**Exercise 7: Financial Forecasting**

**Understanding Recursive Algorithms:**

* **Recursion Concept:** Recursion involves a method calling itself to solve smaller instances of the same problem. This approach can simplify complex problems by breaking them into more manageable sub-problems. For example, calculating factorials or Fibonacci numbers is naturally suited to recursion.

**Analysis:**

* **Time Complexity:** Recursive algorithms can be inefficient due to redundant calculations, often leading to exponential time complexity (e.g., naive Fibonacci).
* **Optimization:** Techniques like Memoization or Dynamic Programming can reduce time complexity by storing intermediate results and avoiding redundant calculations.