[[1]](#footnote-2)

Investigation of Long Memory in Quarterly Home Price Index Data

Vikas Garg, Yasin Khan, Shirley Lu, Timothy Roberts, Yifan Tang, Wesley Tillu

*Abstract*—…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….………………………………………………………………………………………………………………………………….

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# INTRODUCTION

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# Time Series Modeling

## Stationarity

2.1



## Unit Root Non-Stationarity

## ARCH Effect

## Long Term Dependence

## Proposed Models

2.2



# Methods

## Data

## Initial Analysis

### Exploratory Data Analysis

### Data Transformations

### I(1) Testing

### Normality Testing

## Parameter Estimation for Model Building

### Parametric vs Non Parametric vs Semi-parametric

### Linear Time Series Parameters

### Nonlinear Time Series Parameters

### Fractional Differencing Parameters

### Joint Estimation of ARFIMA Parameters

## Model Checking and Performance

### Absolute

### Relative

# Results

## Initial Analysis

### Exploratory Data Analysis

### Data Transformations

### I(1) Testing

### Normality Testing

## Parameter Estimation for Model Building

### Parametric vs Non Parametric vs Semi-parametric

### Linear Time Series Parameters

### Nonlinear Time Series Parameters

### Fractional Differencing Parameters

### Joint Estimation of ARFIMA Parameters

## Model Checking and Performance

### Absolute

### Relative

## Validity and Interpretation

# Conclusion

Acknowledgment

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1. [↑](#footnote-ref-2)