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| **Problem Chosen** C | **2022 MCM/ICM Summary Sheet** | **Team Control Number** 2206751 |

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**1 Introduction**

* 1. **Problem Background**

随着金融体制改革的深入，越来越多的人开始接触投资。市场交易者经常买卖波动较大的资产，以实现总回报最大化的目标。而在期货市场中，黄金和比特币是两种常见的热门资产，它们具有不同的性质。

黄金是经典的价值储存手段和对冲通胀的工具，它由于历史原因成为了货币，所以兼具80%的商品属性+20%的货币属性。另外，由于黄金资源存储量有限、自身金属性能稳定，所以它能够长期持有，价值较为稳定。

比特币是一种数字的、分散的、部分匿名的货币，不受任何政府或其他法律实体的支持，也不可兑换成黄金或其他商品。它依赖于对等网络和加密来维护其完整性。与大多数货币或在线支付服务（如PayPal）相比，比特币流动性强，交易成本低，目前被广泛用于投机化交易。

在相当长一段时间里，黄金一直是市场稳定的来源之一。而比特币仍被视新鲜事物和陌生事物，其价格相对而言并不稳定。通过研究二者的投资组合，我们可以由此延拓至多种资产的投资组合，因此对这个数据进行分析是也是一种对经济市场的一种分析。通过建立量化投资模型分析市场，投资和理财，进行量化投资预测，由此创建利益最大化，提高投资交易行为盈利的概率将成为经济市场的一大趋势。

展的过程。

* 1. **Problem Statement**

In this problem, we need to accomplish the following objectives:

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* Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
* Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
  1. **Overview of Our Work**

Balabala...

The work we have done in this problem is mainly shown in the following Figure 1.

Figure 1: ??

**2 Assumptions**

We made the following assumptions to help us with our modeling. These assumptions are

the promise of our subsequent analysis.

* Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
* Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
* Aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa

**3 Notations**

The primary notations used in this paper are listed in Table 1.

Table 1: Notations

|  |  |
| --- | --- |
| Symbol | Description |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**4 Model 1:**

**4.1**  **Preliminary Preparation**

**5 Model 2:**

**5.1 Preliminary Preparation**

**6 Model 3:**

**6.1 Preliminary Preparation**

**7 Sensitivity Analysis**

**8 Strengths and Weaknesses**

**8.1 Strengths**

**8.2 Weaknesses**

**8.3 Future Work**

**9 Conclusion**

**Memo**

**References**

**Appendix**