Risk Management

Rajan is a trader, he buys commodities in Africa, transports it to India, and sells it at double the price. These commodities are transported to India in a ship.

Rajan is planning to ship 10,000 tonnes of gold to India which cost him Rs 100 crores, he expects to sell it at 200 crores and make 100 core in profits.

Rajan can hire a very large ship and put in all the 10,000 tonnes of gold in it. This approach has some risks, the ship can sink mid ocean due to some mechanical problem, or pirates can rob the ship. If this happens Rajan will end up losing all the gold and will make a loss of 100 cores.

Rajan decides to ship this in 10 different ships leaving the port on the same day, each carrying 1000 tonnes of gold. This approach definitely reduces the risk of loss by sinking of ships or robbery by pirates. Even if 1 or 2 ships are impacted by these events the rest of the gold is transported safely. If he loses 2 ships, he loses 2000 tons of gold, but he is still able to sell 8000 tonnes of gold and make a 60 crore profit.

Rajan is able to reduce his risk by sending gold in multiple ships.

Moral of the story so far: Don't put all your gold in one ship. (Product Diversification)

From an investment perspective one should look to diversify by investing in multiple products so that risk of loss of the entire capital by one of the products failing is reduced.

Rajan's strategy of shipping in 10 different ships still has a challenge. As all the ships carrying gold are shipping out on the same day, if there is a major storm or tsunami in the mid sea then all the ships will still be impacted and he will still lose all his capital.

Rajan decides to send the gold in 10 different ships but each one is set to sail one week after the previous one has sailed. This helps mitigate the risk of all the ships being caught in the same storm.

Moral of the story so far: Don't sail all your ships at the same time. (Temporal diversification)

From an investment perspective one should look to invest gradually over a period of time so that the risk of losing a lot of capital due to a single market crash is reduced.

Let's say all the gold Rajan shipped arrived in India but the demand for gold is poor and he is unable to sell all the gold in the gold market. He still loses some of his profits, and if the market is very bad – he may lose some of his capital as well.

Rajan can choose to ship gold, silver, copper, and diamonds to India so that if one of the product market is doing poorly he still is able to make some profits in other markets. Let's say he spent 25 crores on each of them and plans to sell them at 50 crores. Now that the gold market is down he is unable to sell the 25 crores of gold but still makes a profit of 50 crores – by selling silver, copper, and diamonds for Rs 150 crore.

Moral of the story so far: Your ships should carry more than one commodity. (Market diversification)

From an investment perspective one should look to operate in multiple markets so that the risk of poor performance of one market is reduced.

Rajan may still lose money if the quality of the commodities he is purchasing is poor or if the ships carrying the commodities are substandard, or of the ships are run by crooked captains who will run away with the cargo.

Rajan can reduce these risks by ensuring the quality of the commodities he is purchasing. He should also check of the quality of the ship carrying his commodities and the history of the captains of the ships carrying his commodities.

Moral of the story so far: You should take steps to make sure you are not duped. (Due diligence)

From an investment perspective one should conduct due diligence of the products and markets before investing.

In summary 4 D's that essential to investors are **D**iversification of products, **D**iversification over time, **D**iversification of markets, and **D**ue diligence.

Risk Mitigation	Implications for Investors
Product diversification Don't put all your gold in one ship.	If you is investing in stocks one should make sure that they have a well-diversified portfolio of stocks. A good practice is to have a portfolio of over 20 stocks which are operating in diverse Industries.
Temporal diversification Don't sail all your ships at the same time.	If you are investing, build your position over at least a 3 to 5 year time frame. The longer the time frame the better, best is to invest ones savings over a life time when one is generating income.
Market diversification Your ships should carry more than one commodity.	You should invest in a variety of products – like stocks, bonds, real-estate, commodities (gold and silver). The product mix should be appropriate to one's life stage.
Due diligence You should take steps to make sure you are not duped.	You should work to ensure that the investments you are making are prudent. Here are some quick examples (they are not comprehensive) • For stocks one should check its ability to continue to make profits (some of the frameworks we had discussed in the earlier articles can be useful), one should also check on the quality of the management. • For bonds one should check of the credit rating and interest rates being offered. • For real-estate one should ensure that the paper work is in order. • For commodities one should check on the quality and ease of selling.