

# Battle of Online and Offline Consumption: Comparative Analysis of Amazon and Walmart Stocks

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## 1. Introduction

What? Why? How?  
brief results  
structure of this paper

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## 2. Data

source, basic information, descriptive statistics, time plots

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## 3. Model Establishment

3.1 Model specification  
acf, pacf, exist ARCH effect

3.2 Mean equation: ARMA(p,q)  
determine order

3.3 Volatility equation: ARCH(m,s) / GARCH(m,s)  
determine order

—> final model: ARMA(p,q)+(G)ARCH(m,s)

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## 4. Estimation

MLE method  
estimation result display

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## 5. Model checking

MSE, MAE, log likelihood (or MSFE)

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## 6. Prediction

compare with the 2017 data nowadays

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## 7. Conclusion

different trend and future between these two types of consumption