**Northern Dynasty Minerals (NYSEMKT:NAK) gets fresh life with a Republican government.**

 Canadian mining company Northern Dynasty Minerals has one of the world's largest undeveloped deposits of copper and gold, but the U.S. EPA nixed its efforts to develop the Pebble Project in Alaska in 2014 to protect the world's largest sockeye salmon fishery. The change in US government is now in favor of NAK and its stock (once below $0.50 per share) has now exceeded $700 million valuation. An EPA agreement I expected shortly. Aiming big, the company has raised $35.5 million with new stock offerings, and is seeking partners. Mining capacity estimates include: 57B tons of copper, 70M ounces of gold, 3.4B pounds of molybdenum and 344M ounces of silver. <https://www.fool.com/investing/2017/02/01/where-will-northern-dynasty-minerals-be-in-10-year.aspx>

The buzz and excitement has prompted management to look to us for analysis:

1. Retrieve and begin to analyze data about some of the existing and new markets.
2. Determine the impact of mining metals & minerals price on NAK stocks.
3. Generate economic scenarios in the new markets based on price changes.

**Decision is to generate direct & indirect revenue from mining and refining activities.**

* Product: Gold, Silver, Copper, Molybdenum.
* Geography: US, Canada, Europe, China.
* Customers: Traders and Importers of metals & minerals.

**Business questions:**

1. How would the new mining project affect the stock of NAK?
2. How would the value of identified markets affect the value of business in US dollars?
3. How best to allocate resources for mining of the different metals, knowing that American labor and regulatory costs mean increased production costs, and the rural nature of the project means that infrastructure, energy, and transportation costs will be significant as well?

**Data and analysis to inform the decision:**

* NAK stock prices: volatility and correlation
* Gold, Silver, Copper, Molybdenum: volatility and correlation
* Foreign exchange rates: US dollars, Canadian dollars, EU euros and Chinese yuan
* All together: correlations among these indicators

**Data source(s):**

* <https://www.quandl.com/data/LME-London-Metal-Exchange>
* <https://www.quandl.com/data/LBMA-London-Bullion-Market-Association>

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