

The Ranking and Comparison of Close-Ended Mutual Funds Performance with Open-Ended Mutual Funds: Evidence from Pakistan Mutual Funds Industry

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Abstract

The primary objective of this study is to rank and compare the performance of close and open-ended mutual funds in Pakistan. For this purpose the study ranked the close-ended mutual funds over the time period 2008 to 2012. By using Sharpe and Treynor measures, the 12 mutual funds have been ranked for five years. It has revealed that the Pakistani market is efficient as no fund performs better than the market in five years. A comparative study has also been conducted to compare the performances of open-ended and close-ended mutual funds. By using paired samples t-test the study finds no difference between the performance of open-ended and close-ended mutual funds performance. However, fund size and fund age are significantly different for open-ended and close-ended funds.

Key Words: *Mutual fund industry, performance comparison, open-ended mutual funds, close-ended mutual funds*

Introduction

The trend of investment in mutual funds is going up day by day. In developed countries' financial markets the increase in the number of mutual fund shows the preference of investors in this type of investment (Huhmann & Bhattacharyya, 2005). As define by Bogle (2004) Mutual Funds are managed by professionals who manage individual funds along with fund complexes. The purpose of establishing mutual fund is to facilitate small investors who have less investment and want diversified investment and who cannot invest in securities directly. For this reason the asset management company is effective to provide professional management as it has expertise in financial market (Afza & Rauf, 2009). According to Shah, Hijazi & Hamdani (2005) mutual funds are very useful for saving purpose as the savings are important for every individual to fulfill basic needs which are health, education and better living standard. In Pakistan, people have religious mind and they don't prefer to invest in interest base banking schemes. For such people there is an opportunity to save their capital by investing it in mutual funds and ultimately the money, they have stored in their pockets due to interest base banking schemes, will be mobilized for productive purpose.

Presently there are 130 open-ended and 14 close-ended mutual funds available in private sector (MUFAP, March 2013) and Securities and Exchange Commission of Pakistan (SECP) is the regulatory body of all types of mutual funds in Pakistan.

Open-Ended Mutual Funds

Open-Ended Mutual Funds are those funds which can be subscribed and redeemed on frequent basis. Open-ended mutual funds give the opportunity

to the investors to withdraw their amount from fund at any specified time. The open-ended mutual funds have liquidity requirements as the large number of investors may redeem their units at a given day. Hence, the Asset Management Companies may need capitalization requirements. According to Rao (1996) open-ended mutual funds are the investment companies which remain ready every time to purchase their own shares at net asset value or its near price. As the price of share in open-ended fund varies with the proportion of net asset value therefore it directly affects the performance of fund. At the end of 2005, there were limited numbers of open-ended funds in Pakistan but now 130 open-ended mutual funds are listed in MUFAP (MUFAP, March 2013).

Close-Ended Mutual Funds

The close-ended funds are offered initially to public and then traded in the stock markets. Close-ended mutual funds are listed in MUFAP and traded in stock exchanges. This type of mutual fund has fixed capitalization of shares and investors have no option to withdraw their investment from fund. They can only trade in their shares in stock markets and can exchange their shares with other investors at any time during market hours. In close-ended mutual funds the redemption facility is not available therefore, the managers do not retain high cash for liquidity purpose. The price of share in close-ended mutual funds is settled by the valuation of the market and its price is affected by the demand and supply forces for that particular fund. The price can be different from the Net Asset Value (NAV). Usually the market price for these close-ended mutual funds is 10% to 20% higher or lower than the NAV.

Literature Review

Mutual fund is appearing as the great topic in these days researches. Mutual Funds industry is attaining great attention of the researchers as the trend of investment in mutual funds is growing day by day. So in order to facilitate the small investors and funds managers, many studies have been conducted on mutual funds in foreign countries and some studies have also been conducted in Pakistan.

Many researchers have conducted their studies on Mutual Funds with regard to Fund type. According to Anderson, Coleman, Frohich & Stegall (2001) close ended mutual funds are the funds which are different from ordinary funds as their shares traded on discounted prices in secondary market. They find that the returns of these type of funds relate to the country's market index, exchange rate and the discount in selling price of funds.

Yi & Kim (2005) examine the risk factors and performance of close ended mutual funds by taking the data from 1993 to 1999 by taking the sample of 82 close-ended mutual funds they investigate the risk factors and returns. They take price and return from The Center for Research in Security Prices (CRSP) and portfolios return from Morning Star Mutual Funds. They document that the close-ended mutual funds have unique characteristics. They also document the risk factors are not identical in common stock and close-ended mutual funds. However, book-to-market ratio and size are equally important for both common stock and mutual funds.

Brown (1995) finds that returns of mutual funds are consecutively correlated over a period of time. He also pointed out that past performance of mutual funds is good predictor of performance in future of mutual funds.

Pontiff (1997) investigates the returns of close and open ended mutual funds and documents that the variance of return on close-ended mutual fund price is greater than the variance on return in net asset value. He also documents

that the open ended mutual funds have no market price therefore share price of this type of funds are same as market value of investment.

Peterson, Pietranico, Riepe & Xu (2001) say that the funds can be affected by different factors. In their study they examine the factors which affect the funds. These factors include pre-tax performance which further includes risk, turnover and fund expense. The other factor is post tax performance which includes expenses, risk, past pre-tax performance, and past tax efficiency.

Glosten & Harris (1988) document that Mutual Funds, by their large trading volume and market positions, accomplish the trades more favorably. These large funds can also increase their research resources which lead them to create more investment opportunities. Filbeck & Tompkins (2004) conduct their study on fund performance by using data over the period 1999 to 2001 and document that the mature funds perform better than short term funds. However, Blake, Lehmann & Timmermann (1998) state that the funds perform better in their first year of existence. Most of these studies are conducted in foreign countries. There is a scope for conducting this kind of study in Pakistani mutual fund industry.

Methodology

The population of the study consists of all close and open-ended mutual funds listed in MUFAP. The data of the time period from January 2008 to December 2012 have been used for analysis. A total 13 close-ended mutual funds are listed in MUFAP. From the total of 13 mutual funds, 12 funds have been selected which are having their data publicly available in the data period from 2008 to 2012. To rank the performance of mutual funds the traditional measures like Treynor and Sharpe models are used. To compare the performance of open and close-ended funds paired samples t-test is

used. For this purpose, Statistical Package for Social Sciences (SPSS) and MS Excel have been used.

Treynor Model

This model was introduced by Treynor in 1966 to measure the performance of portfolio by taking into account the factor of systematic risk. The current study has used this model to analyze the performances of all close-ended mutual funds. Treynor ratio has calculated for five years of data for every fund and compared the performance with market. The model is:

$$\text{Treynor Ratio} = \frac{(R_p - R_f)}{\beta}$$

Where:

R_p , Representing average return

R_f , Representing average risk free return

β , Systematic Risk

Sharpe Model

$$\beta = \frac{\text{Cov}_{im}}{\sigma_m^2}$$

Sharpe introduced this model in 1966 to measure the performance of portfolios by taking into account the companies' specific risk / standard deviation. This study has employed this measure for analyzing mutual funds performance evaluation.

$$\text{Sharpe Ratio} = \frac{R_p - R_f}{\sigma_p} \quad X$$

Where:

R_p = observed average return of fund;

R_f = average risk free return;

σ_p = standard deviation of fund return.

Shar

pe ratio has been calculated for five years of data of each fund and

compared the performance of funds with market. In this study Sharpe ratio is reported in percentage values. A comparative analysis has also carried out to compare open-ended and close-ended mutual funds. This analysis is based on the comparison of fund size, fund age, turnover, expense ratio, ROA and ROE.

Results and Findings

The results of Treynor and Sharpe measures are as follows:

Table 1

Treynor and Sharpe Ratio for 2008

| Sr. No. | Fund Name | Treynor Ratio | Ranking | Sharpe Ratio | Ranking |
|---------|----------------------------------|---------------|---------|--------------|---------|
| 1 | Atlas Fund of Funds | -0.742 | 7 | -5.9767 | 3 |
| 2 | Asian Stock Fund | -0.8371 | 10 | -7.07432 | 10 |
| 3 | Safeway Mutual Funds | -0.8703 | 11 | -7.27362 | 11 |
| 4 | JS Growth Fund | -0.6793 | 1 | -1.67174 | 1 |
| 5 | JS Value Fund Limited | -0.8121 | 8 | -6.61779 | 9 |
| 6 | Meezan Balanced Fund | -1.3015 | 12 | -9.2887 | 12 |
| 7 | PICIC Energy Fund | -0.7405 | 6 | -6.16313 | 7 |
| 8 | PICIC Growth Fund | -0.7146 | 4 | -5.99121 | 4 |
| 9 | PICIC Investment Fund | -0.7192 | 5 | -6.1156 | 6 |
| 10 | NAMCO Balanced Fund | -0.7011 | 3 | -6.01411 | 5 |
| 11 | First Capital Mutual Fund | -0.6812 | 2 | -5.81199 | 2 |
| 12 | Golden Arrow Selected Stock Fund | -0.8287 | 9 | -6.55448 | 8 |
| 13 | Market | -0.69333 | | -1.22245 | |

Table 1 shows Sharpe and Treynor ratio of each fund for the year 2008. The table shows that all the funds have negative Sharpe and Treynor ratios even the market has both its Treynor and Sharpe ratios negative. This can be associated to the start of financial crisis around the world in the late of 2007. In 2008 Pakistani stock market remained freezed for a longer period of time therefore no trading took place and market went down. The table reveals that no fund outperformed the market even when the market itself has negative Treynor and Sharpe ratios. The fund at serial 4 i.e. JS Growth Fund perform better as compare to the other funds and the same ranking through Sharpe and Treynor ratio means that the fund is properly diversified. First Capital Mutual Fund is on second ranking but less performance than the market and it also has the same ranking in Sharpe and Treynor measures which indicates the proper diversification of the fund. Likewise NAMCO Balanced Fund is at third in Treynor but at fifth in the Sharpe ratio. It means the fund is managing its systematic risk but unable to manage its unsystematic portfolio risk therefore the ranking is different in Sharpe and Treynor. Likewise, the table ranks all the other funds. The Meezan Balanced Fund is at last in ranking i.e. 12th number and the ranking in Sharpe and Treynor is same.

Table 2
Treynor and Sharpe Ratio for 2009

| Sr. No. | Fund Name | Treynor Ratio | Ranking | Sharpe Ratio | Ranking |
|---------|-----------------------|---------------|---------|--------------|---------|
| 1 | Atlas Fund of Funds | 0.57291 | 7 | 6.266449 | 7 |
| 2 | Asian Stock Fund | 0.62928 | 3 | 8.694846 | 2 |
| 3 | Safeway Mutual Funds | 0.60832 | 5 | 8.267113 | 5 |
| 4 | JS Growth Fund | 0.57364 | 6 | 2.203073 | 11 |
| 5 | JS Value Fund Limited | 0.03755 | 12 | 0.431592 | 12 |
| 6 | Meezan Balanced Fund | 0.56201 | 8 | 5.534710 | 9 |
| 7 | PICIC Energy Fund | 1.06711 | 1 | 9.774832 | 1 |

| | | | | | |
|----|--|----------|----|-----------|----|
| 8 | PICIC Growth Fund | 0.47502 | 10 | 5.978949 | 8 |
| 9 | PICIC Investment Fund | 0.51672 | 9 | 6.712850 | 6 |
| 10 | NAMCO Balanced Fund | 0.41915 | 11 | 5.156769 | 10 |
| 11 | First Capital Mutual Fund Golden Arrow Selected | 0.64379 | 2 | 8.540304 | 4 |
| 12 | Stock Fund | 0.62902 | 4 | 8.632312 | 3 |
| 13 | Market | -0.49730 | | -1.055294 | |

Table 2 shows the ranking of all the funds through Sharpe and Treynor ratios for the year 2009. The table reveals that all the funds have their Sharpe and Treynor ratios positive which means that their performance remained better in 2009. It is shown in the table that the market has negative values of Sharpe and Treynor but the funds have positive value which means in 2009 all mutual funds outperformed the market. The table also ranks the funds and fund at serial 7 i.e. PICIC Energy Fund is on the first rank because both values are greater than the other funds' values. The same ranking in Sharpe and Treynor shows that the fund is properly diversified. First Capital Mutual Fund is second in Treynor ranking but at fourth in Sharpe ranking. It means the fund is not properly diversified therefore the systematic and unsystematic portfolio risk differs.

Table 3

Treynor and Sharpe Ratio for 2010

| Sr. No. | Fund Name | Treynor Ratio | Ranking | Sharpe Ratio | Ranking |
|---------|-----------------------|---------------|---------|--------------|---------|
| 1 | Atlas Fund of Funds | 0.15957 | 1 | 2.225254 | 1 |
| 2 | Asian Stock Fund | -0.14063 | 8 | -2.222780 | 8 |
| 3 | Safeway Mutual Funds | -0.17819 | 11 | -2.566025 | 10 |
| 4 | JS Growth Fund | -0.13774 | 7 | -0.656863 | 5 |
| 5 | JS Value Fund Limited | -0.12490 | 6 | -2.059905 | 7 |

| | | | | | |
|----|----------------------------------|----------|----|-----------|----|
| 6 | Meezan Balanced Fund | -0.02787 | 3 | -0.418077 | 3 |
| 7 | PICIC Energy Fund | 0.03905 | 2 | 0.664589 | 2 |
| 8 | PICIC Growth Fund | -0.03371 | 4 | -0.610148 | 4 |
| 9 | PICIC Investment Fund | -0.05999 | 5 | -1.105575 | 6 |
| 10 | NAMCO Balanced Fund | -0.19359 | 12 | -3.239257 | 12 |
| 11 | First Capital Mutual Fund | -0.14680 | 9 | -2.643901 | 11 |
| 12 | Golden Arrow Selected Stock Fund | -0.17032 | 10 | -2.274010 | 9 |
| 13 | Market | 0.12402 | | 2.307251 | |

Table 3 shows the Sharpe and Treynor ranking for each fund for the year 2010. The table reveals that all the funds, except Atlas Fund of Funds and PICIC Energy Fund, have their ratios negative which indicates their bad performance in 2010. All the funds have underperformed the market as the market has positive Sharpe and Treynor ratio. All funds have lower ratios than the market, except Atlas Fund of Funds' Treynor ratio. Other than market, the Atlas Fund of Funds is first in ranking and performed better as compare to other funds. The ranking of Atlas Fund of Funds in both Sharpe and Treynor is same which means the fund is properly diversified. Keeping in consideration the above results, it can be said that the stock market of Pakistan remained efficient in 2010 as no fund beat the market.

Table 4

Treynor and Sharpe Ratio for 2011

| Sr. No. | Fund Name | Treynor Ratio | Ranking | Sharpe Ratio | Ranking |
|---------|---------------------|---------------|---------|--------------|---------|
| 1 | Atlas Fund of Funds | -0.53814 | 4 | -3.676577 | 3 |

| | | | | | |
|----|----------------------------------|----------|----|------------|----|
| 2 | Asian Stock Fund | -0.53411 | 2 | -7.874156 | 7 |
| 3 | Safeway Mutual Funds | -0.53474 | 3 | -0.534738 | 1 |
| 4 | JS Growth Fund | -0.77812 | 7 | -2.708146 | 2 |
| 5 | JS Value Fund Limited | -0.59474 | 5 | -8.219718 | 8 |
| 6 | Meezan Balanced Fund | -3.81208 | 12 | -5.991159 | 5 |
| 7 | PICIC Energy Fund | -2.32483 | 11 | -10.150959 | 9 |
| 8 | PICIC Growth Fund | -0.84539 | 8 | -11.134935 | 10 |
| 9 | PICIC Investment Fund | -0.95125 | 9 | -14.702741 | 12 |
| 10 | NAMCO Balanced Fund | -0.61038 | 6 | -7.575113 | 6 |
| 11 | First Capital Mutual Fund | -0.37178 | 1 | -5.389970 | 4 |
| 12 | Golden Arrow Selected Stock Fund | -1.54134 | 10 | -12.946976 | 11 |
| 13 | Market | -0.21451 | | -4.63197 | |

Table 4 shows the ranking of all close-ended mutual funds through Treynor and Sharpe measures for the year 2011. Based on the above table it is revealed that all the funds have negative Treynor and Sharpe ratios including the market which means the performance of all funds remained poor in 2011. No fund has beaten the market even after the Market's negative ratios. As far as the ranking is concerned, First Capital Mutual Fund is first in ranking in Treynor ratio whereas it is on the fourth in Sharpe rankings. It means the fund is not properly diversified as the ratios of Sharpe and Treynor measures are different. Likewise, Asian Stock Fund is

second in Treynor ranking but on seventh in Sharpe ratio which means the fund is also not properly diversified.

Table 5

Treynor and Sharpe Ratio for 2012

| Sr. No. | Fund Name | Treynor Ratio | Ranking | Sharpe Ratio | Ranking |
|---------|--|---------------|---------|--------------|---------|
| 1 | Atlas Fund of Funds | 0.157949 | 6 | 3.350303 | 3 |
| 2 | Asian Stock Fund | 0.312718 | 2 | 3.982683 | 2 |
| 3 | Safeway Mutual Funds | 0.306236 | 3 | 0.306235 | 10 |
| 4 | JS Growth Fund | 0.259639 | 5 | 1.209528 | 6 |
| 5 | JS Value Fund Limited | 0.439519 | 1 | 3.07420 | 5 |
| 6 | Meezan Balanced Fund | -0.063145 | 12 | -0.760139 | 11 |
| 7 | PICIC Energy Fund | 0.121405 | 7 | 3.091096 | 4 |
| 8 | PICIC Growth Fund | 0.026832 | 10 | 0.575090 | 9 |
| 9 | PICIC Investment Fund | 0.031715 | 9 | 0.692195 | 8 |
| 10 | NAMCO Balanced Fund | -0.045578 | 11 | -1.152491 | 12 |
| 11 | First Capital Mutual Fund Golden Arrow | 0.039885 | 8 | 1.059164 | 7 |
| 12 | Selected Stock Fund | 0.294403 | 4 | 7.776318 | 1 |
| 13 | Market | 0.313719 | | 10.96620 | |

Table 5 shows the ranking of all close-ended mutual funds through Sharpe and Treynor measures for the year 2012. The table reveals that most of the funds performed better in 2012. The Treynor and Sharpe ratio for market

was 0.313719 and 10.96620, respectively. The table shows that only JS Value Fund Limited has high Treynor Ratio than the market otherwise no fund has its Treynor or Sharpe ratio higher than the market. So it can be said that only JS Value Fund Limited outperformed the market whereas all other funds underperformed the market. The table also reveals that the Treynor and Sharpe ratio are not same for JS Value Fund Limited which means the fund is not properly diversified. Likewise, Asian Stock Fund is on second ranking which has second highest Treynor and Sharpe ratio but less as compare to market. The ranking of Asian Stock in Treynor and Sharpe ratios are same which means that the fund is properly diversified. In 2012 only two funds i.e. Meezan Balanced Fund and NAMCO Balanced Fund have their Sharpe ratio negative. The negative Sharpe ratio means poor performance of the funds therefore it is easy to ascertain that these two funds have bad performance as compare to other funds.

Keeping into consideration the results of five years, it is revealed that the Pakistani stock market is reasonably efficient as individual funds could not beat the market on consistent basis even in the aftermath of financial crisis of 2007 coupled with the political instability in the country.

Comparative Analysis

Table 6 shows the pairs of open and close-ended funds by taking ROE, ROA, Expense Ratio, Turnover, Fund Size and Fund Age. The table shows that pair number 5 and 6 have significant difference at significance value of 0.01 which means that there is statistically significant difference between the fund size and fund age of open ended and close-ended. Other values are insignificant which means there is no difference in open and close-ended mutual funds with respect to ROE, ROA, Expense Ratio and Turnover.

Based on the results it can be concluded that close-ended mutual funds are significantly larger in size and older in life. Although, these funds are fewer in number but their average size is significantly bigger than open-ended mutual funds. This can be associated with the fact that, unlike the open-ended funds, investors of close-ended funds cannot redeem their investment therefore these funds keep on growing in size. Similarly, close-ended funds are significantly older in age as compared to their open-ended counterparts. The fact is that no new close-ended fund is established in the near past so keeping the average age of the existing funds high while on the other hand a large number of open-ended funds are established in the recent past which significantly decreased the average age of open-ended funds. But looking into the more important aspects of these funds for investors i.e. ROA, ROE and expense ratio, open-ended funds are better, though not statistically significant, than open-ended funds. Adding to it the advantage of liquidity offered by open-ended funds can explain the trend toward the open-ended funds in the recent past. No close-ended fund is established (rather close-ended funds decreased in number) in the last 8-10 years but a large number of open-ended funds are started as show by MUFAP data. In 2003 there were around 13 open-ended and 35 close-ended funds registered in MUFAP whereas as in the year 2012-13 the number for open-ended increased by 130 whereas the number of close-ended funds dropped down to only 14 (MUFAP, 2013).

Table 6
Paired Sample Test

| | Mean | Std. Deviation | Paired Differences | | t | Sig. (2-tailed) |
|--|--------|----------------|--------------------|--|-----------|-----------------|
| | | | Std. Error Mean | 95% Confidence Interval of the Difference Lower Upper | | |
| OpenROE - CloseROE | .033 | .170 | .054 | -.088 .154 | .62 | .553 |
| OpenROA - CloseROA | .033 | .169 | .053 | -.088 .154 | .62 | .553 |
| OpenExpense Ratio - CloseExpense Ratio | -.004 | .013 | .004 | -.013 .006 | -.87 | .406 |
| OpenTurnover - CloseTurnover | -.515 | .747 | .236 | -1.049 .020 | -2.18* | .057 |
| OpenSize - CloseSize | -2.708 | .283 | .089 | -2.910 -2.506 | -30.28*** | .000 |
| OpenAge - CloseAge | -.2000 | .039 | .012 | -.228 -.172 | -16.39*** | .000 |

* Significant at $p < 0.1$
 ** Significant at $p < 0.05$
 *** Significant at $p < 0.01$

Conclusion

This study has focused on the ranking of close-ended mutual funds over five years and a comparative analysis of open and close-ended funds characteristics. By using the Treynor and Sharpe measures it has been revealed that no fund outperformed the market on a consistent basis over the study period. It has also been revealed that Pakistani stock market is reasonably efficient as no fund could beat the market on regular basis even when the market was facing downfall problem. A comparative study has

also conducted to compare open and close-ended mutual funds on different aspects. The results demonstrate that there is no difference in the performance of open and close-ended mutual funds over the study period. There is significant difference in the two groups based on fund's age and size but these differences have their own reasons behind it. Lastly, this study explains the rationale behind the dramatic increase in the number and value of open-ended funds in Pakistan over the recent past.

References

- Afza, T., & Rauf, A. (2009). Performance evaluation of Pakistani mutual funds. *Pakistan Economic and Social Review*, 47(2), 199-214.
- Anderson, S., Coleman, B., Frohlich, C. and Steagall, J. (2001). A Multifactor Analysis of Country Fund Returns. *Journal of Financial Research*, 24, 331-346
- Blake, D., Lehmann, B. N., & Timmermann, A. (1999). Asset allocation dynamics and pension fund performance*. *The Journal of Business*, 72(4), 429-461.
- Bogle, J. C. (2003). Re-Mutualizing the Mutual Fund Industry-The Alpha and the Omega. *BCL Rev.*, 45, 391.
- Brown, S. J., & Goetzmann, W. N. (1995). Performance persistence. *The Journal of finance*, 50(2), 679-698.
- Filbeck, G., & Tompkins, D. L. (2004). Management Tenure and Risk-Adjusted Performance of Mutual Funds. *The Journal of Investing*, 13(2), 72-80.
- Glosten, L. R., & Harris, L. E. (1988). Estimating the components of the bid/ask spread. *Journal of financial Economics*, 21(1), 123-142.
- Huhmann, B. A., & Bhattacharyya, N. (2005). Does mutual fund advertising provide necessary investment information?. *International Journal of Bank Marketing*, 23(4), 296-316.
- Mutual Funds Association of Pakistan 'Assets Under Management'. Retrieved from http://www.mufap.com.pk/aum_report.php?tab=01 (Accessed: 2 March, 2013).

- Peterson, J.D., Pietranico, P.A., Riepe, M. W. and Xu, F. (2001), Explaining the Performance of Domestic Equity Mutual Funds. *Journal of Investing*, 10, 81-92.
- Pontiff, J. (1997). Excess volatility and closed-end funds. *The American Economic Review*, 155-169.
- Shah, S. A., Hijazi, S. T., & Hamdani, N. H. (2005). Performance Evaluation of Mutual Funds in Pakistan. *The Pakistan Development Review*, 863-876.
- Yi, J., & Kim, M. K. (2005). Risk Factors On Returns Of Closed-End Funds. *Journal of Business & Economics Research (JBER)*, 3(10).