

**“Arbitrage Pricing Model in Relation to Macro-Economic Variables
in Same Industry”**



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ABSTRACT

Purpose: The purpose of this thesis is to determine how macroeconomic variable influence stock returns in arbitrage pricing model for companies operating in same industries and to check behavior these macroeconomic variable I selected American banking sector and chose Bank of America and JPMorgan Chase & Co. to test how macroeconomic variables effect their stock prices. Is there any difference or all the independent variable influence their stock prices in same manner?**Design /Methodology/Approach:** In order check the efficiency of Arbitrage Model I used different test, used Empirical method with secondary data collected from different sources available online in order to get the desired results. For the purpose of this research I selected from New York Stock Exchange for JPM and BAC as their data was somewhat readily available compare to other and it also near to the requirement like efficient market, Risk diversity and less arbitrage opportunities available and is the biggest and one of the most organized companies in the world. I selected eight independent variables for this study which included gold, Oil, Inflation, Unemployment rate and Exchange rate and both Long and Short term interest rate with each factor has its own correlation with the prices or return of the stocks. **Results:** Results proved that independent macroeconomic variables have different impact for companies operating in same industry as one variable can be significant for one company in an industry but might be unable to make any significant impact on the stock price of another one. **Originality/Value:** The ATP model has been applied many times for return and different researchers found different results but it is the first time I am applying this for specific industry and its companies to check whether these companies react to these independent variables in equal manner In order to relate the component with the outcome I have used different test like Correlation, Regression etc to draw most accurate conclusion in this regard.

Keywords: Arbitrage Pricing Theory, , Durbin-Watson Autocorrelation Test, Wald Wolfowitz Runs Test, Principal Component Analysis, Normality, Multicollinearity, OLS Regression, Capital Asset Pricing Model, Three Factors Model

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LIST OF ABBREVIATIONS

APT	Arbitrage Pricing Theory.
CAPM	Capital Asset Pricing Model.
P/E Ratio	Price-Earnings Ratio.
P/BV Ratio	Price-Book Value Ratio.
D/P Ratio	Dividend Payout Ratio.
DWT	Durbin Watson Autocorrelation Test.
NYSE	New York Stock Exchange.
Mkt	Market
ETP's	Electronically Traded Products.
ETF's	Electronically Traded Funds.
OLS	Ordinary Least Square Regression.
SMB	Small Minus Big.
UK	United Kingdom.
USA	United States Of America.
LTi	Long Term Interest Rate.
Infl	Inflation.
M2	Money Supply.
KSE	Karachi Stock Exchange
KSE-100	Karachi Stock Exchange 100 Index.
LSE	Lahore Stock Exchange.
ISE	Islamabad Stock Exchange.
P-Value	Probability Value.

AD Normality	Anderson Darling Normality Tests.
STi	Short Term Interest Rate.
DOW	Dow Jones Industrial Average Index.
GDP	Gross Domestic Product.
EUR	US Exchange Rate with Europe.
UNEM	Unemployment.
GNP	Gross National Product.
JPM:	JPMorgan Chase & Co.