Namibian Mining: The Economic Stronghold

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Source: Samih Ossaily

Source: De Beers

Source: Minerals and more

Source: Uranium Information Centre

Source: The Namibia Economist

Source: CIA World Factbook
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Introduction

This report reviews the development of Namibia’s mining sector, an outlook on significant operations considering their dominant economic role and briefs on investment opportunities within the sector.

We are particularly interested in establishing whether Namibia’s mineral resources are being utilised to their full potential and the extent to which benefits of this resource are distributed to benefit the Namibian population in general.

We will assess the potential for notable growth of globally competitive downstream industries and analyse factors hindering such growth.

As the mining sector will remain the driver of Namibian economic growth for the foreseeable future, this paper will take a close look at the factors affecting the global demand and supply functions of the economically significant minerals with a view to assessing future profitability.

We take a look at China as a destination of Namibian minerals and potential FDI from this source considering the warm diplomatic ties enjoyed by the two countries.

Global mining trends

The rising cost of metals, with the price of copper, zinc and nickel having more than doubled over the past three years has been driven by almost stagnant supply and strong demand (particularly from China and India). China has more than doubled its share of global demand of aluminium, copper, zinc & steel to more than 25% and close to 50% in the case of iron ore. Supply on the other hand has been restrained by a combination of industry consolidation and under-investment.

The market share of the top 10 producers of aluminium and gold has increased from a third in 1993 to more than half and more than 80% in the case of iron ore as private sector companies control the market.

Mining companies are at present investing cautiously on the assumption that current high prices are unsustainable and focusing more on shareholder returns. This behaviour leads us to believe that the market is in the early stages of a super cycle rather than the peak of a normal cycle.

Mining companies are however still plagued by rising costs of labour, energy, consumables and mining equipment, which restrict the capacity to embark on new projects.

Mining companies also appear to be failing to replace reserves. Resource replacement amongst gold miners has only been 25% in the last five years after a 76% cut in exploration budgets in 1998. Base metal mining exploration expenditure has been increasing since 2003. However, there have been no new major discoveries in the last five years.

M&A activity in the mining industry has increased significantly as the drive to replace reserves and resources motivated the larger companies. Hostile bids have become more popular than the historical norm (Harmony’s offer for Goldfields, Xstrata’s bid for WMC Resources and Glamis for Goldfields), indicating the nature of the battle for resources. The four largest companies currently account for about 40% of the industry’s global market capitalisation.

Source: Beacon Group Advisors

Barrick Gold’s recent US$9.2bn unsolicited cash & stock bid for Placer Dome which would make Barrick the largest gold producer in the world is an example. Toshiba’s US$5bn bid for nuclear reactor manufacturer Westinghouse in anticipation of China’s imminent $8bn tender to build four 1,000-megawatt nuclear reactors is more recent evidence of this trend.

With resource replacement an issue on the mind of the industry, a group of mining houses comprising of Anglo American, BHP Billiton, Codelco, Newmont, Noranda, Phelps Dodge, Placer Dome, Rio Tinto and WMC Limited through the Mining and Minerals Working Group of the World Business Council for Sustainable Development (WBCSD) led the Global Mining Initiative (GMI). The GMI covers a wide range of issues concerning mining, minerals and metals cycle with a view to effectively contributing to the transition to sustainable development. The involvement of some of the worlds largest mining companies indicates a high likelihood of the swift development of definable international standards for environmentally and socially responsible mining.
Mining and the minerals process in Africa

Africa produces more than 60 metal and mineral products and is a major producer of several of the world's most important minerals and metals including Gold, Platinum Group Elements (PGEs), Diamonds, Uranium, Manganese, Chromium, Nickel, Bauxite and Cobalt.

Africa's contribution to the world's major metals (copper, lead and zinc) is less than 7%. As a result, silver production is low (less than 3% of the world's production) due to the fact that most silver is produced as a by-product of lead - zinc and copper mining. The continent hosts about 30% of the planet's mineral reserves, including 40% of gold, 60% cobalt and 90% of the world's PGE reserves. This makes Africa a strategic producer of these precious metals.

Increased exploration and mine development in Africa has been primarily focussed on gold and diamond exploration. Undoubtedly, there is still great scope for these commodities, but riding on the back of improving base metal prices, this sector could see an increase in activities. Mozambique, Nigeria and Madagascar are a few of the countries that have tremendous potential for base metal and industrial mineral deposits.

South Africa, Ghana, Tanzania, Zambia and the DRC dominate the African Mining industry, whilst countries such as Angola, Sierra Leone, Namibia, Zambia and Botswana rely heavily on the mining industry as a major foreign currency earner.

Major new mines opening in Africa or under development are distributed between South Africa, Namibia, Botswana, Tanzania, and Gabon producing gold, diamonds, PGEs, chrome and base metals. Major discoveries over the last year include the discovery of several potentially diamondiferous kimberlites in Mauritania, and the potential marine deposits offshore in Southern Namibia.

SADC

The development of new mining and metallurgical technologies and discovery of new ore bodies have accelerated the exploitation of mineral resources in the SADC region over the past century.

The large-scale mineral resource exploitation and growth of the mining sector has resulted in the establishment of a manufacturing base, modern transport and communications infrastructure.

Mining in SADC remains a predominant industry as it contributes about 60% to the total foreign exchange earnings, 10% to total GDP though in some member states it goes up to 50% and about 5% to direct formal employment.

SADC is also an important player on the international mineral market with shares of between 11% and 45% of the world supply of eight major commodities which include chromites, cobalt, diamond, gold, manganese, copper, platinum and uranium and has considerable potential in the dimension stone sector and other industrial minerals. In addition SADC possesses some of the world's richest deposits for a number of minerals.

The SADC region has all the mineral resources necessary for industrialisation. The processing of mineral products in the SADC region therefore has un realised potential. To realise the potential of developing viable mineral processing/fabrication industries, the region has to adopt supply and demand led mineral processing strategies.

The objectives of regional mineral and metals processing are to increase the value of mineral products before exporting them, maximising local opportunities for production of minerals industry inputs (i.e. capital goods, consumables and services) within the region.

Mining and the Namibian economy

The Namibian economy displayed real growth of 42% in the decade to the end of 2004. Mining is the most important primary industry in Namibia, accounting for 53.6% of primary industries’ 19.4% contribution to 2004 GDP at market prices of N$3.8bn. Copper smelting and more recently refined Zinc traditionally drive the other manufacturing component of secondary industries, which accounts for 4.9% of GDP.

Source: NPC/CBS

The Namibian economy expanded by a very impressive 5.9% in 2004, mainly because of a very sound performance from the diamond mining industry of 37% and other mines 31% (mostly Scorpion Zinc, Ongapolo and Rossing).
Other manufacturing, which is mainly, smelted copper and refined zinc also performed well by expanding by 19%. However, the non-mining economy, expanded by only 2.9%. The chart below underscores the importance of a strong mining performance to overall GDP growth.

Source: NPC/CBS

In 2004 Ores and minerals together with manufactured copper and refined zinc accounted for nearly 42% of total exports of goods and services with diamonds accounting for 29%.

The mining industry also contributes significantly to infrastructure and community development, however it can be argued that little has been achieved in terms of redistribution of the mineral wealth to the Namibian population at large. Sustainable resource exploitation and increased local down streaming to the benefit of the Namibian population at large are amongst government’s objectives within the sector. With the exception of Ongopolo and to lesser extent Namdeb most of the large mining outfits are born of large multi-national companies. This puts Namibia at risk of a love and leave attitude from concession holders if government does not implement and enforce strict compliance with environmental and other standards supporting sustainable development. Diamonds dominate Namibia’s mineral production, while uranium, base metals, fluorspar and table salt are also produced. Precious metals and dimension stone are produced to a lesser extent. Although a wide variety of minerals are produced locally, all do not have the same demand capacity internationally. Taking the latter into consideration this review will mostly concentrate on some commodities, this is not to say that we disregard the importance of others.

Employment and wages

Using employment trends amongst Chamber of Mines members as a proxy for the industry, we see that the number of jobs in Namibia’s mining industry has been increasing since 2002 mainly due to the opening of Skorpion Zinc in that year and De Beers Marine operations in 2003.

Although total employment by Chamber members in 2004 stood at 7,449 employees reflecting an increase of approximately 1,500 employees since 2001, the numbers are still well below the 9,775 levels of 1995 as large established miners’ ability to create employment diminishes. Namdeb land operations reduced its workforce by about 1,700 employees between 1995 and 2001.

Technological advancements have resulted in a shift of the mining input mix as human capital is replaced by machinery. Small-scale mining operations (although developed haphazardly, poorly equipped and under-resourced) are
labour-intensive and engage large numbers of both men and women.

In 1990 formal small-scale mining employed approximately 5% of the total mining industry, while by 2000 it accounted for 20% of the estimated number of people in mining. This is excluding the informal miners, who are difficult to count because they are very mobile and not recorded in official statistics.

The growth of small-scale mining operations is however hampered by wasteful practices, high-risk nature, and activities associated with hazardous working conditions, which disregard health, safety, and environmental protection. Increased employment in Namibian mining depends largely on the development of the labour intensive small-scale operators.

Value addition

Of late much focus has been put on the lack of development of downstream industries locally to increase value addition, create employment and related ripple effects in the economy.

Diamond cutting and polishing

The Lev Leviev group opened Africa’s largest diamond cutting and polishing plant in Windhoek but complains of having to work on imported stones due to the short supply of local rough diamonds. At present the Diamond Trading Company (DTC) sells the bulk of Namibian diamonds. The company argues that imported diamonds are obtained at very high prices, and yet Namibia produces quality diamonds suitable for the local industry.

Local polishing and cutting factories are most likely to be profitable provided they receive locally extracted stones outside of the DTC pipeline.

De-Beers announced that it is building a diamond-sorting centre in Botswana, which would serve the whole SADC region. The DTC expects the centre to be completed by 2008 and is scheduled to start operations in 2009.

Copper smelting

Ongopolo Mining and Smelting mines copper at its Otjihase, Kombat and Tsumeb mines, which is refined at its Tsumeb smelter. Overall production at the three mines declined in 2004 and through 2005 the company augmented smelter volumes by treating copper concentrates from the DRC, Zimbabwe, RSA, and Zambia.

Zinc refining

The Skorpion Mining Company mines an oxide zinc deposit by open cast mining and operates a refinery producing special high-grade zinc for export. Skorpion’s case for constructing an on-site refinery lies in the fact that the ore, which has an average grade of 10%, does not have enough value for it to be economically transported to a refinery. Due to the integrated refinery and mine, which is the first of its kind in Southern Africa, Skorpion is able to produce zinc at a lower cost.

Mining and sustainable development

Considering the pivotal role of the mining sector in the national economy, domestic stakeholders in particular should not underestimate the importance of sustainable mineral exploration.

Sustainability of mineral exploration involves different stages. During the first stage of mining, the exploration stage, activities such as prospecting, drilling and trenching are undertaken in order to locate mineral deposits of economic interest. With proper planning, these activities can be carried out with minimal disturbance to land, water, vegetation and wildlife habitat.

When a deposit of economic interest is found, studies and sampling programs are undertaken to provide data needed to prepare plans for the mining project and for land reclamation following the end of the mining activities.

In the past, little attention was given to the protection of the environment. Of late, however, environmental protection is a paramount issue in modern mining activities of exploration, planning, operation, and restoration. It also underlines research activities oriented toward the safe and responsible use of mineral resources. Despite efforts to ensure that mining companies engage in sustainable resource extraction, local and international
environmentalists have expressed dissatisfaction with the acceptance of some Environmental Impact Assessments (EIA) submitted by mining companies.

Questions have been raised regarding the access to already scarce utilities, as mining is electricity and water intensive. Enforcing environmental accounting at an industry level would reduce such questions and yield the following benefits to government:

- Lower financial and other burdens of environmental protection on government because industry is able to justify environmental programs on the basis of financial self-interest.
- Strengthen the effectiveness of existing government regulations by revealing to companies the true environmental costs and benefits resulting from those policies/regulations.
- Inform government policy design.
- Use industry data to compile national-level accounts.

Society stands to yield the following benefits from environmental accounting:

- Enable more efficient and cost-effective use of natural resources, particularly energy and water.
- Enable the cost-effective reduction of pollutant emissions.
- Reduce the external societal costs related to industry pollution, such as the costs of environmental monitoring and control as well as public health costs.
- Provide superior information for improved public policy decision-making.

Benefits to industry:

- Improves the ability track and manage the use and flows of energy and materials with greater accuracy.
- Increases accurate identification, estimation and resource allocation while reducing environmental related costs.
- Avails more accurate and comprehensive information for the measurement and reporting of environmental performance, improving corporate image with stakeholders such as customers, investors, local communities, employees, government, and finance houses.

Although no environment related legislation exists, mining companies are encouraged by the legal framework to use technologies, which ensure that mining is conducted in a sustainable way.

As a guiding tool, the Namibia Mining Policy of 2002 outlines the responsibility of a license holder regarding the restoration of mining area after mining ceases. It states that when mining closure occurs, it should address both environmental and safety aspects as part of mining reclamation.

Mine reclamation is an ongoing program on previous mining sites and is designed to restore to an acceptable state the physical, chemical and biological quality or potential of air, land and water regimes disturbed by mining. In addition, the objective of mine reclamation is to prevent or minimize adverse long-term environmental impacts and to create a self-sustaining ecosystem as near as practicable to what existed before the mining activity.

In recent years, there has been increasing pressure on the mining industry to find solutions to mine waste management issues that are both environmentally sound and cost-effective. Mining companies must recognize that long-term environmentally acceptable approaches are needed in order to meet increasingly stringent regulatory requirements, public concerns, and to reduce the liability for environmental contamination that may result from a mining project.

In addition to possible environmental disturbance the mining industry is a large consumer of electricity and water.

Source: The Economist
To accommodate the Skorpion Zinc mine for example, NamWater constructed its second biggest water supply scheme in the country (pictured on the previous page). The system is designed to deliver 868 cubic meters of water per hour to the mine (approximately a third of the water supplied to Windhoek/hour). Central to the system is the largest reservoir in the country holding 30,000 m³ water.

The Skorpion operation installed power capacity of 120MVA, which raised Namibia’s total power consumption by 25%. The mine’s demand is 83MW (almost a third of national demand). The mine is energy intensive due to the large quantities of ore and rock that have to be transported, cooling of deep underground mines, the operation of pneumatic equipment and smelting operations. Skorpion’s 66/11kV step-down switchyard is shown below.

Source: Mining-technology.com

Environmental groups have expressed concerns that the process through which a mining licence in Namibia is obtained may be fundamentally flawed. Currently there is no legislation that differentiates procedurally between mining in a National Park and or any other location in the country.

Ownership

Owing to a lack of access to capital, expertise and technology most of the successful mining operations in Namibia are majority owned by large multinationals. Skorpion Zinc for instance represents massive capital outlays and cutting edge technology, which turned an otherwise un-economic deposit into a low cost zinc refinery.

The issue of ownership of these natural resources and adequate distribution of income derived from them has been the centre of attention with the region for several years now. Countries like South Africa have moved to redress these imbalances through the mining charter and other initiatives. These moves have resulted in some shifts from the traditional corporate structure of SA mining giants.

The Namibian government on behalf of the general public is a 50% shareholder in Namdeb representing the highest value locally owned equity stake. The returns are distributed at government’s discretion and much concern has been raised about the state’s ability to do so effectively.

Small-scale mining

The absence of an organised small-scale mining sector further reduces the likelihood of small-scale miners successfully growing into larger operators. The small-scale mining sector allows local communities to participate directly in the exploitation of their indigenous mineral endowment. Small-scale mining operations are labour-intensive and engage large numbers of both men and women. In Tanzania for example the liberalisation of mining brought rural poverty alleviation on a scale far surpassing the impact of donor funded job creation efforts in the 1990s.

The inefficiency of the small-scale mining sector in Namibia can be attributed to the absence of a mineral development policy, which leaves very little protection for small-scale miners, especially in the light of large companies showing interest in similar mineral deposits. This leads to poor decisions often based on political factors, contributing to the sidelining of the already disadvantaged small-scale miners (Siyabango 2002). The small-scale mining sector remains one of the most ideal areas to empower previously disadvantaged Namibians.

Namibia’s small-scale mining sector has always been greatly disadvantaged by the remote geographic location of rich diamond deposits and the early demarcation of the restricted diamond areas. Namibian small-scale miners are mainly involved in the extraction of gemstones mainly of the tourmaline group of minerals and mostly located in and around the Omaruru-Karibib-Usakos triangle.

Ideally, small-scale operators should not be confronted by capital constraints as special purpose vehicles such as the Mineral Development Fund have been set up to address this. Unfortunately, Namibian small-scale operators are unable to access these funds, due to the difficulty in proving the economic viability of a tourmaline deposit to which most local small-scale miners are exposed.
The exceptions with regards to small-scale operators are those sub-contracted by the diamond conglomerates to work on proven deposits. These operators have easier access to capital, as the risk associated with their operations is marginal.

Industry experts have noted that government can further promote Namibia’s small-scale mining industry through simplification of regulations and a redirection of taxes from the miner to perhaps the agent, who is better positioned to pass this on the final consumer.

Further more, the difficulty in proving the economic viability of tourmaline deposits makes institutional funding for small-scale mining operations impossible due to the institutional investor’s relatively low risk appetite. This leaves the arena open for venture capital, which could even include some assets currently lying idle. A more organised marketing channel will not only attract capital towards the miners themselves but also create a whole new gemstone industry that can support existing cutting and polishing investments. As the cut of a gemstone contributes highly to its overall value it is important to build human capital of the highest quality in the cutting arena and look at branding potential.

Once again the absence of clear enforceable legislation governing the operations of industry participants is a great stumbling stone in its development.

The Namibian Chamber of Mines re-iterates its commitment to both the development of Namibia’s small-scale mining industry and empowerment of previously disadvantaged Namibians. Namibia is considered the most unequal society in the world. In the absence of a clear policy framework the chamber through a consultative process, compiled a BEE strategy for the mining industry. The strategy is based on ownership, employee literacy, education and training, employment practices, community development, procurement and beneficiation. We view Chamber’s action as positive for the industry.

Tourmaline

According to classification by K. E. Kluge in his Handbuch der Edelsteinkunde, published in 1860, tourmaline is a gem of the second rank. It has hardness of between 7 and 8, specific gravity of greater than 3 with Silica a prominent constituent. It occurs in specimens of large size and of fairly frequent occurrence. The value of second ranked gems is generally less than stones of the first rank, but perfect specimens are more highly prized than poorer specimens of the latter. K. E. Kluge ranks tourmaline 8th in a list of true jewels based on value and rarity as gems, their hardness, and optical characteristics.
often compels them to sell to rogue gemstone dealers and tourists for next to nothing or even engage in barter trade.

**Mining and Investment**

Mining investment in Namibia is robust in comparison with other sectors and yet extremely erratic as most of the large investment initiatives are largely externally driven and owned. This means that benefits from these operations, which remain in Namibia, are by and large limited to government royalties/taxes, employment (which is increasingly being replaced by technology) and social investment made into the surrounding communities.

There is little domestic non-government money invested in Namibian mining and therefore limited local ownership and beneficiation from the exploitation of these resources is limited. Alongside FDI, the level of domestic investment is equally important in fostering economic growth, ensuring local participation and reducing the repatriation of wealth generated from Namibia’s mining sector.

Most of the domestic “private funding” taking place in the Namibian mining industry is largely borne or guaranteed by government and related institutions. Although government is not in the business of doing business, most foreign/local joint ventures in the mining sector have more often than not been with government or some form of it.

Ongopolo is a unique example of a management initiative to take-over a mothballed operation. It must be noted however that management’s buy-out benefited largely from similar interests held the Mine Workers Union of Namibia.

FDI naturally flows to countries with vast natural resources, and while Namibia may receive significantly higher FDI than most countries in the region it is significantly overshadowed by Angola and South Africa.

The significant rise in commodity prices, which started in 2004 should support continued FDI inflows to countries like Namibia that were previously overlooked by investors.

The report of the UK’s Commission on Africa 2005, noted that infrastructure and policy measures in Africa have neither been adequate nor improved or expanded. The report correctly points out that private investment cannot be expected to flow without decent transport systems, a stable policy environment, human capital and reliable utilities. Apart from the relative supply constraints regarding basic utilities such as water and electricity, Namibia enjoys a stable policy and excellent transportation systems. The human capital element is usually imported when unavailable locally.

Presently an increase in the perception of a lack of transparency amongst the international investing community pose risks to FDI flows to Namibia. The recent credit rating on the other hand is a positive for FDI flows.

**Diamonds**

Contributing to 9.3% of GDP and over 35% of export earnings in 2004, diamond mining is without doubt Namibia’s economic bastion.

According the Ministry of Mines and Energy’s database, in 2004 a total of eight companies had diamond mining licenses. Some held more than one license, with Namdeb and Diamond Fields having the most, six and four respectively. Five companies mine offshore while the rest onshore.

Diamond production in Namibia was at a record high last year with significant contributions coming from Namdeb’s operations, however due to the strength of the local currency, sales did not reflect the same performance.

**Namdeb**

This Namibian Government/De Beers partnership company dominates the local diamond industry through its various operations and subsidiaries. Namdeb’s annual review for the year ended 31 December 2004 reflected an increase in diamond revenue of 35% to N$3.964bn compared to N$2.937bn in the previous period. Namdeb’s income before taxation at N$0.922bn showed a growth of 41% from N$0.652bn. Distribution to shareholders was...
N$1.05bn, which is 78% higher than the previous year. Group operating cash flow increased to N$0.6bn from N$0.3bn on higher cash receipts from customers.

Namdeb published production figures for the six months to June 30 2005. The company produced 951,000 carats, 8,000 less than the corresponding period. Of total production, 888,000 carats were sold at a total value of N$2.054bn reflecting an average price per carat of N$2,313, which is 10% higher than realised in the first half of 2004. Earnings before tax increased by 6% to N$0.559bn.

In February 2005 Namdeb signed a memorandum of understanding (MoU) with EPIA Minerals and Trans Hex. In terms of the agreement, the two contracted companies will conduct business in marine prospecting and mining in some Namdeb licensed areas. De Beers Marine Namibia in which Namdeb holds 30% was the only entity allowed to prospect and mine in those areas until recently.

Last year the group completed the Elizabeth Bay Mine extension project. Crushing and milling capacity (amongst other developments) was constructed at a cost of N$450m and will enable the mine to treat previously untreatable diamond-bearing material extending its life by another 7-8 years.

De Beers Centenary, which owns 50% of Namdeb and accounts for approximately 60% of the world’s annual production of rough diamonds, is marketed through the De Beers-controlled Diamond Trading Company (DTC) which markets all De Beers production as well as production bought from other mines both on long term contracts and on the open market.

The DTC dominates the market for diamonds globally and has managed diamond prices by controlling most of the supply pipeline. As a result, the diamond market has been less prone to the cyclical price fluctuations typical of many commodities. DTC dominates the international diamond market by buying diamonds from De Beers Consolidated mines, Namdeb, Debswana, Alrosa and BHP Billiton. As a single buyer sales agent for the industry, DTC sets the prices at which it purchases and sells diamonds. De Beers offers diamond parcels to select sight holders on a take it or leave it basis.

Last year the South African government announced plans to fix the percentage of rough diamond production that mines would have to sell to a state diamond trader to promote the country’s diamond cutting industry through the Diamond Amendment Bill. Anglo American responded that “Elimination of South Africa’s unpolished diamonds from the DTC’s aggregation of production might lead to the demise of the DTC should other major producer countries follow suit with similar legislation”.

Following the announcement SA government’s plans De Beers concluded a BEE deal, a move that undoubtedly positions it more favourably with the SA government.

The contract between De Beers and the Namibian government, which channels diamonds mined in Namibia through the DTC, was up for renegotiation in 2005.

Diamond market outlook

Diamond overall index 2002-date

Source: polishedprices

Diamond sales in the US were 6% higher in the first half of 2005 led as usual by large chains, internet sales, high-end independent jewellers and leading luxury good houses who recorded double digit growth.

In Japan sales grew by 2% in H105 supported by the improving economic outlook and strong sales from De Beers trilogy promotion.

Diamond Overall Index 2005

Source: polishedprices
Asia-Arabia recorded high single-digit growth in India and the Gulf while Turkey reflected double-digit growth. Asia-Pacific was disappointing with China only marginally up for traditional reasons. Sales fell in all major European markets.

Diamond price annual trends

Source: polishedprices

The graphs used above are of indices for fine single polished units taken from a number of brokers and reflect the actual market.

February 2006 started with a dip after January’s modest sight. However, considering the upward trend of 2005, which followed 2004’s surge, the absolute price level remains high.

According to De Beers’s latest outlook, demand for rough diamonds continues to be steady. However stocks of both rough and polished diamonds in the cutting centres were relatively high at the beginning of this year. However, the 2006 outlook remains positive, with market growth expected to be similar to 2005.

Base metals

Source: Ministry of Mines and Energy

Zinc

Total Zinc output and earnings increased substantially last year as Skorpion Zinc achieved designed capacity. Zinc export sales amount to N$950m in 2004 an increase of 120% y-o-y.

Namibian Zinc exports do not form a notable part of global exports. Australia, Peru, and the US are the largest exporters of Zinc (exporting more than 4m tonnes of Zinc in 2004). Belgium, Japan and Korea are the top importers of Zinc.

The global medium-term outlook for Zinc looks positive as the Western World zinc production stagnated over the 2002-2004 period and was further constrained last year by the strike at Teck Cominco’s Trail smelter in Canada.

The only major non-Asian greenfield addition to refined zinc production in recent years has been Anglo American’s Skorpion refinery in Namibia, which was brought on-stream in April 2003. However, a significant number of zinc mine projects are at various stages of development and expected to add around one million tonnes/year of zinc-in-concentrate capacity by the end of 2007. CRU International forecasts that 2.5m tonnes of new zinc mine production is required by 2007 to meet expected demand. Given that there are few new zinc projects committed to production by 2007, this new mine production requirement is unlikely to be met.

Developments in China have also supported zinc prices. In 2004, China moved from being a net exporter of refined zinc to being a net importer, albeit a small one. Last year however,
monthly trade figures indicate that China has moved to being a substantial net importer of Zinc.

As the developing world continues to industrialize, the consumption of zinc is increasing: 47% is used for galvanized steel, 19% for brass, and 16% for zinc alloys. Zinc consumption is dependent on construction (48%) and automobile industry (23%).

After reaching lows in mid-2002, world zinc prices rallied above US$1270 per tonne (averaging US$1,048/t) in 2004, prices for the base metal averaged around US$1,381 per tonne in 2005 and continue to increase in line with the global economic growth, increased demand and lower inventories.

Zinc prices are widely expected to continue rising this year and ease in 2007 but remain higher than those realised in and before 2005.

Lead, which has always been considered a low value by-product in refining zinc benefited from a 64% surge in prices in 2004, which was followed by an 11% increase in 2005. The surge resulted in lead taking over copper as the second most viable base metal despite lower production. Similarities in extraction and refining processes for the two base metals are an added advantage for mining companies.

Fundamentals for lead remain very good and the global economic condition will lead to new record prices.

**Skorpion Zinc Mine and Refinery**

In 1999 Anglo American bought Reunion Mining to acquire 100% ownership of Skorpion Zinc, which was originally discovered by Anglo in 1976. The mine extracts zinc ore and refines it into Special High Grade (SHG) zinc with a purity of 99.995% that does not require further processing except melting and casting before producing zinc ingots.

Production started in 2003 and mid-2004 the mine reached design capacity. Output for 2004 was 67,000 tonnes and 37,000 tonnes for the six months ended June 2005. According to Anglo’s group interim results released in August 2005, Skorpion’s revenue for the six months ended 30 June 2005 was USD86m (N$537m) up from USD24m (N$159m). The operating profit for the same period was USD6m (N$37m).

**Copper**

Copper is produced at Ongopolo’s mines and refined at the smelter in Tsumeb. Overall production at Ongopolo’s three mines that were operational in 2004 declined. Production from the Asis Far West mine, which is expected this year, should support production. Ongopolo continues to treat copper concentrates from the DRC, Zimbabwe, South Africa and Zambia. Access to the latter was improved immensely following the completion of the Trans Caprivi Corridor.

After reaching a fifteen-year low average of US$1559 per tonne in 2002, copper prices climbed to average US$2865 per tonne in 2004 and US$3,680 in 2005. Decreasing stockpiles and growing economies are fuelling copper prices currently.

Copper prices have been playing in record territory of late and the fundamentals of copper have pointed to high prices for some time. Low stocks in LME and Comex warehouses, phenomenal demand from China for everything from cars to domestic appliances and telecommunications, have pointed to a supply shortage.

According to AME Mineral Economics, in the last six years, China’s compound annual growth in copper demand has been 14.5%. Although AME says that this cannot be sustained, the longer-term growth rate is still expected to be more than 5-6%.

Copper mining and refining is being increased to meet world demand following several years of industrial disputes, riots and natural disasters at several mine sites and refineries in third world countries. This will significantly reduce the current supply deficit over the next decade.

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**Source:** I-net Bridge; SSS Database

Given the global appetite for base metals we expect prices for copper, zinc and lead to remain high this year and begin to subside only once significant producing operations come on stream.
Namibia currently has only one producing gold mine, Navachab, which is owned by Anglo Gold Ashanti. Due to the improved financial returns, evaluation of the viability of the postponed open pit phased expansion project was recommenced during 2002. Additional drilling and improved geological information increased the reserves. Implementation of the ‘Eastern Pushback Project’ was approved in September 2002, under which the life of the mine is extended to at least 2013, and the volume of gold produced more than tripled from 204,000 oz/y to 660,000 oz/y.

Gold output remains low being less than 3,000 kilograms in 2004. Similarly gold revenue has fallen to less than N$200m. Silver production and sales revenue followed the same trend as gold.

Otjikoto is located within the Otavi Area in north-central Namibia where African Rainbow Minerals (ARM) made a discovery of vein-hosted gold materialisation.

The Otjikoto gold project lies within ARM’s Otavi Exploration Area of 3,084 square kilometres where, through ARM’s exploration efforts, a workable gold deposit has been discovered with an inferred mineral resource of some 870,000 troy oz of gold.

ARM’s management believes the resource is open-ended and has the potential for the delineation of further resources. TEAL has started resource extension and delineation drilling in the build-up to complete a pre-feasibility study on a possible new gold mining operation. Further drilling should lead to resource definition by the end of this year.

ARM has an exploration drill-rig that is currently operating in Otavi Exploration Area. It is anticipated that most of the data will be available before the end of H106, which may enable a reclassification of resources.

Prices climbed from 2001 lows of an average US$271.37 per ounce to an average US$444.95 per ounce in 2005 and a current price of US$540 per ounce. The resurgence in the gold price has largely correlated with the decline in the value of the US dollar late last year. The reduction in European and American central banks’ gold sales, the closures of high cost mines and decreased exploration activity have contributed to the recent surge in the gold price.

Uranium

Uranium production

A weak USD in 2004 caused uranium output to increase, mainly to counter the currency effect. In addition production increased to meet old and new customer demand. Rossing, the only producing Uranium mine in Namibia shipped its first consignment to China 2004.
Uranium prices dipped to below US$7/lb in 2000 as the world neglected the use of uranium as an energy source. The surge in oil prices has since resulted in higher demand for non-fossil fuels resulting in renewed interest in uranium, which culminated in record high prices.

According to the Ministry of Mines and Energy the law does not oblige government to release sales figures for Uranium.

In July 2005 the Namibian government approved a 25-year mining license for Paladin Resource’s Langer Heinrich Uranium Project. The project had placed on care and maintenance in the 1970’s due to the depressed market outlook.

Development on the project started in June 2005 and is expected to take 15 months to complete. Commissioning of the mine is anticipated for September 2006.

When fully operational the mine is expected to produce 1180 tonnes of uranium oxide per annum. The Langer Heinrich Uranium Project is 100% owned by the Australia and Toronto Stock Exchange listed Paladin Resources Ltd.

In Paladin’s newsletter released on the 19th September 2005, the company stated that its board has decided to proceed with mine design and planning using a US$30/lb price instead of US$25/lb used in the bankable feasibility study. This increased the economically viable mineral reserve by 14% to 11.590m tonnes. The company also extended the mine life span from 15 yrs to 17 yrs.

**Rossing Uranium Limited**

Rossing, which is 68.6% owned by Rio Tinto operates an open-pit uranium mine located in the Namib Desert. Although the mine has performed well since it started operations in 1976, the same cannot be said today as it faces an uncertain future. In 2003 operations were estimated to end 2007 but now the forecasted closure is 2009 while interim studies are on going to extend the life span to 2017.

Besides uncertain future the entity is under severe pressure due to sustained losses over the 24 months ending December 2004 that resulted in Rossing not paying companies tax. But despite the economic hardships, Rossing met standing orders from customers and supplied 7.7% of the world’s uranium in 2004 (2003: 6%).

Half-year results for 2005 Rio Tinto indicate that Rossing made a gross turnover of US$60m (N$374m) up from US$48m (N$317m) for the corresponding period last year. Operating income excluding depreciation and amortization was unchanged at USD11m (N$69m) while the net earnings for six months to June 2005 amount almost to USD69m (N$431m) up from zero.

**Outlook**

The US Secretary of State has commented that nuclear power will inevitably grow much more important and it would be impossible to ask China and India to reduce their fuel consumption. China and India already have high hopes for nuclear power; China intends to build two new reactors every year until 2020 while India plans a new reactor per year until then.

The first new nuclear power plants in about 30 years are being considered for the U.S., augmenting a generation built after the Arab oil embargo in 1973-74 caused crude oil prices to soar. An energy bill that President George W. Bush signed into law last year includes tax breaks, government insurance for project delays and loan guarantees to encourage construction of nuclear plants.

Plans like that of China and India, continued high oil prices and increased attempts to substitute fossil fuels which are blamed for global warming, paint a rosy picture for uranium price prospects. According to the International Energy Agency, after three decades of stagnation, the nuclear industry may receive more than US$200bn of investment by 2030.

**OIL vs Uranium mean price**

Source: I-net Bridge/SSS Research

It is worth noting however, that unlike the conventional oil, recoverable uranium depends largely on the price outlook for uranium, which we believe will increase until prices of energy substitutes begin a downward trend or cheaper alternatives are discovered.
Industry outlook

The increasing shift in industrial activity from developed to developing especially Asian countries, has fuelled economic growth in previously neglected regions. The world’s developing economies have increased their demand for commodities as they grow, and the trading between nations has significantly increased, providing a suitable atmosphere for the development of the global mining industry. With the rapid industrialization and the growing demand for commodities, the future of the minerals market looks promising.

The added economic liberalization initiated by the WTO has opened up diverse possibilities for nations to trade and therefore global mining companies are able to reduce costs and develop new ways to improve productivity. This opening up should continue to stimulate stronger demand for minerals and minerals. China is the focal growth economy at the moment but the United States remains robust in absolute terms.

The mining industry is very sensitive to changes in world markets because most products are exported, and prices for most mineral products are set internationally. This means that exchange rate fluctuations and economic conditions in other countries will affect the value of minerals produced in Namibia. The strength of local mining companies’ earnings is inversely related to the currency. Therefore to a large extent, the benefits of rising US dollar commodity prices over the past two years have been offset by the strength of the local currency. Local mining companies must acknowledge the currency effect on earnings and should maintain profitability in a relatively strong Namibian dollar environment by engaging more efficient production methods.

REACH (Registration, Evaluation and Authorisation of Chemicals) is a new regulatory system proposed by the European Commission to ensure that producers and importers of chemicals prove that the substances entering the EU market are safe to use. It will apply to over 10,000 chemicals including organic and inorganic compounds, base metals, steel, alloys and waste and scrap materials used in end products. The African mining industry will be impacted severely by unintended consequences of REACH in its present form.

Recent developments such as the Langer Heinrich Uranium Project indicate that the industry has potential to continue growing and contributing significantly to overall economic growth. But future economic gains from mining will to a large extent depend on developments on international markets and the stakeholders’ capability in managing the mineral wealth. Another determinant will be the sector’s ability and pace to transform from a raw material exporter to a value added exporter.

Sustainable development of natural resources is possible only when supported by accurate information regarding the environmental performance of individual operations. Enforcing environmental accounting at the corporate level will yield benefits to all stakeholders in the mining industry.

From the Tanzanian case we learn that an industry cannot grow without access to international markets, which offer greater incentives to small-scale miners and local entrepreneurs to participate in the industry. The case also reveals the dangers of taxing a fledgling industry and highlights the importance of the production stage targeted by the tax.

In order to address the issue of local ownership and participation in Namibia’s mining sector a clear legislative framework must be established to promote small-scale mining activities, economically viable mineral deposits must be exploited according to a pre-determined national agenda and the deregulation of more restricted mining areas may be considered to avail opportunities to locals or partnerships in which previously disadvantaged Namibians stand to benefit from the exploitation.
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Zinc mean price

Source: I-net Bridge

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Source: I-net Bridge

Uranium vs Coal

Source: I-net Bridge, SSS database

Gold mean price

Source: I-net Bridge
Company details

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