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An Investigation of Scenarios for the

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ABSTRACT

The platinum-mining industry is predominantly located in South Africa, which is home to more than 78 % of the world's Platinum Group Metals (PGMs). The industry has been growing extremely fast but has recently faced several challenges. High platinum prices in 2008 meant that the industry had an average return on capital of ±34 % for three to four years. This was driven by the increasing demand for PGMs, which have a wide range of industrial and high-technology applications with an important and growing impact on our daily lives. Platinum, palladium and rhodium are mainly used as a component of autocatalysts for both petrol- and diesel-engine vehicles, which together are responsible for more than 76% of net total PGM consumption. However, over the past two years, this industry has faced many challenges resulting in a significant reduction in demand for these PGMs, thereby creating many uncertainties regarding the future of the industry. The economic crisis during 2008 hurt the platinum price. It plummeted from ±US$2 200 per ounce in mid-July 2008 to approximately US$800 per ounce in late 2009, leaving some platinum mines temporarily closed.

As a result, platinum mining companies need to expand their knowledge regarding future opportunities and threats that may cause a dramatic fall or rise in the demand and supply of platinum. There is still a gap in knowledge as to how to identify the key uncertainties affecting the overall platinum industry. This research report seeks to unravel these key uncertainties. Therefore, the aim of this research is to explore the key uncertainties in the platinum-mining industry that may affect it in the next 10–15 years, and to suggest plausible future scenarios for the industry.

In recent years, strategic foresight has remained the biggest challenge associated with platinum-mining companies. Therefore, an analysis and understanding of the current and prospective status of platinum demand within South Africa and worldwide, its supply, industry trends, and key role players are critical ingredients in anticipating the future of the platinum industry. The research analysis was therefore

used to question the strategic paradigms, and to offer possible future scenarios, but not to forecast the future.

The methodology used for this study is qualitative in nature. The beliefs and thoughts of industry experts were elicited through a structured analysis of the key uncertainties identified by them regarding the platinum industry to arrive at the key ones. The respondents nominated were initially contacted by e-mail and telephone to inform them of the purpose of the study and the subjects to be covered, and to invite them to participate in the research process, including the expected timeline of the review. Upon acceptance, the draft report, with an open-structured questionnaire, was sent to the respondents by e-mail. The responses were then collated and analysed for thematic content to distil a number of key uncertainties. The key driving forces were then identified through Causal Loop Analysis (CLA) and used to posit four plausible scenarios.

The research findings showed that the two critical driving forces that defined the four scenarios were identified as, first, Global Economic Performance (GEP), that is, the performance of platinum in the global arena, and second, Emissions Legislation (EL). This legislation will be driven primarily by global warming, which will necessitate the need for more efficiency in energy use. The subsequent strategic scenarios of the platinum-mining industry were given the following names:

- Scenario 1: Sunshine Forever
- Scenario 2: Perfect Storm
- Scenario 3: Tsunami , and
- Scenario 4: Tornado

These scenarios provide a perspective of what the platinum-mining industry may have to face within the next 10 to 15 years. The scenarios confirmed that an industry is exposed to a turbulent environment when its environment is dynamic, unpredictable, and driven by continuous societal and technological change. Therefore, platinum-mining industries need to use sign-posting to plan and strategise for times of turbulence.

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