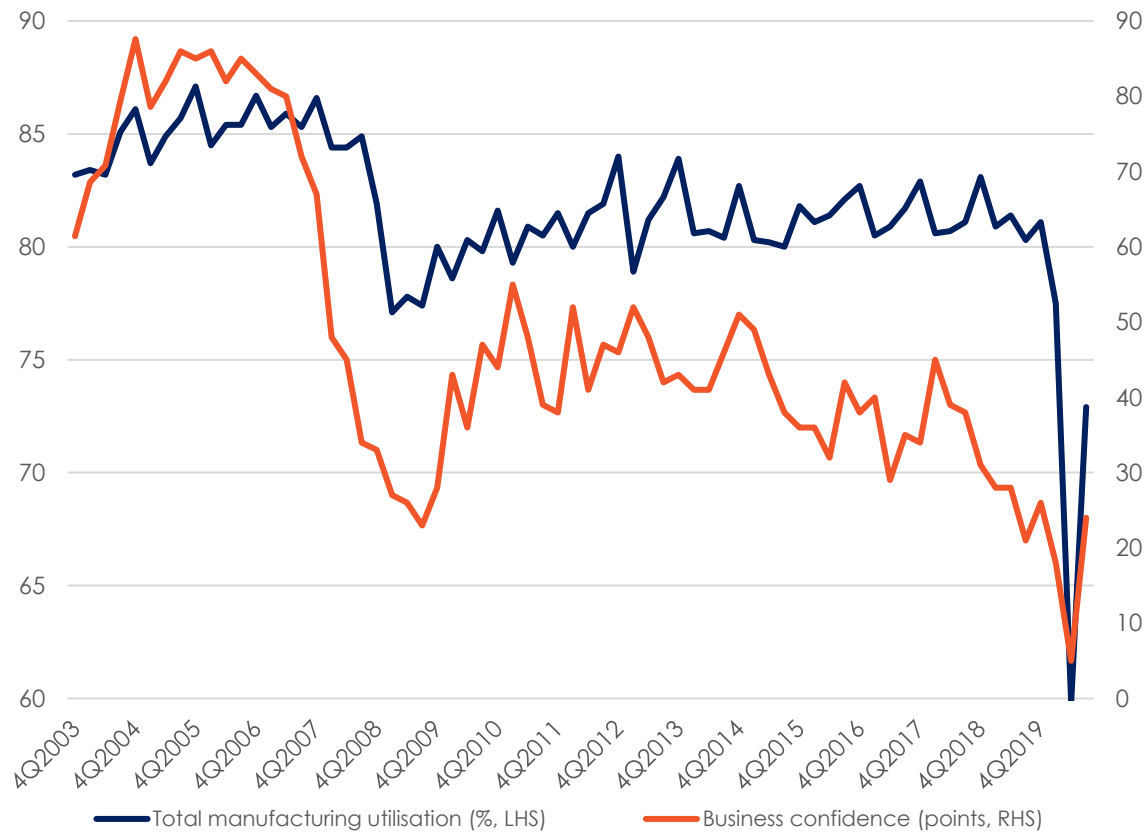
Non-residential construction peaked in 2008-10 alongside Fifa World Cup

Mining exploration has flatlined. Peak of R4.8bn in 2006, but R377m in 2019

Diagnostic: Private sector

Key takeout: Private sector spending outlook is weak given excess capacity and low confidence

- Literature is clear that investment lags capacity utilisation and business confidence

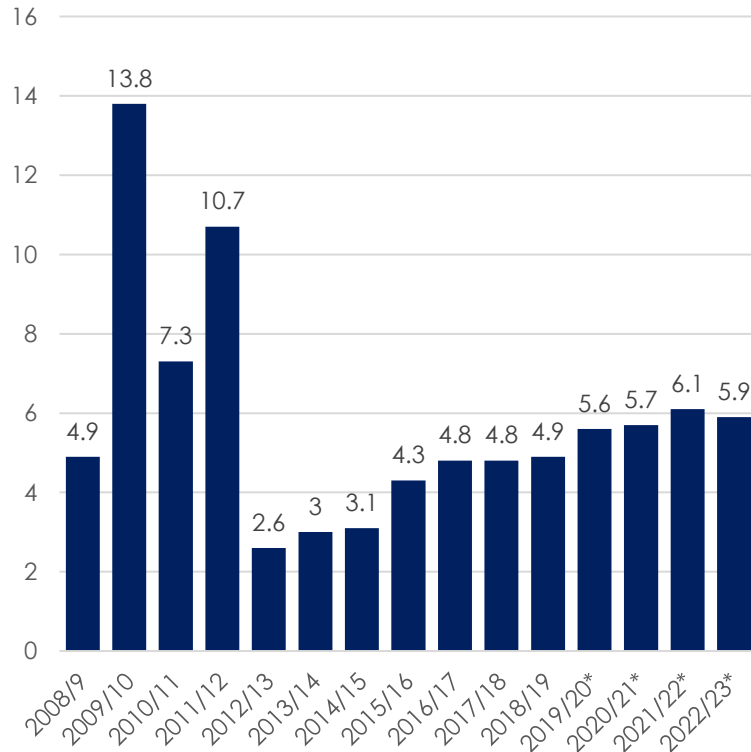


- Investment volumes are a function of capacity utilisation – businesses invest when they are near capacity and expect strong demand in future
- Capacity utilisation has never recovered to pre-financial crisis levels
- Covid crisis has caused severe short-term shock to confidence and capacity
- Implies private sector investment outlook is weak without major policy change that will drive confidence and demand outlook.

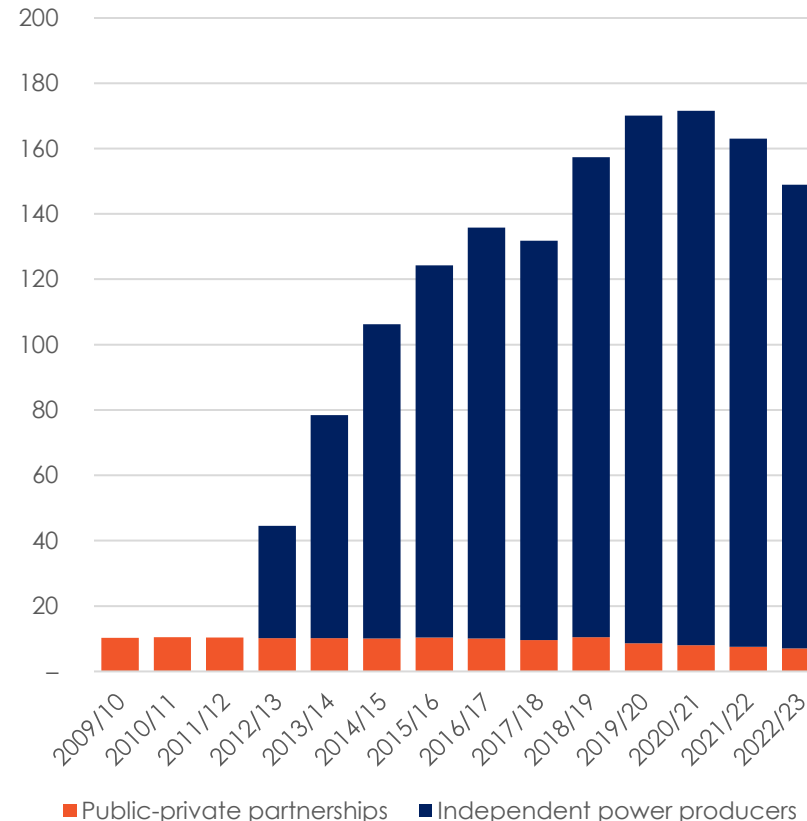
Diagnostic: PPPs

Key takeout: PPPs are complex and seen as the exception in infrastructure approach. No new ones since 2017

• Public sector spending on PPPs (Rbn)







• Contingent liabilities for PPPs (Rbn)



- PPPs undertaken under Regulation 16 of the PFMA/MFMA are overseen by the PPP Unit/GTAC
- Volumes have fallen since 2010, usually put down to a lack of political will given PPPs are much more oversight intensive than on-balance sheet infrastructure projects. Skills shortage in creating bankable projects is clear constraint.
- There have been no new PPPs registered since 2017.
- Excludes RE IPPs which were managed by the IPP Office, an ad hoc institution that was set up outside of the formal PPP framework (JV of Treasury, Dept of Energy and DBSA)
- PPPs and REIPPs have created contingent liabilities that constrained budget will affect.

Diagnostic: summary

- Across all four mechanisms for infrastructure delivery, the trend has been clearly in the wrong direction for several years

	1. "On-budget" public sector 	2. SOEs public sector 	3. Private sector 	4. PPPs 
Typically:	Schools, hospitals, local roads	Ports, rail, power stations	Machines, ICT networks	Toll roads, prisons, IPPs
Recent trend:	Declining since 2015 (3.5% of GDP to 2.7%)	Sharp decline since 2015 (3.8% of GDP to 2.66%)	Decline since 2008 peak (15.9% of GDP) but flat since 2010 (12.5% of GDP)	No new PPPs registered since 2017. Ad hoc structures like REIPPP successful.
Primary blockages	Skills shortage to manage within Framework for Infrastructure Delivery and Procurement Management, Budget constraint	Credit ratings fallen dramatically since 2015, deep in junk territory	High level of unused capacity on existing infrastructure	PFMA reg 16 is complex requiring multi-year process.
Funders:	Tax payers, bond holders	Bond holders (tax payer bailouts)	Shareholders, banks	Banks, institutions, shareholders, tax payers
Possible recovery catalysts:	Rotate budget from consumption to investment	PPPs with private sector to improve utilisation of existing infrastructure	Open policy space to boost investment (e.g. spectrum, mining)	Rebuild PPP pipeline through NT PPP Unit

Solutions: Facing up to binding constraints

The reality	The implications	The response
National budget is highly constrained, debt is sub investment grade with negative outlooks	There is no new money, only better management of existing money. We cannot increase borrowing to fund investment.	Rotate expenditure out of consumption and into investment. Improve value for money of spending. Shift projects into PPPs that can be privately funded. Private sector support for capacity constraints in project development and delivery.
SOEs are sub investment grade and unlikely to emerge for foreseeable future	Cannot raise debt and therefore investment must be financed by operating cashflows, which in turn are constrained	Improve economic value of existing infrastructure. Form SOE-level PPPs with private sector leveraging SOE infrastructure to improve yield.
Private sector has large excess capacity and demand outlook is weak	Expansion investment will be low without structural reform	Implement structural reforms to open investment opportunities: spectrum auction, energy generation, mining finalisation

Solutions: Lifetime planning

We must maximise the social and economic value infrastructure provides the public

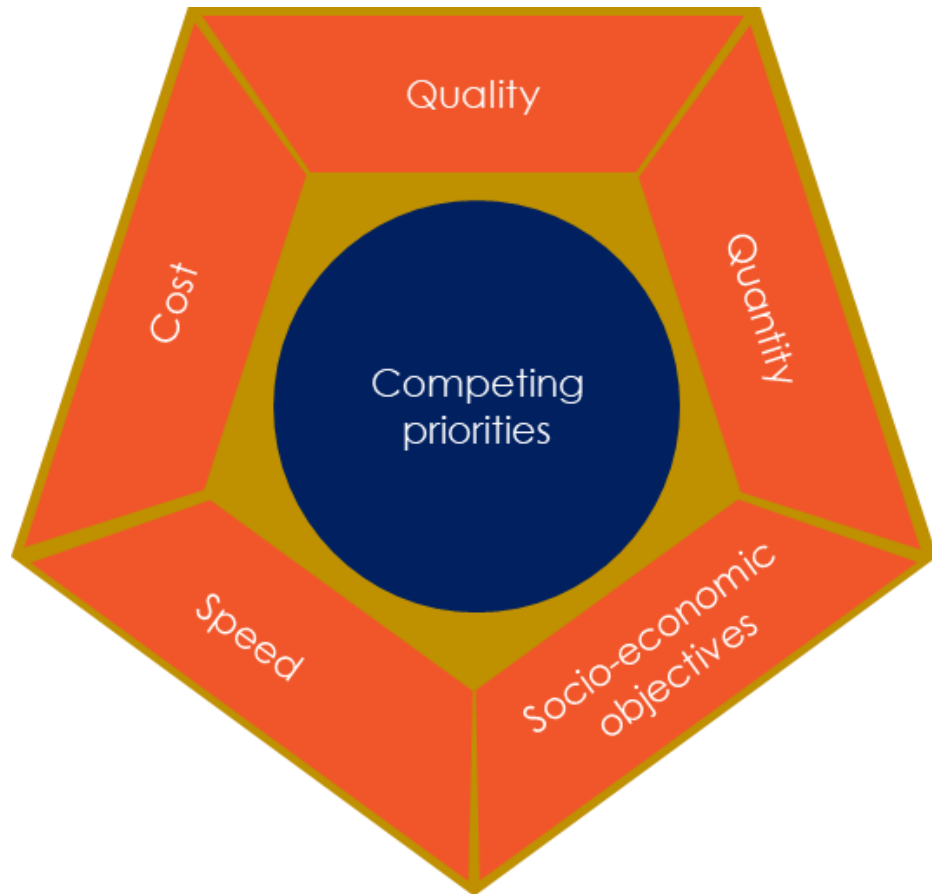
Plan for the **full lifetime** of infrastructure



- The current “run to failure” approach to infrastructure is far more expensive than maintenance
- Without proper budgeting for maintenance at the outset, lifetime cost vs benefit cannot be determined
- Projects have 20-50 year lifetimes during which costs and benefits will accrue
- We must choose projects to maximise lifetime value relative to the lifetime costs
- The delivery mechanism and project design must be calibrated to deliver value

Solutions: Balance priorities

But then rigorously determine procurement model to maximise all priorities at least cost



- Infrastructure procurement requires trade-offs.
- Cost must be balanced against speed, quality, quantity and other socio-economic objectives like BEE and inclusive growth
- But procurement models must ensure maximum delivery on each of these factors once the balance is determined

Solutions: From micro to macro

Ad hoc interventions cannot achieve the scale we need. Need wide ranging changes to free bottom-up infrastructure investment in both public and private sector



public sector



SOEs



Private sector

Policy objective:

Improve local government and provinces procurement. Improved project origination

Crowd in private balance sheets through PPPs

Trigger investment through structural reforms: improve risk and remove red tape

Regulatory changes:

MFMA reform to simplify longer term projects and PPPs
PFMA reg 16 reform for risk weighted and simplified PPP framework. Procurement framework reform for appropriate procurement model decisions.

Implement existing policy on corporatisation (Transnet) and energy restructuring (Eskom)

Policy certainty in mining; spectrum auctions; 50MW embedded generation; faster water use licenses; visa reform for skills

Private sector support:

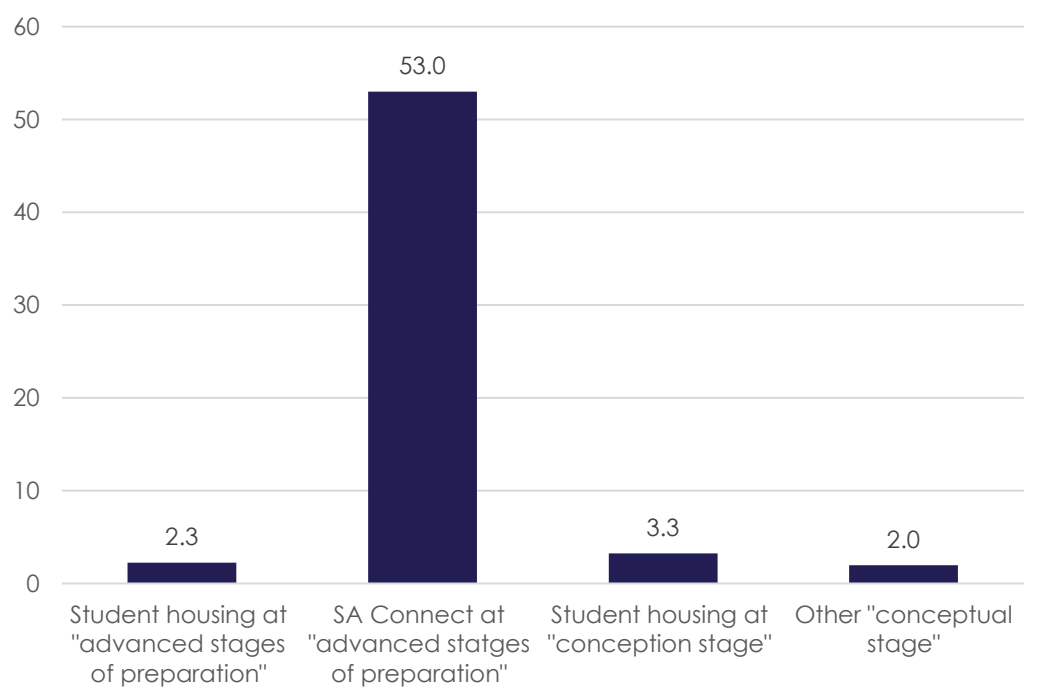
Support capacity (TAMDEV and similar). Feasibility studies and input on high value for money infrastructure concepts

Develop funding mechanisms for greater public infrastructure investment

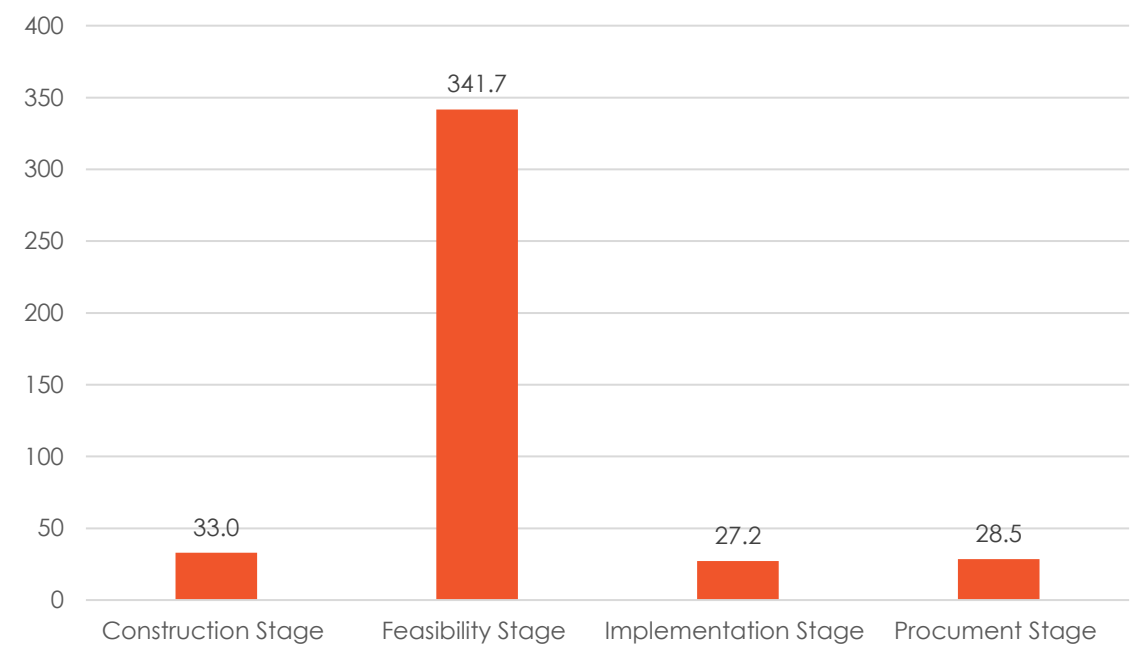
Solutions: the role of interventions

Infrastructure Fund, Sips, can help at the margin to catalyse certain projects and create the political will to drive PPPs. But volumes will remain relatively small.

Infrastructure Fund Projects (Rbn)

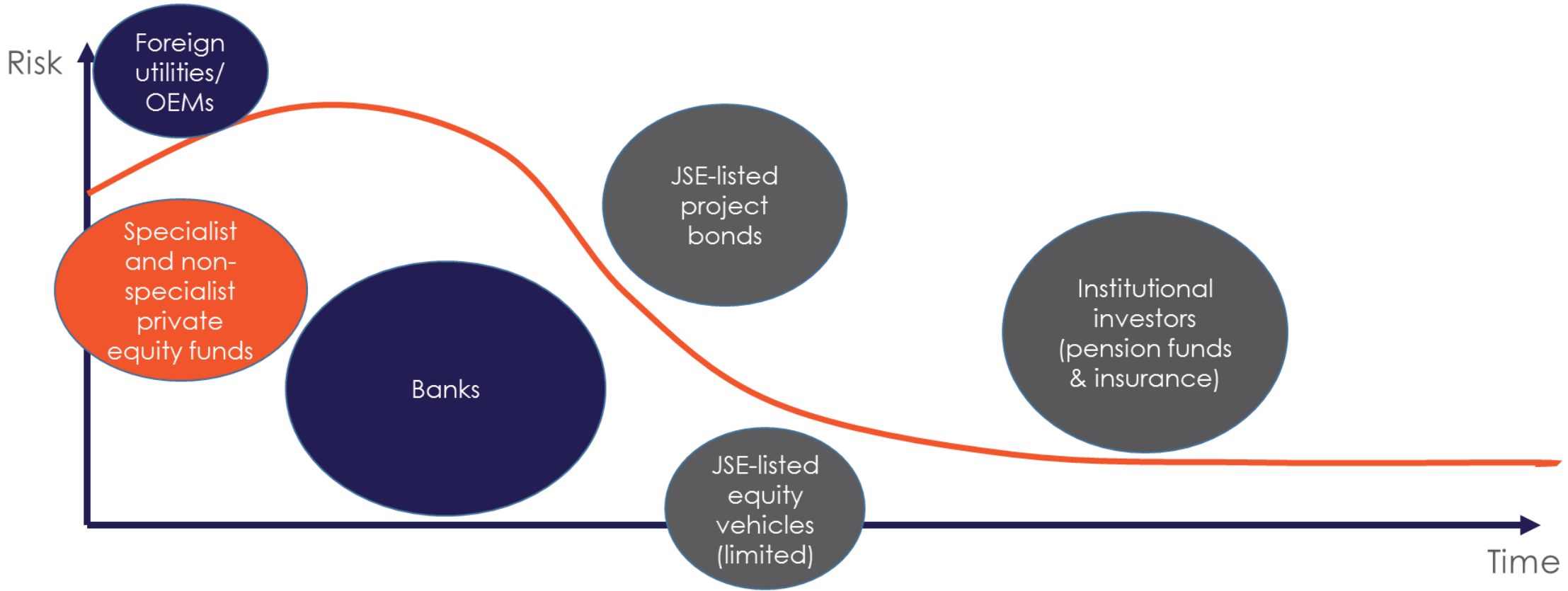


Other public sector projects (Rbn)



Solutions: Private sector funding

Funding must fit the project risk cycle: high during construction before fitting a long-run, utility-like low-risk phase. Project design should accommodate refinancing across the risk spectrum. Funding is available, it is the projects that are missing



Solutions: Healthy PPPs

Focus on the principle of **maximising value for money**

Public sector

- Custodian of the public interest
- Largest balance sheet with greatest risk absorption capacity
- Long term time horizon
- Major investor in infrastructure



Private sector

- Incentivised to drive efficiencies through innovation
- Best positioned to manage construction risk and operational risks
- Can mobilise private sector investment

Public and private sectors can each contribute skills and capabilities to ensure optimal project delivery

The best mechanism is South Africa's PPP framework (regulation 16), which should be amended to ensure optimal partnerships

Questions?



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