Mining in Africa
Advice to Africa

Prebisch-Singer hypothesis
Resource curse thesis
Primary resources price volatility challenge
Take home message

• (S)Development = Industrialisation

• Beneficiation is overrated

• Backward linkages rock!!!!

• Exploration is the entry point
Background

- Economic development = Industrialisation

Comparison of mineral rents (% of GDP) between LIC, MIC and HIC

Source: World Bank
Manufacturing is good for income

Comparison of MVA (% of GDP) between HIC, MIC and LIC

Years

MVA% of GDP


High income
Low income
Middle income
Mining value chain
Technical complexity of sub-chains

- Mine construction
- Production
- Beneficiation and mine closure
- Exploration
Cost of operation in the sub-chains

- Mine construction- US$1.5 billion
- Production—Difficult to estimate
- Beneficiation/refining—Plant cost
- Exploration- US$10-50 million
- Mine closure- US$150 million
Why exploration

• This is an additive value chain
• It is least complex
• It is least expensive
• The minerals are in Africa
Changes in project value and inherent risk in mining project with progress down the value chain
The exploration sub-chain

- Early Stage Exploration
  - Target Identification
    - Geological data
    - Minerals Market analysis
  - Desktop
    - Preparing to go in
      - Legislation evaluation
      - Research and previous work
    - Fieldwork
      - Drilling and sampling
      - Geophysics work
  - Prospecting Evaluation
    - Laboratory and Deskwork
      - Geophysical analysis
      - Geochemical analysis
    - Drilling and bulk sampling
      - Environmental base-line studies
      - Metallurgical Testwork
      - Ore body Delineation
  - Follow-up Exploration
    - Exploration evaluation
      - Preparation of Bankable Feasibility Study
    - Late Stage Exploration
      - Ore reserve calculation
      - Environmental Impact Assessment
Conclusion: How for Africa

- Dominate exploration
- Strengthen geo-data centres

- **Policy agility**- Strength of freight train agility of a Mini Cooper (motor-bike)

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MEDASE,
ASANTE SANA
THANK YOU