Chapter 2: Literature Review

Central Banking and Sustainable Finance

• Evolution and Trends:

- History of sustainable finance in central banking.
- o Recent shifts towards environmental, social, and governance (ESG) criteria.

Accelerated Computing

• Definition and Overview:

- Explanation of accelerated computing and its relevance.
- o Key technologies: GPUs, TPUs, and their applications in finance.

Applications in Finance:

- Risk assessment and real-time data processing.
- o Examples of banks using accelerated computing for decision-making.

Geospatial Intelligence

• Definition and Importance:

- o Overview of geospatial intelligence and its capabilities.
- o Role in understanding economic patterns and environmental impacts.

Use Cases:

- Examples of geospatial analysis in monitoring climate risks and urban development.
- o Impact on economic forecasting and resource allocation.

Integration of Technologies

Case Studies:

- o Examples of successful integration in financial institutions.
- Challenges and lessons learned.

• Theoretical Frameworks:

 Models explaining the synergy between computing power and geospatial data.

Chapter 3: Methodology

1. Research Design

Approach:

- Justification for choosing a qualitative, quantitative, or mixed-methods approach.
- Explanation of the research design and how it aligns with the research objectives.

• Framework:

Overview of the theoretical framework guiding the research.

2. Data Collection

Sources of Data:

- Description of primary and secondary data sources.
- Types of data to be collected (e.g., financial data, geospatial data, policy documents).

3. Data Analysis

• Techniques:

 Description of data analysis techniques (e.g., statistical analysis, spatial analysis, machine learning algorithms).

Software:

o Tools and software used for data analysis (e.g., R, Python, GIS software).

Validation:

Methods for validating data accuracy and reliability.

4. Limitations

Potential Challenges:

o Identification of potential challenges and limitations in the research.

• Mitigation Strategies:

o Strategies to address and mitigate these limitations.