



The Geological Society  
of Zimbabwe

**2021 WEBINAR**

# Mineral asset valuation and its uses



[www.shutterstock.com](http://www.shutterstock.com) · 143785069



**National Association of  
Certified Valuators and Analysts®**

THE AUTHORITY IN MATTERS OF VALUE®

# Presenter: W.Gambiza,CVA

## Mining Investment Banking Expert

### Industrial Experience

- 14+ years combined experience in Mining Engineering and Mineral Project Finance

### Education

- PGP in Investment Banking & Capital Markets – Current
- MSc (Eng.) in Financial Valuation of Mineral Assets
- MSc in Strategic Management (Finance)
- Executive Certificate in Investments and Portfolio Management
- IB Certificate in Financial Modelling and Valuation
- Certificate in Mining Financial Modelling

### Professional Certification

- Certified Valuation Analyst , CVA

### Expertise

- Mining Capital Sourcing
- Mine Feasibility Studies
- Valuation of Mineral Assets
- Mine Due Diligences
- Mining Equity Research
- Mergers and Acquisitions
- Mineral Project Finance
- Expert Testimony
- Litigation Support
- Mining Investment Research
- Mineral Market Analysis
- Capacity Building

# Presentation Outline

- Key Terms
- Classification of Mineral Assets
- Purposes of Mineral Asset Valuation
- Market Requirements
- Fundamental Principles
- Mineral Asset Valuation Methodologies
- International Valuation Standards
- Critical steps involved in MAV

# What is a Mineral Asset?

- An accounting definition of an **asset** - a resource with economic value that an individual, corporation, or country owns or controls with the expectation that it will provide a future benefit.
- **Mineral asset** refers to a contractual or permanent right to explore for or mine (or both) minerals from the earth.
- It is obvious that the principal asset of a mining company is the **Mineral Resource** over which the company has rights.
- Within this asset is the metal or commodity that should be identified, scheduled, extracted, and beneficiated in order to realize optimum value from the underlying asset.

# Value of a mineral assets

- Mineral resources and/or reserves have a commercial value which can be expressed in monetary terms and may be a subject of trade on the market.
- Mining businesses exist to create and optimize long-term shareholder value but key questions that always arise are:
  - how do you measure value of a mineral asset?
  - how do you maximize value of a mineral asset?
  - how do you preserve the mineral asset value?
- Correct valuation of mineral assets, is a highly specialized area and a multistage process.
- The work demands extensive knowledge and experience in a number of key fields particularly in geology, mining engineering, mineral processing, corporate finance and economics

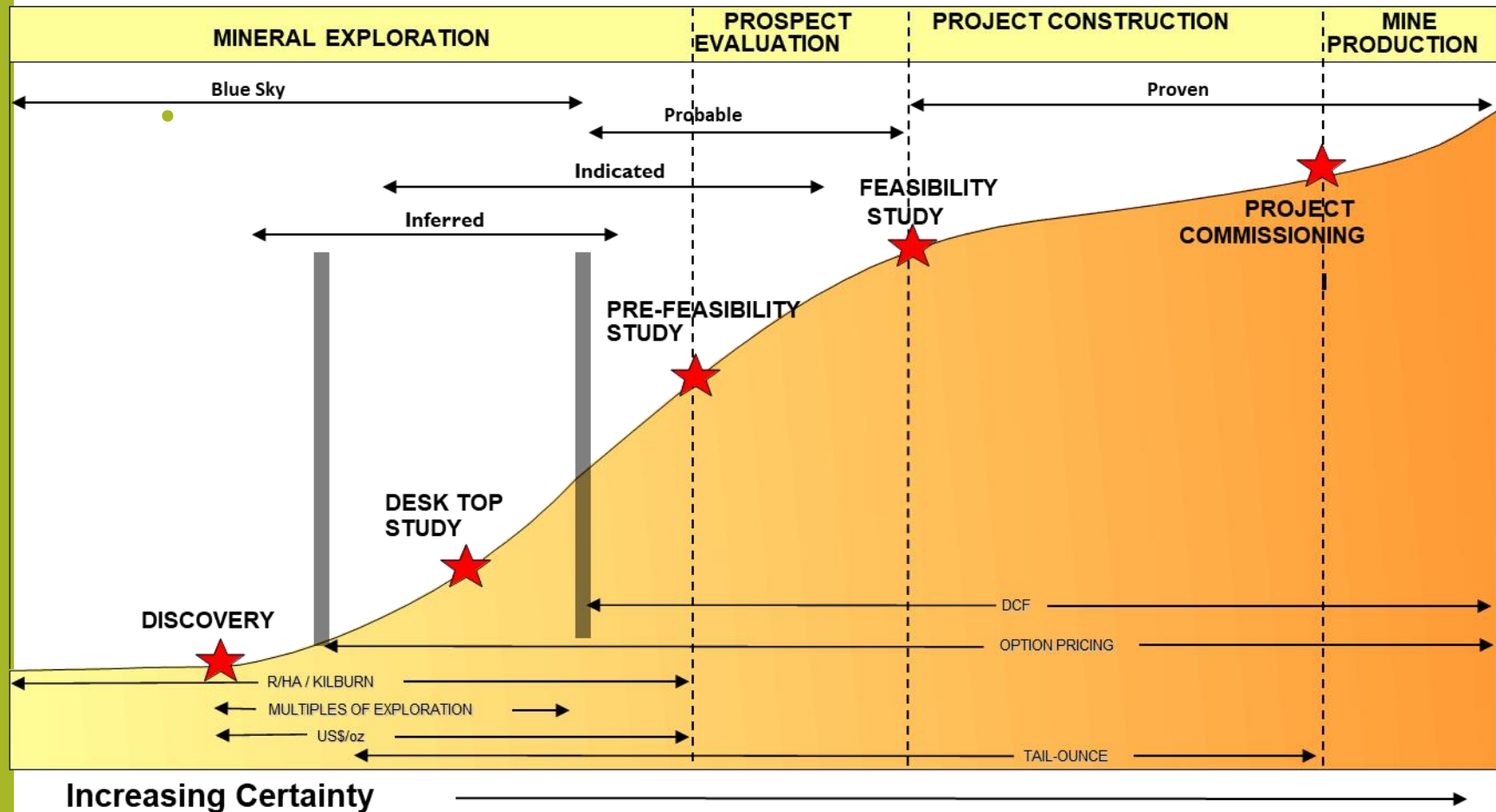
# What is Mineral Asset Valuation?

- Mineral Asset Valuation is a process and a set of procedures used to estimate the monetary value or economic value (worthiness) of the subject property.
- These values come in various forms known as Basis of Value or Standard of Value - *“a statement of the fundamental measurement assumptions of a valuation”*
  - Fair Market Value
  - Forced Value / Liquidation Value
  - Investment Value - “The value of an asset to the owner or a prospective owner for individual investment or operational objectives”
  - Special Value or Synergistic Value - An additional element of value created by the combination of two or more assets or interests where the combined value is more than the sum of the separate values”
- In most cases, Standard of Value commonly refers to Fair Market Value
- An organization or person that commissions a valuation is known as a commissioning entity.

# Fair Market Value

- The **fair market value** is “*the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts*”.
- Mineral Assets Valuations are carried out at various stages of mine development.
- The stages of mine development is key as it assist the Valuer to select the most appropriate valuation methodology.

# Stages of Mine Development





## Classification of Mineral Assets Based on Development

- Early stage exploration asset
- Advanced exploration asset
- Prefeasibility study asset
- Feasibility study asset
- Development asset
- Production asset
- Marginal assets
- Dormant asset

**At every stage of the mineral project life cycle, valuation can be done and the valuation report should be used for its intended use.**

To maximize value of a mining set-up, management should constantly apply “**Mineral Asset Management Principles**” to the principal asset as one would to an asset such as loading equipment or dump truck.

# Mineral Asset Management

At every stage, the critical asset management value-adding questions that management should be asked include:

- **Is the asset available?** This requires the development of appropriate metrics and controls to ensure that planning has resulted in sufficient mineable face length being available, and that sufficient flexibility has been created in the orebody, to ensure that short- and medium-term plans can be realized.
- **Is the asset being utilized optimally?** This places focus on the mining process, mining efficiency, and all the leading indicators of productivity - holistic approach covering capital, people, systems, and assets
- **Is the asset reliable?** Has sufficient work been done to ensure that those aspects that make the asset unreliable are addressed. This could include the level of geological uncertainty, the risk of interruption due to geological interferences, potential for the loss of the asset as it is extracted and transported, and the reliability of all relevant data related to the asset and its use
- **What is the mean time between failures?** This involves development of controls that monitor the mean time between failures due to geological interferences such as dykes, potholes and washouts, and other unwanted events. These measures indicate the appropriate levels of flexibility required.
- **Is the asset optimized?** Use of grade-tonnage curves and application of cut-off grades.

# Purpose of Valuation

- Acquisitions
- Mergers
- Capital Raising – Equity or Debt
- Listing support
- Additional information for financial statements
- Deal structuring - support for property agreements
- Litigation
- Expropriation compensation
- Income tax matters
- Vendor consideration
- Determination of Royalty Payments
- Investment decisions
- Bank loan security

The intended use and intended users of the Valuation Report must be clearly disclosed unless confidential.

# Market Requirements

Who Should Carry out Mineral Asset Valuations?

## Competent Mineral Asset Valuator, CV

A person who (a) is a professional with demonstrated experience and Competence in the Valuation of Mineral Properties, (b) has experience relevant to the subject Mineral Property or has relied on an Expert with experience relevant to the subject Mineral Property, and (c) is regulated by or is a member in good standing of a Professional Organisation.

Responsible for adhering to the Principles, Standards and Requirements in the Valuation of Mineral Assets.

# Market Requirements - Principles

The following fundamental principles must be adhered to:

- Materiality
- Transparency
- Competency
- Reasonableness
- Objectivity
- Independence

To generate health returns, in the mining investment space, financial institutions firms should possess a set of skills including CV, so that they can successfully select, structure and monitor performance of their investments.

Do financial institutions have these skills?

# Mineral Asset Valuation Approaches

## 1. Cost approach

what was paid; historical expenditure

WHAT HAS BEEN SPENT??

## 2. Market approach

willing buyer –willing seller; comparable transactions

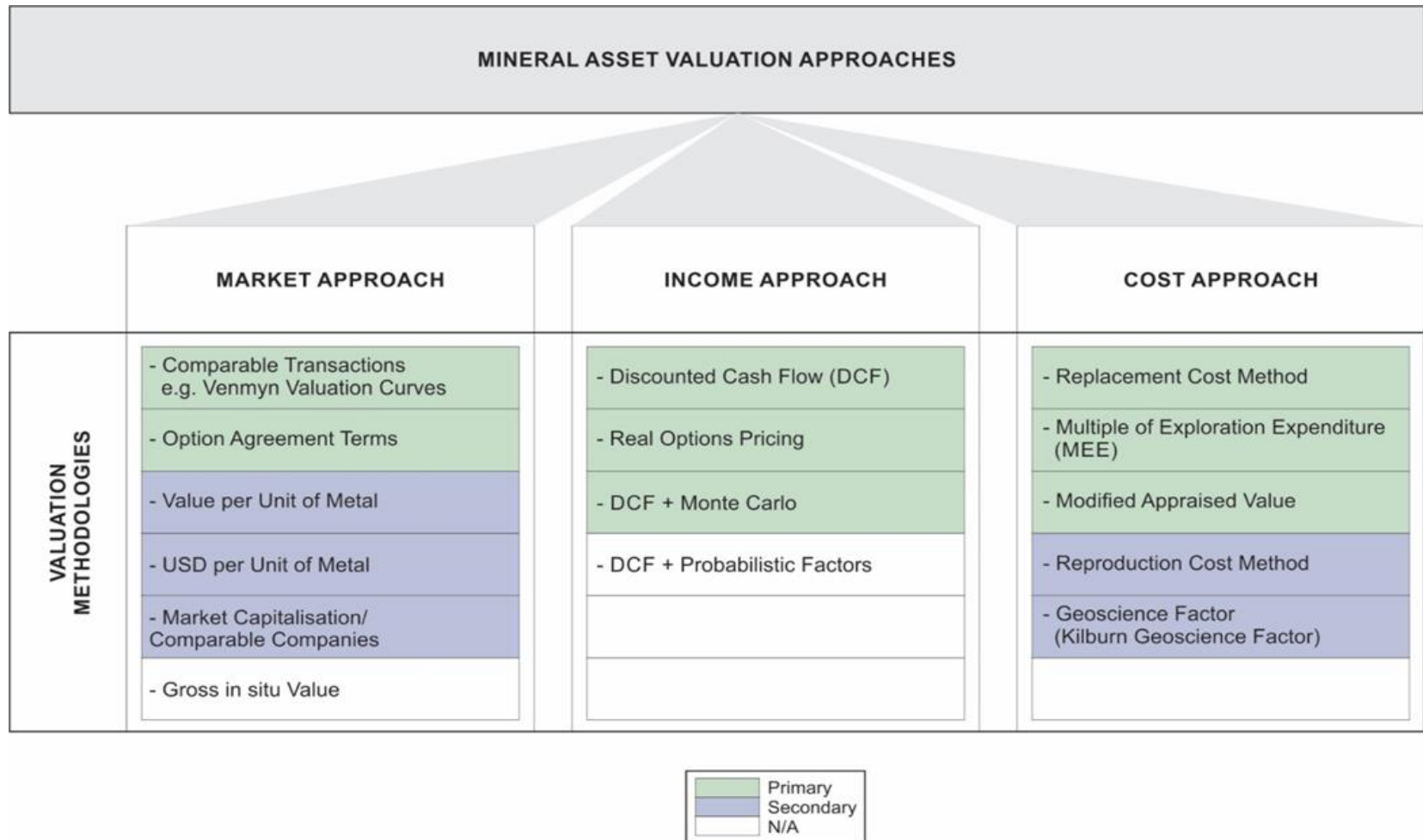
WHAT IS THE NORM?

## 3. Income approach

cash flow generated from exploitation of resource

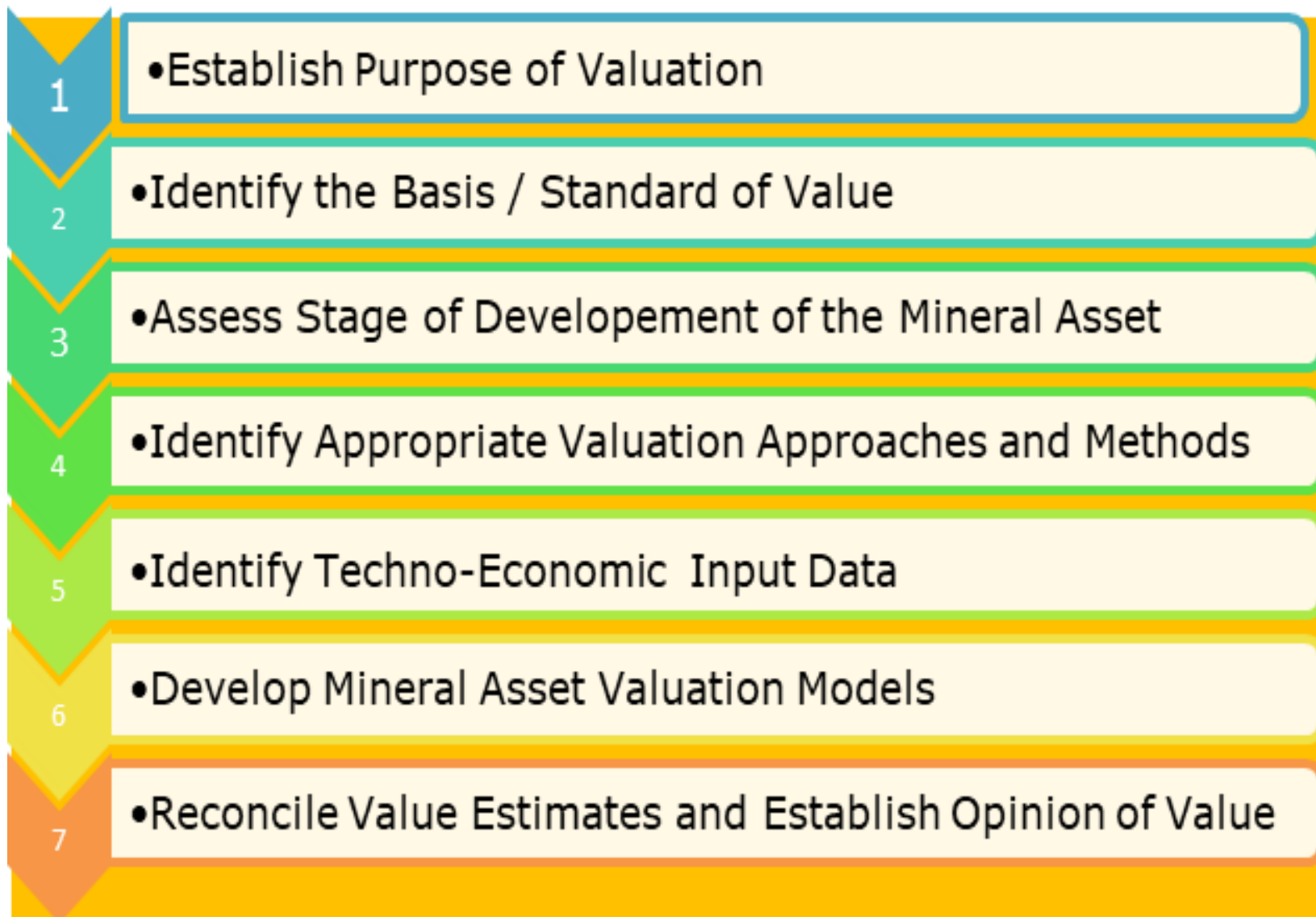
WHAT WILL IT MAKE?

# Mineral Asset Valuation Approaches



The valuation codes prescribe that at least two of these methods must be used, forming a value range, within which the “Preferred Value” is selected!!!

# Steps to be taken in valuation of mineral assets





# Mineral asset valuation standards

- The market has experienced poor or biased valuations which can arise due to:
  - Incompetence
  - Negligence
  - Temptation to create a favorable answer
  - Lack of independence

## **Rio Tinto's Mining Investment Case: Fraudulent Coal Asset Valuation in Mozambique**

- To deal with cases of unscrupulous valuations and misleading reports, rules governing Mineral Asset Valuation have been set and they stand to provide guidelines and standards (Codes).
- The rules and guidelines enforce on Valuers high ethical and service quality standards.

## Riversdale Coal Asset Transaction in Mozambique



“The \$US3.7 billion purchase of Mozambique coal assets in 2011 had already cost then chief executive Tom Albanese his job, when Rio Tinto was forced to write-off more than \$US3 billion from the value of its investment in January 2013”.

“They tried to save their own careers at the expense of investors by hiding the truth.” - Steven Perkin, SEC's Co-Director of Enforcement.

# Global Mineral Asset Valuation Codes

- VALMIN Code 2015
- CIMVAL Code 2003
- SAMVAL Code 2016
- SME Valuation Standards 2016
- IIMA, USA
- POVAL Code 2015
- International Valuation Standards
- NACVA Standards
- RICS RED BOOK

These valuation codes attempt to standardize how the valuation of mineral assets should be done.

They have also increased individuals' reporting accountability through professional affiliate bodies

THE END  
THANK YOU

**Business Contacts**

Cell Number: +263 772 530 466

Email: [business@svc.co.zw](mailto:business@svc.co.zw)