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From the Editor

Editorial: Ethical business



Simulated view of a black hole

Our theme this month is Ethical business and we highlight particularly, two articles. The first is from the Department of Shariah and Management, Academy of Islamic Studies, University of Malaya, entitled Islamic Spirituality, Organizational Commitment, and Organizational Citizenship Behavior: A Proposed Conceptual Framework and looks at the benefits of workplace spirituality within organizations and the associated effects on outcomes and performance level. This study proposes a theoretical framework of Islamic spirituality within the workplace and looks at the effect of Islamic spirituality to predictive employee behavior, with particular emphasis on organizational commitment and organizational citizenship behavior (OCB). This research concludes with a call for researchers to empirically examine the link between Islamic spirituality, organizational commitment, OCB, and job performance.

The second article is an Essay looking at *The Impact of Free Market Economy or Neoliberalism on Labour* and argues whether the free market economy has indeed assisted labourers in developing nations, or if it has just entrenched capitalism further afield, bringing greater profits to first world capitalists.

I also provide my own essay on *Philosophy, physics, Einstein's gravitational waves and black holes for the lay man,* looking from a much wider and deeper perspective at our ethical place in the universe.

Lesley Pocock Chief Editor

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Impact of Value Creation on Stock Prices: A Study of Amazon.Com, Inc

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Abstract

The handwriting has been on the wall for a long time, but a lacklustre economy and ongoing financial turmoil have underscored the broad trend that has fundamentally altered how private equity investors make money. Private equity firms can no longer rely solely on the power of leverage and ever-expanding price-earnings multiples to generate superior returns. More private equity firms wielding more capital have bid up acquisition prices, putting pressure on potential investment gains. In this study, one of the most common indicators, Relative Strength Index (RSI) was used to analyse the market movements of Amazon.com, Inc. over a period of the last 290 days. As the study describes the existing price movements of the selected company, the research design followed was descriptive and analytical research design. The company was chosen completely on the basis of convenient sampling technique which is non-probability in nature. This study is significant for investors and traders as it leads to identify the level of price movement that further helps in understanding buying and selling situations in the market by identifying support and resistance levels.

Key words: Market movements, relative strength index, stock exchange, value creation.

1. Introduction

Value creation is performance of actions that increase the worth of goods, services or even a business. Many business operators now focus on value creation both in the context of creating better value for customers purchasing its products and services, as well as for shareholders in the business who want to see their stake appreciate in value. Value creation is a corporation's raison d'être, the ultimate measure by which it is judged. In the 1990s, the main emphasis of executives was on creating value for shareholders-a value that was reflected in movements of the company's stock price. But measures based on stock market values are subject to the same wild fluctuations as the market itself. In a rising tide, all boats get raised. But when macroeconomic changes force up markets generally, it does not mean that the value of each individual company in that market has changed similarly. Markets are moved by sentiment that has little to do with the underlying value of individual corporations.⁽¹⁾ Amazon strives to be Earth's most customer-centric company where people can find and discover virtually anything they want to buy online. By giving customers more of what they want - low prices, vast selection, and convenience - Amazon continues to grow and evolve as a world-class e-commerce platform. It is the largest Internet-based retailer in the United States.⁽²⁾ Founded by Jeff Bezos, the Amazon.com website started in 1995 as a place to buy books because of the unique customer experience the Web could offer book lovers. Bezos believed that only the Internet could offer customers the convenience of browsing a selection of millions of book titles in a single sitting. During the first 30 days of business, Amazon fulfilled orders for customers in 50 states and 45 countries - all shipped from his Seattle-area garage.⁽³⁾ Amazon's evolution from Web site to e-commerce partner to development platform is driven by the spirit of innovation that is part of the company's DNA. The world's brightest technology minds come to Amazon.com to research and develop technology that improves the lives of shoppers and sellers around the world. In 2015, Amazon surpassed Walmart as the most valuable retailer in the United States by market capitalization.⁽⁴⁾

Amazon's stock is listed on NasdaqGS. The NASDAQ Stock Market, commonly known as the NASDAQ, is an American stock exchange. It is the second-largest exchange in the world by market capitalization, behind only the New York Stock Exchange. On July 1, 2006, the NASDAQ National Market was renamed the NASDAQ Global Market. In conjunction with this, NASDAQ created the new NASDAQ Global Select Market, a segment of the NASDAQ Global Market with the highest initial listing standards of any exchange in the world. ⁽⁵⁾

Footnotes

1. http://www.economist.com/node/14301714

2. Jopson, Barney (July 12, 2011). "Amazon urges California referendum on online tax." Financial Times.

3. https://www.linkedin.com/company/amazon

4. http://www.nytimes.com/2015/08/16/technology/inside-amazon-wrestling-big-ideas-in-a-bruising-workplace.html?_r=0

5. http://www.nasdaq.com/about/Top_Tier_Splash.stm

2. Review of Literature

Errunza, V. R., & Losq, E. (1985) investigated the behaviour of stock prices for a group of well-established and newly emerging LDC securities markets and the derived results suggested that the probability distributions to be consistent with a lognormal distribution with some securities exhibiting non-stationary variance. LDC markets, even though not as efficient as major DC markets, are quite comparable to the smaller European markets and the behaviour of security prices as reported in their study appears to be generalizable for the heavily traded segments of LDC markets.

Jegadeesh, N., & Titman, S. (1993) documented that strategies which buy stocks that have performed well in the past and sell stocks that have performed poorly in the past generate significant positive returns over a 3 to 12 months holding period. They found that the profitability of those strategies (Returns of Relative Strength Portfolios) were not due to their systematic risk or to delayed stock price reactions to common factors. The returns of the zero-cost winners minus losers' portfolio were examined in each of the 36 months following the portfolio formation date. With the exception of the first month, the portfolio realized positive returns in each of the 12 months after the formation date. However, the longer term performances of these past winners and losers revealed that half of their excess returns in the year following the portfolio formation date dispatch within the following two years.

Pruitt, S. W., & White, R. E. (1988) attempted to directly determine the profitability performance of a multi-component technical trading system incorporating price, volume, and relative strength indicators on individual security issues. The system they tested, to which they had given the acronym CRISMA to represent its component parts (Cumulative Volume, Relative Strength, Moving Average), is completely ex-ante in nature and outperformed the market over a significant interval of time, even after adjusting for problems of trade timing and risk, and after allowing for round-trip transaction costs up to 2% per security trade.

Tsaih, R., Hsu, Y., & Lai, C. C. (1998) presented a hybrid AI (artificial intelligence) approach to the implementation of trading strategies in the S&P 500 stock index futures market. The hybrid AI approach integrates the rule-based systems technique and the neural networks technique to accurately predict the direction of daily price changes in S&P 500 stock index futures. Based upon this hybrid AI approach, the integrated futures trading system (IFTS) was established and employed to trade the S&P 500 stock index futures contracts. Empirical results also confirmed that IFTS outperformed the passive buy-and-hold investment strategy during the 6-year testing period from 1988 to 1993.

Amit, R., & Zott, C. (2000) explored the theoretical foundations of value creation in e-business by examining how 59 American and European e-businesses became publicly traded corporations create value and observed that in e-business, new value can be created by the ways in which transactions are enabled. Developed a model based on study, they suggested that the value creation potential of e-businesses hinges on four interdependent dimensions, namely: efficiency, complementarities, lock-in, and novelty. They also found that no single entrepreneurship or strategic management theory can fully explain the value creation potential of e-business.

Gunasekarage, A., & Power, D. M. (2001) analysed the performance of one group of these trading rules using index data for four emerging South Asian capital markets (the Bombay Stock Exchange, the Colombo Stock Exchange, the Dhaka Stock Exchange and the Karachi Stock Exchange) and examined the implications of the results for the weak form of the efficient market hypothesis. The findings indicated that technical trading rules have predictive ability in these markets and rejected the null hypothesis that the returns to be earned from studying moving average values are equal to those achieved from a naive buy and hold strategy.

Hameed, A., & Kusnadi, Y. (2002) analysed that the momentum returns of more than 1 percent per month is observed when applied to less diversified portfolios consisting of firms with small market capitalization or high volume of trade, suggesting that price momentum is related to firm specific factors.

Wong, W. K., Manzur, M., & Chew, B. K. (2003) focused on the role of technical analysis in signalling the timing of stock market entry and exit. Test statistics were introduced to test the performance of the most established of the trend followers, the Moving Average, and the most frequently used countertrend indicator, the Relative Strength Index. Using Singapore data, the results indicated that the indicators can be used to generate significantly positive return. It was also found that member firms of Singapore Stock Exchange (SES) tend to enjoy substantial profits by applying technical indicators and concluded it as the main reason why most member firms do have their own trading teams that rely heavily on technical analysis.

Wang, C. (2004) examined among national stock prices of four Asian Newly Industrializing Countries stock markets - Taiwan, South Korea, Singapore and Hong Kong - in models incorporating the established markets of Japan, USA, UK and Germany. The results consistently appear to suggest the relatively leading role of all established markets in driving fluctuations in the NIC stock markets. In other words, all established markets and Hong Kong, consistently were the initial receptors of exogenous shocks to the (long-term) equilibrium relationships and the other NIC markets, particularly the Singaporean and Taiwanese markets had to bear most of the burden of shortrun adjustment to re-establish the long-term equilibrium relationship. In comparison to all other NIC markets, Taiwan and Singapore appear as the most endogenous, with Taiwan providing evidence of its short-term vulnerability to shocks from the established markets.

Pan, R. K., & Sinha, S. (2007) analysed the cross-correlation matrix C of stock price fluctuations in the National Stock Exchange (NSE) of India to investigate the universality of the structure of interactions in different markets and found that this emerging market exhibits strong correlations in the movement of stock prices compared to developed markets, such as the New York Stock Exchange (NYSE). This showed the dominant influence of a common market mode on the stock prices. By comparison, interactions between related stocks, were found to be much weaker. This lack of distinct sector identity in emerging markets was explicitly shown by reconstructing the network of mutually interacting stocks. Spectral analysis of C for NSE revealed that the few largest eigenvalues deviate from the bulk of the spectrum predicted by random matrix theory, but they were far fewer in number compared to, e.g., NYSE. They showed this due to the relative weakness of intrasector interactions between stocks, compared to the market mode, by modelling stock price dynamics with a two-factor model. They also suggested that the emergence of an internal structure comprising multiple groups of strongly coupled components is a signature of market development.

3. Objectives of the Study

The main objective of the study is to do relative strength analysis, with the help of RSI indicator, of a particular scrip to interpret buying and selling conditions in the market. Also the objective of the study is to analyse price movements over a period of last 290 days.

4. Research Methodology

The study aims at analysing the price movements of Amazon. com, Inc. over a period of last 290 days and as the study describes the existing price movements of the selected company, the research design followed was descriptive and analytical research design. The company was chosen completely on the basis of convenient sampling technique which is non-probability in nature. This study is significant for investors and traders as it leads to identify the level of price movement that further helps in understanding buying and selling situations in the market by identifying support and resistance levels. To achieve the desired objective, the daily share price movements of the selected company was absorbed for 290 days, i.e. from 1st April 2015 to 15th January 2016. As the company is listed on NasdaqGS (NASDAQ Global Select Market) so the data was collected from the website of Nasdaq and Bloomsberg. After that, the closing prices of share prices were taken and the future price movement was analysed using Relative Strength Index Indicator of technical analysis. Data was collected as available on Nasdaq and Bloomsberg website as on 16th January 2016-evening.

5. Data Analysis and Interpretations

The data was analysed by using Relative Strength Analysis, the most common and reliable indicator of technical analysis of stock markets. Relative Strength Index (RSI) is a popular momentum oscillator developed by J. Welles Wilder Jr. It is not to be confused with relative strength, which compares a stock's price performance to that of an overall market average, such as the S&P 500. Instead, the RSI analyses the recent performance of a security in relation to its own price history. RSI is a valuable tool to determine overbought/oversold levels. The Relative Strength Index compares upward movements in closing price to downward movements over a selected period. Wilder originally used a 14 day period, but 7 and 9 days are commonly used to trade the short cycle and 21 or 25 days for the intermediate cycle. The RSI value will always move between 0 and 100; the value will be 0 if the stock falls on all 14 days, and 100, if the price moves up on all the days. This implies that the RSI can also be used to identify the overbought/oversold levels in a counter. As suggested by J Welles Wilder, the developer of this indicator, most technical analysts consider the RSI value above 70 as 'overbought zone' and below 30 as 'oversold zone'. However, investors and traders need to adjust these levels according to the inherent volatility of the scrip. It is computed on the basis of the speed and direction of a stock's price movement. This means that the RSI indicator only measures the stock's internal strength (based on its past) and should not be confused with its relative strength, that is compared with other stocks, market indices, sectoral indices, etc.

Table 1 (pages 6-10) shows the Relative Strength Index for each day on the basis of 14-day RSI technique from 1st April 2015 to 15th January 2016.

In this paper, signals are only tak en in the direction of the trend with the following conditions:

• Go long, in an up-trend, when RSI falls below 35 and rises back above it.

• Go short, in a down-trend, when RSI rises above 65 and falls back below it.

In the column of 14-day RSI in Table 1, the red cells show oversold zones, green cells show overbought zones and yellow cells show hold position.

According to Wilder, divergences signal a potential reversal point because directional momentum does not confirm price. A bullish divergence occurs when the underlying security makes a lower low and RSI forms a higher low. RSI does not confirm the lower low and this shows strengthening momentum. A bearish divergence forms when the security records a higher high and RSI forms a lower high. RSI does not confirm the new high and this shows weakening momentum..

Table 1: Showing Relative Strength Analysis on the basis of 14-day RSI

| Date | Close | Change | Gain | Loss | Avg. Gain | Avg. Loss | 14-day RSI |
|-----------|--------|--------|-------|-------|--------------|--------------|------------|
| 01-Apr-15 | 370.26 | | | | | | |
| 02-Apr-15 | 372.25 | 1.99 | 1.99 | | | | |
| 06-Apr-15 | 377.04 | 4.79 | 4.79 | | | | |
| 07-Apr-15 | 374.41 | -2.63 | | 2.63 | | | |
| 08-Apr-15 | 381.20 | 6.79 | 6.79 | | | | |
| 09-Apr-15 | 383.54 | 2.34 | 2.34 | | | | |
| 10-Apr-15 | 382.65 | -0.89 | | 0.89 | | | |
| 13-Apr-15 | 382.36 | -0.29 | | 0.29 | | | |
| 14-Apr-15 | 385.11 | 2.75 | 2.75 | | | | |
| 15-Apr-15 | 383.45 | -1.66 | | 1.66 | | | |
| 16-Apr-15 | 386.04 | 2.59 | 2.59 | | | | |
| 17-Apr-15 | 375.56 | -10.48 | | 10.48 | | | |
| 20-Apr-15 | 389.51 | 13.95 | 13.95 | | | | |
| 21-Apr-15 | 391.18 | 1.67 | 1.67 | | 4.61 | 3.19 | 59.10 |
| 22-Apr-15 | 389.80 | -1.38 | | 1.38 | 4.28 | 3.06 | 58.30 |
| 23-Apr-15 | 389.99 | 0.19 | 0.19 | | 3.99 | 2.84 | 58.39 |
| 24-Apr-15 | 445.10 | 55.11 | 55.11 | | 7.64 | 2.64 | 74.32 |
| 27-Apr-15 | 438.56 | -6.54 | | 6.54 | 7.09 | 2.92 | 70.86 |
| 28-Apr-15 | 429.31 | -9.25 | | 9.25 | 6.59 | 3.37 | 66.15 |
| 29-Apr-15 | 429.37 | 0.06 | 0.06 | | 6.12 | 3.13 | 66.17 |
| 30-Apr-15 | 421.78 | -7.59 | | 7.59 | 5.68 | 3.45 | 62.24 |
| 01-May-15 | 422.87 | 1.09 | 1.09 | | 5.36 | 3.20 | 62.58 |
| 04-May-15 | 423.04 | 0.17 | 0.17 | | 4.98 | 2.97 | 62.64 |
| 05-May-15 | 421.19 | -1.85 | | 1.85 | 4.63 | 2.89 | 61.54 |
| 06-May-15 | 419.10 | -2.09 | | 2.09 | 4.30 | 2.84 | 60.25 |
| 07-May-15 | 426.88 | 7.78 | 7.78 | | 4.55 | 2.63 | 63.33 |
| 08-May-15 | 433.69 | 6.81 | 6.81 | | 4.71 | 2.44 | 65.82 |
| 11-May-15 | 432.85 | -0.84 | | 0.84 | 4.37 | 2.33 | 65.23 |
| 12-May-15 | 431.02 | -1.83 | | 1.83 | 4.06 | 2.29 | 63.89 |
| 13-May-15 | 426.87 | -4.15 | | 4.15 | 3.77 | 2.43 | 60.84 |
| 14-May-15 | 432.28 | 5.41 | 5.41 | | 3.89 | 2.25 | 63.30 |
| 15-May-15 | 426.00 | -6.28 | | 6.28 | 3.61 | 2.54 | 58.68 |
| 18-May-15 | 425.24 | -0.76 | | 0.76 | 3.35 | 2.41 | 58.13 |
| 19-May-15 | 421.71 | -3.53 | | 3.53 | 3.11 | 2.49 | 55.52 |
| 20-May-15 | 423.86 | 2.15 | 2.15 | | 3.04 | 2.32 | 56.79 |
| 21-May-15 | 431.63 | 7.77 | 7.77 | | 3.38 | 2.15 | 61.13 |
| 22-May-15 | 427.63 | -4.00 | | 4.00 | 3.14 | 2.28 | 57.91 |
| 26-May-15 | 425.47 | -2.16 | | 2.16 | 2.92 | 2.27 | 56.18 |
| 27-May-15 | 431.42 | 5.95 | 5.95 | | 3.13 | 2.11 | 59.74 |
| 28-May-15 | 426.57 | -4.85 | | 4.85 | 2.91 | 2.31 | 55.77 |
| 29-May-15 | 429.23 | 2.66 | 2.66 | | 2.89 | 2.14 | 57.44 |
| 01-Jun-15 | 430.92 | 1.69 | 1.69 | | 2.80 | 1.99 | 58.51 |
| 02-Jun-15 | 430.99 | 0.07 | 0.07 | | 2.61 | 1.85 | 58.56 |

| 03-Jun-15 436.59 5.60 5.60 2.82 1.72 62.21 04-Jun-15 430.78 -5.81 5.83 2.62 2.01 56.63 05-Jun-15 425.95 -3.83 3.83 2.43 2.14 53.24 09-Jun-15 425.48 1.98 1.98 2.26 2.23 50.32 09-Jun-15 430.77 5.29 2.246 1.92 56.09 11-Jun-15 432.97 2.20 2.20 2.444 1.79 57.73 12-Jun-15 423.97 6.25 6.25 2.10 2.19 49.00 16-Jun-15 427.26 3.59 3.59 2.21 2.03 52.09 17-Jun-15 427.81 0.55 0.55 2.09 1.89 52.56 18-Jun-15 436.29 1.37 1.37 2.49 1.81 57.89 23-Jun-15 445.99 9.70 9.70 3.00 1.68 64.13 24-Jun-15 443.10 <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<> | | | | | | | | |
|---|-----------|--------|-------|-------|------|------|------|-------|
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| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | 05-Jun-15 | 426.95 | -3.83 | | 3.83 | 2.43 | 2.14 | 53.24 |
| 10-Jun-15430.775.295.292.461.9256.0911-Jun-15432.972.202.441.7957.7312-Jun-15423.67-6.256.252.102.1915-Jun-15427.263.593.592.212.0352.0917-Jun-15427.263.593.592.212.0352.0917-Jun-15427.810.550.552.091.8952.5618-Jun-15439.3911.5811.582.771.9556.9122-Jun-15436.291.371.372.491.8157.8922-Jun-15445.999.709.703.001.6864.1324-Jun-15440.10 -0.74 0.742.591.8458.4225-Jun-15440.10 -0.74 0.742.591.8458.4226-Jun-15438.10-2.002.002.401.8556.4529-Jun-15439.094.234.232.372.1455.0601-Jul-15437.710.320.322.291.8555.3106-Jul-15436.04-1.671.672.131.8453.6507-Jul-15436.270.680.682.021.7154.2508-Jul-15435.7710.000.3741.5570.7015-Jul-15435.7710.000.3741.5570.7015-Jul-15436.09-0.281.607.387.3014-Jul-15455.77 <td>08-Jun-15</td> <td>423.50</td> <td>-3.45</td> <td></td> <td>3.45</td> <td>2.26</td> <td>2.23</td> <td>50.32</td> | 08-Jun-15 | 423.50 | -3.45 | | 3.45 | 2.26 | 2.23 | 50.32 |
| 11-Jun-15 432.97 2.20 2.20 2.44 1.79 57.73 12-Jun-15 429.92 -3.05 3.05 2.27 1.88 54.69 15-Jun-15 423.67 -6.25 6.25 2.10 2.19 49.00 16-Jun-15 427.26 3.59 3.59 2.21 2.03 52.09 18-Jun-15 437.81 0.55 0.55 2.09 1.89 52.56 18-Jun-15 434.92 -4.47 4.47 2.57 1.95 56.91 22-Jun-15 436.29 1.37 1.37 2.49 1.81 57.89 23-Jun-15 440.10 -0.74 0.74 2.59 1.84 58.42 26-Jun-15 438.10 -2.00 2.00 2.40 1.85 56.45 29-Jun-15 438.09 4.23 4.23 2.37 2.14 52.54 01-Ju-15 437.10 0.32 0.32 2.29 1.85 55.31 05-Jul-15 | 09-Jun-15 | 425.48 | 1.98 | 1.98 | | 2.24 | 2.07 | 51.95 |
| 12-Jun-15429.92-3.053.052.271.8854.6915-Jun-15427.263.593.592.212.0352.0917-Jun-15427.810.550.552.091.8952.5618-Jun-15439.3911.5811.582.771.7561.2419-Jun-15436.291.371.372.491.8157.8923-Jun-15436.291.371.372.491.8157.8923-Jun-15445.999.709.703.001.6864.1324-Jun-15440.10-0.740.742.591.8458.4225-Jun-15440.10-0.740.742.591.8456.4529-Jun-15438.10-2.002.002.401.8555.6429-Jun-15438.10-2.002.002.401.8555.6629-Jun-15437.710.320.322.272.1452.5401-Jul-15437.710.320.322.291.8555.3106-Jul-15436.04-1.671.672.131.8453.6507-Jul-15436.07-7.027.021.882.0847.3809-Jul-15434.394.692.081.9451.7710.5110-Jul-15435.7710.0010.003.741.5570.7015-Jul-15455.7710.0010.003.741.5570.7015-Jul-15488.105.095.094.52 <td< td=""><td>10-Jun-15</td><td>430.77</td><td>5.29</td><td>5.29</td><td></td><td>2.46</td><td>1.92</td><td>56.09</td></td<> | 10-Jun-15 | 430.77 | 5.29 | 5.29 | | 2.46 | 1.92 | 56.09 |
| 15-Jun-15423.67-6.256.252.102.1949.0016-Jun-15427.26 3.59 3.59 2.21 2.03 52.09 17-Jun-15427.81 0.55 0.55 2.09 1.89 52.66 18-Jun-15439.39 11.58 11.58 2.77 1.75 61.24 19-Jun-15434.92 -4.47 4.47 2.57 1.95 56.91 22-Jun-15436.29 1.37 1.37 2.49 1.81 57.89 23-Jun-15440.04 -5.15 5.15 2.79 1.93 59.12 25-Jun-15440.10 -0.74 0.74 2.59 1.84 58.42 26-Jun-15438.10 -2.00 2.00 2.40 1.85 56.45 29-Jun-15434.09 4.23 4.23 2.37 2.14 52.56 29-Jun-15437.71 0.32 0.32 2.29 1.85 55.31 06-Jul-15436.04 -1.67 1.67 2.13 1.84 53.65 07-Jul-15436.72 0.68 0.68 2.02 1.71 54.25 08-Jul-15438.71 0.26 1.67 2.188 2.08 47.38 09-Jul-1543.51 9.12 9.12 2.58 1.80 58.95 13-Jul-15435.57 12.06 12.06 3.26 1.67 66.13 14-Jul-15461.19 -4.38 4.38 3.47 1.75 66.47 15-Jul-15488. | 11-Jun-15 | 432.97 | 2.20 | 2.20 | | 2.44 | 1.79 | 57.73 |
| 16-Jun-15427.26 3.59 3.59 2.21 2.03 52.09 17-Jun-15427.81 0.55 0.55 2.09 1.89 52.56 18-Jun-15439.39 11.58 11.58 2.77 1.75 61.24 19-Jun-15434.92 -4.47 4.47 2.57 1.95 56.91 22-Jun-15436.29 1.37 1.37 2.49 1.81 57.89 23-Jun-15445.99 9.70 9.70 3.00 1.68 64.13 24-Jun-15440.10 -0.74 0.74 2.59 1.84 56.45 25-Jun-15440.10 -0.74 0.74 2.59 1.84 56.45 29-Jun-15429.86 -8.24 8.24 2.23 2.31 49.14 30-Jun-15434.09 4.23 4.23 2.37 2.14 52.54 01-Jul-15437.71 0.32 0.32 2.29 1.85 55.31 06-Jul-15436.04 -1.67 1.67 2.13 1.84 53.65 07-Jul-15436.04 -1.67 1.67 2.13 1.84 53.65 07-Jul-15435.07 -7.02 7.02 1.88 2.08 47.38 09-Jul-15435.09 4.69 2.08 1.94 51.77 10-Jul-15443.51 9.12 9.12 2.58 1.80 58.95 13-Jul-15443.51 9.12 9.12 2.58 1.67 66.13 14-Jul-15445.57 | 12-Jun-15 | 429.92 | -3.05 | | 3.05 | 2.27 | 1.88 | 54.69 |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 15-Jun-15 | 423.67 | -6.25 | | 6.25 | 2.10 | 2.19 | 49.00 |
| 18-Jun-15439.3911.5811.582.771.7561.2419-Jun-15434.92-4.474.472.571.9556.9122-Jun-15436.291.371.372.491.8157.8923-Jun-15440.84-5.155.152.791.9359.1225-Jun-15440.10-0.740.742.591.8458.4226-Jun-15438.10-2.002.002.401.8556.4529-Jun-15438.00-4.234.232.372.1452.5401-Jul-15437.393.303.302.441.9955.0602-Jul-15437.710.320.322.291.8555.3106-Jul-15436.720.680.682.021.7154.2508-Jul-15436.720.680.682.021.7154.2508-Jul-15436.720.680.682.021.7154.2508-Jul-15435.5712.063.261.6766.1314-Jul-15465.5710.0010.003.741.5570.7015-Jul-15455.5712.0612.063.261.6372.3017-Jul-15488.00-0.100.104.201.3176.2322-Jul-15488.005.095.385.385.382.3223-Jul-15488.005.093.641.5669.9424-Jul-15529.002.972.975.741.5279.07 <td>16-Jun-15</td> <td>427.26</td> <td>3.59</td> <td>3.59</td> <td></td> <td>2.21</td> <td>2.03</td> <td>52.09</td> | 16-Jun-15 | 427.26 | 3.59 | 3.59 | | 2.21 | 2.03 | 52.09 |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | 17-Jun-15 | 427.81 | 0.55 | 0.55 | | 2.09 | 1.89 | 52.56 |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 18-Jun-15 | 439.39 | 11.58 | 11.58 | | 2.77 | 1.75 | 61.24 |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 19-Jun-15 | 434.92 | -4.47 | | 4.47 | 2.57 | 1.95 | 56.91 |
| 24-Jun-15 440.84 -5.15 5.15 2.79 1.93 59.12 25 -Jun-15 440.10 -0.74 0.74 2.59 1.84 58.42 26 -Jun-15 438.10 -2.00 2.00 2.40 1.85 56.45 29 -Jun-15 429.86 -8.24 8.24 2.23 2.31 49.14 30 -Jun-15 437.39 3.30 3.30 2.44 1.99 55.06 02 -Jul-15 437.71 0.32 0.32 2.29 1.85 55.31 06 -Jul-15 437.71 0.32 0.32 2.29 1.85 55.31 06 -Jul-15 436.72 0.68 0.68 2.02 1.71 54.25 08 -Jul-15 436.72 0.68 0.68 2.02 1.71 54.25 08 -Jul-15 436.72 0.68 0.68 2.02 1.71 54.25 08 -Jul-15 435.57 12.06 3.26 1.67 66.13 14 -Jul-15 443.51 9.12 9.12 2.58 1.80 58.95 13 -Jul-15 465.57 10.00 10.00 3.74 1.55 70.70 15 -Jul-15 483.01 7.53 7.53 4.48 1.51 74.78 20 -Jul-15 488.01 5.09 5.09 4.52 1.63 72.30 17 -Jul-15 488.00 -0.10 0.10 4.20 1.31 76.23 22 -Jul-15 488.07 0.27 3.92 1.22 7 | 22-Jun-15 | 436.29 | 1.37 | 1.37 | | 2.49 | 1.81 | 57.89 |
| 25-Jun-15440.10 -0.74 0.74 2.59 1.84 58.42 26-Jun-15438.10 -2.00 2.00 2.40 1.85 56.45 29-Jun-15429.86 -8.24 8.24 2.23 2.31 49.14 30 -Jun-15434.09 4.23 4.23 2.37 2.14 52.54 01 -Jul-15437.39 3.30 3.30 2.44 1.99 55.06 02 -Jul-15437.71 0.32 0.32 2.29 1.85 55.31 06 -Jul-15436.04 -1.67 1.67 2.13 1.84 53.65 07 -Jul-15436.72 0.68 0.68 2.02 1.71 54.25 08 -Jul-15429.70 -7.02 7.02 1.88 2.08 47.38 09 -Jul-15434.39 4.69 4.69 2.08 1.94 51.77 10 -Jul-15443.51 9.12 9.12 2.58 1.80 58.95 13 -Jul-15455.57 12.06 12.06 3.26 1.67 66.13 14 -Jul-15465.19 -4.38 4.38 3.47 1.75 66.47 16 -Jul-15483.01 7.53 7.53 4.48 1.51 74.78 20 -Jul-15488.00 -0.10 0.10 4.22 1.63 72.30 17 -Jul-15488.00 -0.10 0.10 4.22 1.63 72.30 21 -Jul-15488.00 -0.10 0.10 4.22 1.64 76.33 </td <td>23-Jun-15</td> <td>445.99</td> <td>9.70</td> <td>9.70</td> <td></td> <td>3.00</td> <td>1.68</td> <td>64.13</td> | 23-Jun-15 | 445.99 | 9.70 | 9.70 | | 3.00 | 1.68 | 64.13 |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | 24-Jun-15 | 440.84 | -5.15 | | 5.15 | 2.79 | 1.93 | 59.12 |
| 26-Jun-15438.10 -2.00 2.002.401.8556.4529-Jun-15429.86 -8.24 8.24 2.232.3149.1430-Jun-15434.094.234.232.372.1452.5401-Jul-15437.393.303.302.441.9955.0602-Jul-15437.710.320.322.291.8555.3106-Jul-15436.04 -1.67 1.672.131.8453.6507-Jul-15436.720.680.682.021.7154.2508-Jul-15429.70 -7.02 7.021.882.0847.3809-Jul-15434.394.694.692.081.9451.7710-Jul-15443.519.129.122.581.8058.9513-Jul-15455.5712.0612.063.261.6766.1314-Jul-15465.5710.0010.003.741.5570.7015-Jul-15461.19 -4.38 4.383.471.7566.4716-Jul-15475.4814.2914.294.251.6372.3017-Jul-15488.00 -0.10 0.104.201.3176.2322-Jul-15488.00 -0.10 0.104.201.3176.2322-Jul-15488.105.096.093.641.5669.9424-Jul-15520.03 -5.38 5.385.961.6478.4429-Jul-15531.411.991.99 <td>25-Jun-15</td> <td>440.10</td> <td>-0.74</td> <td></td> <td></td> <td></td> <td>1.84</td> <td>58.42</td> | 25-Jun-15 | 440.10 | -0.74 | | | | 1.84 | 58.42 |
| 29-Jun-15 429.86 -8.24 8.24 2.23 2.31 49.14 30-Jun-15 434.09 4.23 4.23 2.37 2.14 52.54 01-Jul-15 437.39 3.30 3.30 2.44 1.99 55.06 02-Jul-15 437.71 0.32 0.32 2.29 1.85 55.31 06-Jul-15 436.04 -1.67 1.67 2.13 1.84 53.65 07-Jul-15 436.72 0.68 0.68 2.02 1.71 54.25 08-Jul-15 432.970 -7.02 7.02 1.88 2.08 47.38 09-Jul-15 434.39 4.69 4.69 2.08 1.94 51.77 10-Jul-15 443.51 9.12 9.12 2.58 1.80 58.95 13-Jul-15 455.57 12.06 12.06 3.26 1.67 66.47 16-Jul-15 475.48 14.29 14.29 4.25 1.63 72.30 17-Jul-15 < | 26-Jun-15 | 438.10 | | | 2.00 | | | 56.45 |
| 30-Jun-15 434.09 4.23 4.23 2.37 2.14 52.54 01-Jul-15 437.39 3.30 3.30 2.44 1.99 55.06 02-Jul-15 437.71 0.32 0.32 2.29 1.85 55.31 06-Jul-15 436.04 -1.67 1.67 2.13 1.84 53.65 07-Jul-15 436.72 0.68 0.68 2.02 1.71 54.25 08-Jul-15 432.970 -7.02 7.02 1.88 2.08 47.38 09-Jul-15 434.39 4.69 4.69 2.08 1.94 51.77 10-Jul-15 443.51 9.12 9.12 2.58 1.80 58.95 13-Jul-15 455.57 12.06 12.06 3.26 1.67 66.13 14-Jul-15 465.19 -4.38 4.38 3.47 1.75 66.47 16-Jul-15 475.48 14.29 14.29 4.25 1.63 72.30 17-Jul-15 < | | | | | | | | |
| 01-Jul-15 437.39 3.30 3.30 2.44 1.99 55.06 02-Jul-15 437.71 0.32 0.32 2.29 1.85 55.31 06-Jul-15 436.04 -1.67 1.67 2.13 1.84 53.65 07-Jul-15 436.72 0.68 0.68 2.02 1.71 54.25 08-Jul-15 429.70 -7.02 7.02 1.88 2.08 47.38 09-Jul-15 434.39 4.69 4.69 2.08 1.94 51.77 10-Jul-15 443.51 9.12 9.12 2.58 1.80 58.95 13-Jul-15 455.57 12.06 12.06 3.26 1.67 66.13 14-Jul-15 465.57 10.00 10.00 3.74 1.55 70.70 15-Jul-15 461.19 -4.38 4.38 3.47 1.75 66.47 16-Jul-15 475.48 14.29 14.29 4.25 1.63 72.30 17-Jul-15 | | | | 4.23 | | | | |
| 02-Jul-15 437.71 0.32 0.32 2.29 1.85 55.31 06-Jul-15 436.04 -1.67 1.67 2.13 1.84 53.65 07-Jul-15 436.72 0.68 0.68 2.02 1.71 54.25 08-Jul-15 429.70 -7.02 7.02 1.88 2.08 47.38 09-Jul-15 434.39 4.69 4.69 2.08 1.94 51.77 10-Jul-15 443.51 9.12 9.12 2.58 1.80 58.95 13-Jul-15 455.57 12.06 12.06 3.26 1.67 66.13 14-Jul-15 465.57 10.00 10.00 3.74 1.55 70.70 15-Jul-15 461.19 -4.38 4.38 3.47 1.75 66.47 16-Jul-15 475.48 14.29 14.29 4.25 1.63 72.30 17-Jul-15 488.10 5.09 5.09 4.52 1.40 76.33 21-Jul-15 | | | | | | | | |
| 06-Jul-15 436.04 -1.67 1.67 2.13 1.84 53.65 07-Jul-15 436.72 0.68 0.68 2.02 1.71 54.25 08-Jul-15 429.70 -7.02 7.02 1.88 2.08 4.738 09-Jul-15 434.39 4.69 4.69 2.08 1.94 51.77 10-Jul-15 443.51 9.12 9.12 2.58 1.80 58.95 13-Jul-15 455.57 12.06 12.06 3.26 1.67 66.13 14-Jul-15 465.57 10.00 10.00 3.74 1.55 70.70 15-Jul-15 461.19 -4.38 4.38 3.47 1.75 66.47 16-Jul-15 475.48 14.29 14.29 4.25 1.63 72.30 17-Jul-15 488.10 5.09 5.09 4.52 1.40 76.33 21-Jul-15 488.10 5.09 6.09 3.64 1.56 69.94 24-Jul-15 | | | | | | | | |
| 07-Jul-15436.720.680.682.021.7154.2508-Jul-15429.70-7.027.021.882.0847.3809-Jul-15434.394.694.692.081.9451.7710-Jul-15443.519.129.122.581.8058.9513-Jul-15455.5712.0612.063.261.6766.1314-Jul-15465.5710.0010.003.741.5570.7015-Jul-15461.19-4.384.383.471.7566.4716-Jul-15475.4814.2914.294.251.6372.3017-Jul-15483.017.537.534.481.5174.7820-Jul-15488.105.095.094.521.4076.3321-Jul-15488.00-0.100.104.201.3176.2322-Jul-15488.270.270.273.921.2276.3223-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15536.15-0.610.615.471.3580.1503-Jul-15536.15-0.610.615.471.3580.1503-Jul-15535.03-1.121.125.081.3479.1504-Aug-15531.90-3.133.134.711.4776.2805-Aug-15537.015.115.114.40 | | | | 0.02 | 1.67 | | | |
| 08-Jul-15 429.70 -7.02 7.02 1.88 2.08 47.38 09-Jul-15 434.39 4.69 4.69 2.08 1.94 51.77 10-Jul-15 443.51 9.12 9.12 2.58 1.80 58.95 13-Jul-15 443.51 9.12 9.12 2.58 1.67 66.13 14-Jul-15 455.57 12.06 12.06 3.26 1.67 66.13 14-Jul-15 465.57 10.00 10.00 3.74 1.55 70.70 15-Jul-15 461.19 -4.38 4.38 3.47 1.75 66.47 16-Jul-15 475.48 14.29 14.29 4.25 1.63 72.30 17-Jul-15 488.10 5.09 5.09 4.52 1.40 76.33 21-Jul-15 488.10 5.09 5.09 1.52 76.32 22-Jul-15 488.27 0.27 0.27 3.92 1.22 76.32 23-Jul-15 529.42 | | | | 0.68 | 2.07 | | | |
| 09-Jul-15434.394.694.692.081.9451.7710-Jul-15443.519.129.122.581.8058.9513-Jul-15455.5712.0612.063.261.6766.1314-Jul-15465.5710.0010.003.741.5570.7015-Jul-15461.19-4.384.383.471.7566.4716-Jul-15475.4814.2914.294.251.6372.3017-Jul-15483.017.537.534.481.5174.7820-Jul-15488.105.095.094.521.4076.3321-Jul-15488.00-0.100.104.201.3176.2322-Jul-15488.270.270.273.921.2276.3223-Jul-15482.18-6.096.093.641.5669.9424-Jul-15529.4247.2447.246.751.4582.3027-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15536.767.767.765.891.4180.6631-Jul-15536.15-0.610.615.471.3580.1503-Aug-15531.90-3.133.134.711.4776.2805-Aug-15537.015.115.114.401.8070.9506-Aug-15529.46-7.557.554.40 <td< td=""><td></td><td></td><td></td><td>0.00</td><td>7.02</td><td></td><td></td><td></td></td<> | | | | 0.00 | 7.02 | | | |
| 10-Jul-15443.519.129.122.581.8058.9513-Jul-15455.5712.0612.063.261.6766.1314-Jul-15465.5710.0010.003.741.5570.7015-Jul-15461.19-4.384.383.471.7566.4716-Jul-15475.4814.2914.294.251.6372.3017-Jul-15483.017.537.534.481.5174.7820-Jul-15488.00-0.100.104.201.3176.2321-Jul-15488.00-0.100.104.201.3176.2322-Jul-15488.270.270.273.921.2276.3223-Jul-15482.18-6.096.093.641.5669.9424-Jul-15529.4247.2447.246.751.4582.3027-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15536.767.767.765.891.4180.6631-Jul-15536.15-0.610.615.471.3580.1503-Aug-15531.90-3.133.134.711.4776.2805-Aug-15537.015.115.114.741.3677.7006-Aug-15529.46-7.557.554.401.8070.95 | | | | 4.69 | 7.02 | | | |
| 13-Jul-15 455.57 12.06 12.06 3.26 1.67 66.13 14-Jul-15 465.57 10.00 10.00 3.74 1.55 70.70 15-Jul-15 461.19 -4.38 4.38 3.47 1.75 66.47 16-Jul-15 475.48 14.29 14.29 4.25 1.63 72.30 17-Jul-15 483.01 7.53 7.53 4.48 1.51 74.78 20-Jul-15 488.10 5.09 5.09 4.52 1.40 76.33 21-Jul-15 488.00 -0.10 0.10 4.20 1.31 76.23 22-Jul-15 488.27 0.27 0.27 3.92 1.22 76.32 23-Jul-15 482.18 -6.09 6.09 3.64 1.56 69.94 24-Jul-15 529.42 47.24 47.24 6.75 1.45 82.30 27-Jul-15 531.41 1.99 1.99 6.41 1.35 82.62 28-Jul-15 | | | | | | | | |
| 14-Jul-15 465.57 10.00 10.00 3.74 1.55 70.70 15-Jul-15 461.19 -4.38 4.38 3.47 1.75 66.47 16-Jul-15 475.48 14.29 14.29 4.25 1.63 72.30 17-Jul-15 483.01 7.53 7.53 4.48 1.51 74.78 20-Jul-15 488.10 5.09 5.09 4.52 1.40 76.33 21-Jul-15 488.00 -0.10 0.10 4.20 1.31 76.23 22-Jul-15 488.27 0.27 0.27 3.92 1.22 76.32 23-Jul-15 482.18 -6.09 6.09 3.64 1.56 69.94 24-Jul-15 529.42 47.24 47.24 6.75 1.45 82.30 27-Jul-15 531.41 1.99 1.99 6.41 1.35 82.62 28-Jul-15 526.03 -5.38 5.38 5.96 1.64 78.44 29-Jul-15 | | | | | | | | |
| 15-Jul-15461.19-4.384.383.471.7566.4716-Jul-15475.4814.2914.294.251.6372.3017-Jul-15483.017.537.534.481.5174.7820-Jul-15488.105.095.094.521.4076.3321-Jul-15488.00-0.100.104.201.3176.2322-Jul-15488.270.270.273.921.2276.3223-Jul-15482.18-6.096.093.641.5669.9424-Jul-15529.4247.2447.246.751.4582.3027-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15529.002.972.975.741.5279.0730-Jul-15536.767.767.765.891.4180.6631-Jul-15536.15-0.610.615.471.3580.1503-Aug-15535.03-1.121.125.081.3479.1504-Aug-15531.90-3.133.134.711.4776.2805-Aug-15537.015.115.114.401.8070.95 | | | | | | | | |
| 16-Jul-15475.4814.2914.294.251.6372.3017-Jul-15483.017.537.534.481.5174.7820-Jul-15488.105.095.094.521.4076.3321-Jul-15488.00-0.100.104.201.3176.2322-Jul-15488.270.270.273.921.2276.3223-Jul-15482.18-6.096.093.641.5669.9424-Jul-15529.4247.2447.246.751.4582.3027-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15529.002.972.975.741.5279.0730-Jul-15536.767.767.765.891.4180.6631-Jul-15535.03-1.121.125.081.3479.1504-Aug-15531.90-3.133.134.711.4776.2805-Aug-15537.015.115.114.741.3677.7006-Aug-15529.46-7.557.554.401.8070.95 | | | | 10.00 | 4.38 | | | |
| 17-Jul-15483.017.537.534.481.5174.7820-Jul-15488.105.095.094.521.4076.3321-Jul-15488.00-0.100.104.201.3176.2322-Jul-15488.270.270.273.921.2276.3223-Jul-15482.18-6.096.093.641.5669.9424-Jul-15529.4247.2447.246.751.4582.3027-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15529.002.972.975.741.5279.0730-Jul-15536.767.767.765.891.4180.6631-Jul-15535.03-1.121.125.081.3479.1504-Aug-15531.90-3.133.134.711.4776.2805-Aug-15537.015.115.114.741.3677.7006-Aug-15529.46-7.557.554.401.8070.95 | | | | 14.20 | 4.50 | | | |
| 20-Jul-15488.105.095.094.521.4076.3321-Jul-15488.00-0.100.104.201.3176.2322-Jul-15488.270.270.273.921.2276.3223-Jul-15482.18-6.096.093.641.5669.9424-Jul-15529.4247.2447.246.751.4582.3027-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15526.03-5.385.385.961.6478.4429-Jul-15526.03-5.385.385.961.6478.4429-Jul-15526.03-5.385.385.961.6478.4429-Jul-15536.767.767.765.891.4180.6631-Jul-15536.15-0.610.615.471.3580.1503-Aug-15535.03-1.121.125.081.3479.1504-Aug-15531.90-3.133.134.711.4776.2805-Aug-15537.015.115.114.741.3677.7006-Aug-15529.46-7.557.554.401.8070.95 | | | | | | | | |
| 21-Jul-15488.00-0.100.104.201.3176.2322-Jul-15488.270.270.273.921.2276.3223-Jul-15482.18-6.096.093.641.5669.9424-Jul-15529.4247.2447.246.751.4582.3027-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15529.002.972.975.741.5279.0730-Jul-15536.767.767.765.891.4180.6631-Jul-15535.03-1.121.125.081.3479.1503-Aug-15531.90-3.133.134.711.4776.2805-Aug-15537.015.115.114.741.3677.7006-Aug-15529.46-7.557.554.401.8070.95 | | | | | | | | |
| 22-Jul-15488.270.270.273.921.2276.3223-Jul-15482.18-6.096.093.641.5669.9424-Jul-15529.4247.2447.246.751.4582.3027-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15529.002.972.975.741.5279.0730-Jul-15536.767.767.765.891.4180.6631-Jul-15535.03-1.121.125.081.3479.1503-Aug-15535.03-1.121.125.081.3479.1504-Aug-15537.015.115.114.741.3677.7006-Aug-15529.46-7.557.554.401.8070.95 | | | | 5.05 | 0.10 | | | |
| 23-Jul-15 482.18 -6.09 6.09 3.64 1.56 69.94 24-Jul-15 529.42 47.24 47.24 6.75 1.45 82.30 27-Jul-15 531.41 1.99 1.99 6.41 1.35 82.62 28-Jul-15 526.03 -5.38 5.38 5.96 1.64 78.44 29-Jul-15 529.00 2.97 2.97 5.74 1.52 79.07 30-Jul-15 536.76 7.76 7.76 5.89 1.41 80.66 31-Jul-15 536.15 -0.61 0.61 5.47 1.35 80.15 03-Aug-15 535.03 -1.12 1.12 5.08 1.34 79.15 04-Aug-15 531.90 -3.13 3.13 4.71 1.47 76.28 05-Aug-15 537.01 5.11 5.11 4.74 1.36 77.70 06-Aug-15 529.46 -7.55 7.55 4.40 1.80 70.95 | | | | 0.27 | 0.10 | | | |
| 24-Jul-15529.4247.2447.246.751.4582.3027-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15529.002.972.975.741.5279.0730-Jul-15536.767.767.765.891.4180.6631-Jul-15536.15-0.610.615.471.3580.1503-Aug-15535.03-1.121.125.081.3479.1504-Aug-15537.015.115.114.741.3677.7006-Aug-15529.46-7.557.554.401.8070.95 | | | | 0.27 | 6.00 | | | |
| 27-Jul-15531.411.991.996.411.3582.6228-Jul-15526.03-5.385.385.961.6478.4429-Jul-15529.002.972.975.741.5279.0730-Jul-15536.767.767.765.891.4180.6631-Jul-15536.15-0.610.615.471.3580.1503-Aug-15535.03-1.121.125.081.3479.1504-Aug-15531.90-3.133.134.711.4776.2805-Aug-15529.46-7.557.554.401.8070.95 | | | | 47.24 | 0.09 | | | |
| 28-Jul-15 526.03 -5.38 5.38 5.96 1.64 78.44 29-Jul-15 529.00 2.97 2.97 5.74 1.52 79.07 30-Jul-15 536.76 7.76 7.76 5.89 1.41 80.66 31-Jul-15 536.15 -0.61 0.61 5.47 1.35 80.15 03-Aug-15 535.03 -1.12 1.12 5.08 1.34 79.15 04-Aug-15 531.90 -3.13 3.13 4.71 1.47 76.28 05-Aug-15 537.01 5.11 5.11 4.74 1.36 77.70 06-Aug-15 529.46 -7.55 7.55 4.40 1.80 70.95 | | | | | | | | |
| 29-Jul-15 529.00 2.97 2.97 5.74 1.52 79.07 30-Jul-15 536.76 7.76 7.76 5.89 1.41 80.66 31-Jul-15 536.15 -0.61 0.61 5.47 1.35 80.15 03-Aug-15 535.03 -1.12 1.12 5.08 1.34 79.15 04-Aug-15 531.90 -3.13 3.13 4.71 1.47 76.28 05-Aug-15 537.01 5.11 5.11 4.74 1.36 77.70 06-Aug-15 529.46 -7.55 7.55 4.40 1.80 70.95 | | | | 1.99 | E 20 | | | |
| 30-Jul-15 536.76 7.76 7.76 5.89 1.41 80.66 31-Jul-15 536.15 -0.61 0.61 5.47 1.35 80.15 03-Aug-15 535.03 -1.12 1.12 5.08 1.34 79.15 04-Aug-15 531.90 -3.13 3.13 4.71 1.47 76.28 05-Aug-15 537.01 5.11 5.11 4.74 1.36 77.70 06-Aug-15 529.46 -7.55 7.55 4.40 1.80 70.95 | | | | 2.07 | 5.58 | | | |
| 31-Jul-15 536.15 -0.61 0.61 5.47 1.35 80.15 03-Aug-15 535.03 -1.12 1.12 5.08 1.34 79.15 04-Aug-15 531.90 -3.13 3.13 4.71 1.47 76.28 05-Aug-15 537.01 5.11 5.11 4.74 1.36 77.70 06-Aug-15 529.46 -7.55 7.55 4.40 1.80 70.95 | | | | | | | | |
| 03-Aug-15 535.03 -1.12 1.12 5.08 1.34 79.15 04-Aug-15 531.90 -3.13 3.13 4.71 1.47 76.28 05-Aug-15 537.01 5.11 5.11 4.74 1.36 77.70 06-Aug-15 529.46 -7.55 7.55 4.40 1.80 70.95 | | | | 1.76 | 0.55 | | | |
| 04-Aug-15 531.90 -3.13 3.13 4.71 1.47 76.28 05-Aug-15 537.01 5.11 5.11 4.74 1.36 77.70 06-Aug-15 529.46 -7.55 7.55 4.40 1.80 70.95 | | | | | | | | |
| 05-Aug-15 537.01 5.11 5.11 4.74 1.36 77.70 06-Aug-15 529.46 -7.55 7.55 4.40 1.80 70.95 | | | | | | | | |
| 06-Aug-15 529.46 -7.55 7.55 4.40 1.80 70.95 | | | | | 3.13 | | | |
| | | | | 5.11 | | | | |
| 07-Aug-15 522.62 -6.84 6.84 4.09 2.16 65.40 | | | | | | | | |
| | 07-Aug-15 | 522.62 | -6.84 | | 6.84 | 4.09 | 2.16 | 65.40 |

| 11-Aug-15 527.46 3.46 3.46 3.86 1.86 6 12-Aug-15 525.91 -1.55 1.55 3.59 1.84 6 13-Aug-15 529.66 3.75 3.75 3.60 1.71 6 14-Aug-15 531.52 1.86 1.86 3.48 1.59 6 | 5.98 7.45 5.07 7.78 |
|--|------------------------------|
| 12-Aug-15 525.91 -1.55 1.55 3.59 1.84 60 13-Aug-15 529.66 3.75 3.75 3.60 1.71 60 14-Aug-15 531.52 1.86 1.86 3.48 1.59 60 | 5.07 |
| 13-Aug-15 529.66 3.75 3.75 3.60 1.71 6 14-Aug-15 531.52 1.86 1.86 3.48 1.59 6 | |
| 14-Aug-15 531.52 1.86 1.86 3.48 1.59 6 | 7.78 |
| | |
| 17-Aug-15 535.22 3.70 3.70 3.49 1.47 7 | 3.63 |
| | 0.30 |
| 18-Aug-15 535.02 -0.20 0.20 3.24 1.38 7 | 0.08 |
| 19-Aug-15 532.92 -2.10 2.10 3.01 1.44 6 | 7.72 |
| 20-Aug-15 515.78 -17.14 17.14 2.80 2.56 52 | 2.23 |
| 21-Aug-15 494.47 -21.31 21.31 2.60 3.90 31 | 9.98 |
| 24-Aug-15 463.37 -31.10 31.10 2.41 5.84 2 | 9.22 |
| 25-Aug-15 466.37 3.00 3.00 2.45 5.42 3 | 1.14 |
| 26-Aug-15 500.77 34.40 34.40 4.73 5.04 4 | 8.46 |
| 27-Aug-15 518.37 17.60 17.60 5.65 4.68 54 | 4.73 |
| 28-Aug-15 518.01 -0.36 0.36 5.25 4.37 54 | 4.59 |
| 31-Aug-15 512.89 -5.12 5.12 4.87 4.42 55 | 2.44 |
| 01-Sep-15 496.54 -16.35 16.35 4.53 5.27 4 | 5.19 |
| 02-Sep-15 510.55 14.01 4.20 4.90 4 | 5.19 |
| 03-Sep-15 504.72 -5.83 5.83 3.90 4.96 4 | 4.02 |
| 04-Sep-15 499.00 -5.72 5.72 3.62 5.02 4 | 1.94 |
| 08-Sep-15 517.54 18.54 18.54 4.69 4.66 50 | 0.16 |
| 09-Sep-15 516.89 -0.65 0.65 4.35 4.37 4 | 9.90 |
| 10-Sep-15 522.24 5.35 5.35 4.43 4.06 52 | 2.15 |
| 11-Sep-15 529.44 7.20 7.20 4.62 3.77 5 | 5.09 |
| 14-Sep-15 521.38 -8.06 8.06 4.29 4.08 5 | 1.30 |
| 15-Sep-15 522.37 0.99 0.99 4.06 3.79 5 | 1.74 |
| 16-Sep-15 527.39 5.02 5.02 4.13 3.51 5 | 4.00 |
| 17-Sep-15 538.87 11.48 11.48 4.65 3.26 5 | 8.77 |
| 18-Sep-15 540.26 1.39 1.39 4.42 3.03 5 | 9.32 |
| 21-Sep-15 548.39 8.13 8.13 4.68 2.81 6 | 2.47 |
| 22-Sep-15 538.40 -9.99 9.99 4.35 3.33 5 | 5.66 |
| 23-Sep-15 536.07 -2.33 2.33 4.04 3.26 5. | 5.37 |
| 24-Sep-15 533.75 -2.32 2.32 3.75 3.19 54 | 4.04 |
| 25-Sep-15 524.25 -9.50 9.50 3.48 3.64 4 | 8.89 |
| 28-Sep-15 504.06 -20.19 20.19 3.23 4.82 4 | 0.14 |
| 29-Sep-15 496.07 -7.99 7.99 3.00 5.05 3 | 7.30 |
| 30-Sep-15 511.89 15.82 15.82 3.92 4.69 4 | 5.53 |
| 01-Oct-15 520.72 8.83 8.83 4.27 4.35 4 | 9.51 |
| 02-Oct-15 532.54 11.82 11.82 4.81 4.04 54 | 4.33 |
| 05-Oct-15 543.68 11.14 11.14 5.26 3.75 5 | 8.36 |
| 06-Oct-15 537.48 -6.20 6.20 4.88 3.93 5 | 5.43 |
| 07-Oct-15 541.94 4.46 4.46 4.85 3.65 5 | 7.10 |
| 08-Oct-15 533.16 -8.78 8.78 4.51 4.01 52 | 2.90 |
| 09-Oct-15 539.80 6.64 6.64 4.66 3.73 5 | 5.56 |
| 12-Oct-15 550.19 10.39 10.39 5.07 3.46 5 | 9.43 |
| 13-Oct-15 548.90 -1.29 1.29 4.71 3.31 5 | 8.74 |

| 14-Oct-15 15-Oct-15 16-Oct-15 19-Oct-15 | 544.83 562.44 | -4.07 | | 4.07 | 4.37 | 3.36 | 56.53 |
|--|------------------|--------|-------|-------|------|------|-------|
| 16-Oct-15 | 562.44 | | | | | | |
| | | 17.61 | 17.61 | | 5.32 | 3.12 | 63.01 |
| 19-0ct-15 | 570.76 | 8.32 | 8.32 | | 5.53 | 2.90 | 65.62 |
| 10 000 10 | 573.15 | 2.39 | 2.39 | | 5.31 | 2.69 | 66.36 |
| 20-Oct-15 | 560.88 | -12.27 | | 12.27 | 4.93 | 3.37 | 59.35 |
| 21-Oct-15 | 555.77 | -5.11 | | 5.11 | 4.58 | 3.50 | 56.67 |
| 22-Oct-15 | 563.91 | 8.14 | 8.14 | | 4.83 | 3.25 | 59.79 |
| 23-Oct-15 | 599.03 | 35.12 | 35.12 | | 6.99 | 3.02 | 69.86 |
| 26-Oct-15 | 608.61 | 9.58 | 9.58 | | 7.18 | 2.80 | 71.93 |
| 27-Oct-15 | 611.01 | 2.40 | 2.40 | | 6.84 | 2.60 | 72.44 |
| 28-Oct-15 | 617.10 | 6.09 | 6.09 | | 6.78 | 2.42 | 73.74 |
| 29-Oct-15 | 626.55 | 9.45 | 9.45 | | 6.97 | 2.24 | 75.67 |
| 30-Oct-15 | 625.90 | -0.65 | | 0.65 | 6.48 | 2.13 | 75.26 |
| 02-Nov-15 | 628.35 | 2.45 | 2.45 | | 6.19 | 1.98 | 75.79 |
| 03-Nov-15 | 625.31 | -3.04 | | 3.04 | 5.75 | 2.05 | 73.68 |
| 04-Nov-15 | 640.95 | 15.64 | 15.64 | | 6.45 | 1.91 | 77.20 |
| 05-Nov-15 | 655.65 | 14.70 | 14.70 | | 7.04 | 1.77 | 79.91 |
| 06-Nov-15 | 659.37 | 3.72 | 3.72 | | 6.80 | 1.64 | 80.54 |
| 09-Nov-15 | 655.49 | -3.88 | 5.72 | 3.88 | 6.32 | 1.80 | 77.80 |
| 10-Nov-15 | 659.68 | 4.19 | 4.19 | 0.00 | 6.17 | 1.67 | 78.64 |
| 11-Nov-15 | 673.25 | 13.57 | 13.57 | | 6.70 | 1.56 | 81.15 |
| 12-Nov-15 | 665.60 | -7.65 | 15.57 | 7.65 | 6.22 | 1.99 | 75.75 |
| 13-Nov-15 | 642.35 | -23.25 | | 23.25 | 5.77 | 3.51 | 62.20 |
| 16-Nov-15 | 647.81 | 5.46 | 5.46 | 20.20 | 5.75 | 3.26 | 63.83 |
| 17-Nov-15 | 643.30 | -4.51 | 5.40 | 4.51 | 5.34 | 3.35 | 61.47 |
| 18-Nov-15 | 663.54 | 20.24 | 20.24 | 4.51 | 6.40 | 3.11 | 67.32 |
| 19-Nov-15 | 661.27 | -2.27 | 20.24 | 2.27 | 5.95 | 3.05 | 66.11 |
| 20-Nov-15 | 668.45 | 7.18 | 7.18 | 2.21 | 6.04 | 2.83 | 68.07 |
| | | | | | | 2.63 | |
| 23-Nov-15 | 678.99 671.15 | 10.54 | 10.54 | 7.84 | 6.36 | 3.00 | 70.75 |
| 24-Nov-15 | | -7.84 | 4.10 | 7.04 | 5.90 | | 66.30 |
| 25-Nov-15 | 675.34 | 4.19 | 4.19 | 0.00 | 5.78 | 2.79 | 67.47 |
| 27-Nov-15 | 673.26 | -2.08 | | 2.08 | 5.37 | 2.74 | 66.24 |
| 30-Nov-15 | 664.80 | -8.46 | | 8.46 | 4.98 | 3.14 | 61.31 |
| 01-Dec-15 | 679.06 | 14.26 | 14.26 | | 5.65 | 2.92 | 65.91 |
| 02-Dec-15 | 676.01 | -3.05 | | 3.05 | 5.24 | 2.93 | 64.16 |
| 03-Dec-15 | 666.25 | -9.76 | | 9.76 | 4.87 | 3.42 | 58.76 |
| 04-Dec-15 | 672.64 | 6.39 | 6.39 | | 4.98 | 3.17 | 61.07 |
| 07-Dec-15 | 669.83 | -2.81 | | 2.81 | 4.62 | 3.15 | 59.49 |
| 08-Dec-15 | 677.33 | 7.50 | 7.50 | | 4.83 | 2.92 | 62.29 |
| 09-Dec-15 | 664.79 | -12.54 | | 12.54 | 4.48 | 3.61 | 55.39 |
| 10-Dec-15 | 662.32 | -2.47 | | 2.47 | 4.16 | 3.53 | 54.12 |
| 11-Dec-15 | 640.15 | -22.17 | | 22.17 | 3.87 | 4.86 | 44.30 |
| 14-Dec-15 | 657.91 | 17.76 | 17.76 | | 4.86 | 4.51 | 51.84 |
| 15-Dec-15 | 658.64 | 0.73 | 0.73 | | 4.56 | 4.19 | 52.13 |
| 16-Dec-15 | 675.77 | 17.13 | 17.13 | | 5.46 | 3.89 | 58.39 |
| 17-Dec-15 | 670.65 | -5.12 | | 5.12 | 5.07 | 3.98 | 56.03 |

| - | | | | | | | |
|-----------|--------|--------|-------|-------|------|------|-------|
| 18-Dec-15 | 664.14 | -6.51 | | 6.51 | 4.71 | 4.16 | 53.09 |
| 21-Dec-15 | 664.51 | 0.37 | 0.37 | | 4.40 | 3.86 | 53.24 |
| 22-Dec-15 | 663.15 | -1.36 | | 1.36 | 4.08 | 3.68 | 52.58 |
| 23-Dec-15 | 663.70 | 0.55 | 0.55 | | 3.83 | 3.42 | 52.84 |
| 24-Dec-15 | 662.79 | -0.91 | | 0.91 | 3.56 | 3.24 | 52.33 |
| 28-Dec-15 | 675.20 | 12.41 | 12.41 | | 4.19 | 3.01 | 58.20 |
| 29-Dec-15 | 693.97 | 18.77 | 18.77 | | 5.23 | 2.79 | 65.18 |
| 30-Dec-15 | 689.07 | -4.90 | | 4.90 | 4.86 | 2.95 | 62.26 |
| 31-Dec-15 | 675.89 | -13.18 | | 13.18 | 4.51 | 3.68 | 55.10 |
| 04-Jan-16 | 636.99 | -38.90 | | 38.90 | 4.19 | 6.19 | 40.35 |
| 05-Jan-16 | 633.79 | -3.20 | | 3.20 | 3.89 | 5.98 | 39.42 |
| 06-Jan-16 | 632.65 | -1.14 | | 1.14 | 3.61 | 5.63 | 39.07 |
| 07-Jan-16 | 607.94 | -24.71 | | 24.71 | 3.35 | 7.00 | 32.41 |
| 08-Jan-16 | 607.05 | -0.89 | | 0.89 | 3.11 | 6.56 | 32.19 |
| 11-Jan-16 | 617.74 | 10.69 | 10.69 | | 3.66 | 6.09 | 37.51 |
| 12-Jan-16 | 617.89 | 0.15 | 0.15 | | 3.41 | 5.66 | 37.58 |
| 13-Jan-16 | 581.81 | -36.08 | | 36.08 | 3.16 | 7.83 | 28.77 |
| 14-Jan-16 | 593.00 | 11.19 | 11.19 | | 3.74 | 7.27 | 33.94 |
| 15-Jan-16 | 570.18 | -22.82 | | 22.82 | 3.47 | 8.38 | 29.27 |

* Closing Prices were taken from the website of Nasdaq (in USD)





RSI forms patterns, such as triangles or head and shoulders tops and bottoms. Breakouts from these patterns on the daily chart often precede the price breakout by one or two days - providing the swing trader valuable advance notice. Chart 1 shows Amazon.com, Inc. with a bullish divergence in the first month of financial year (April 2015) showing the stock in overbought zone on 24th April 2015. Then suddenly for a week from 30.04.2015 to 07.05.2015, the stock formed a bear-ish divergence to some extent for saving the stock from overbought zone. After two days the stock again came in normal mode. Then, the stock price moved to new high from mid-July to mid-August 2015 as well as RSI formed a bullish divergence which further leads to crossing of resistance level, showing overbought zones.

But on 20th August 2015, suddenly all the investors start selling the shares of the company and the shares came in oversold zones within two trading days and the scrip gave clear indication of buying as it is expected that prices will definitely increase in the near future. During the above mentioned twodays, the prices of the shares fall by US\$69.55 from US\$532.92 to US\$463.37 per share. The prices fell down suddenly during this period due to the news spread all over about the 'brutal' work treatment in Amazon which became headlines of leading newspapers and news channels viz. CNN Money(6), New York Times(7), BBC News(8,9), Washington Post(10), etc.

The indication of buying of shares as shown by RSI values comes to practical ground when on 26th August 2015, the share price again rose to US\$500.77 per share and US\$518.37 per share on 27th August 2015. The prices of the shares moved to US\$548.39 per share till 21st September 2015 which generated huge profits for the investors who invested on those two trading days near 20th August 2015. During this period, the RSI values formed various bullish and bearish divergences but all trading were in the range of 35 and 65. Then on 23rd of October 2015, the RSI values again showed overbought zones due to high demand of investors over previous days. The stock was in overbought zones till around 1st December 2015 and then the prices moved to normal position. But, now since 7th January 2016, the stock is showing in oversold zones, i.e. the investors are selling its shares in a huge amount. On the last trading day of period concerned i.e. on 15th January 2016, the prices of the shares fell by US\$22.82 per share.

Footnotes

6. http://money.cnn.com/2015/08/17/technology/amazon-ny-times/

7. http://www.nytimes.com/2015/08/16/technology/inside-amazon-wrestling-big-ideas-in-a-bruising-workplace.html?_r=0

- 8. http://www.bbc.com/news/business-33957484
- 9. http://www.bbc.com/news/magazine-33988479

10. https://www.washingtonpost.com/news/the-switch/wp/2015/08/17/is-it-really-that-hard-to-work-at-amazon/

6. Conclusion

The study was done over a period of 290 days with the help of RSI indicator out of which the trading was opened for 194 days, rest of the days were weekends and other holidays on which stock market was closed. From the study, it was analysed that the stock prices of Amazon.com, Inc. over a said period of time was moved from a period low of US\$368.34 on 1st April 2015 to a period high of 696.44 on 29th December 2015 which shows a huge positive change in market capitalisation. It was further concluded that business begins with value creation. It is the purpose of the institution: to create and deliver value in an efficient enough way that it will generate profit after cost because value creation is the starting point for all businesses, successful or not; it's a fundamental concept to understand as proved by the analysis, effect of timely news and data shown.

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Application of Microfinance in Selected Islamic Banks in Malaysia: Challenges and Prospects

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Abstract

This paper aims to investigate the issues and challenges faced by Islamic banks in implementing Microfinance (MF) in selected Islamic banks in Malaysia. An empirical study is endeavoured consisting of semi structured interviews with senior managers and officers from four Islamic banks in order to address the main research questions. Out of the four selected Islamic Banks, only two are currently providing MF. The MF programs in these two banks are mostly restricted to pensioners, army wives, registered companies and companies operating for a minimum of two to three years. The main challenges facing Islamic Banks when dealing with MF can be highlighted in the following points: the default risk, the lack of funds and the unwillingness of shareholders to take MF risk, the high operating cost, the complexity of MF processing, and regulatory restrictions. Other hindrances include the lack of well trained staff capable of efficiently managing MF. This research concludes with a call for Islamic Banks to seriously participate in economic and social development through greater involvement in MF.

Key words: Islamic microfinance; Islamic banks; Microfinance, Malaysia.

1. Introduction

Microfinance (MF) has seen rapid growth over the last three decades as it is fundamentally designed to serve the financing needs of the non-bankable who lack access to financial services. MF is considered an effective method in poverty reduction, income enhancement, health and education improvement (Hassan et al. 2013). According to the Asian Development Bank (ADB), "Microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers, and insurance to poor and lowincome households and their microenterprises" (ADB 2000, 2). It is widely believed that MF is the most effective tool in poverty alleviation (Masyita and Ahmed 2013, Rahman and Dean 2013). The World Bank announced 2005 as the year of microfinance. Moreover, microfinance has been recognised by the United Nations as the key factor for sustainable development, economic growth, and the most efficient tool to alleviate poverty (Saad and Duasa 2010). Within this context, a number of interesting studies highlighted the vast potential of MF and its contribution to economic development and poverty reduction (Khandker 2003, Pitt and Khandker 1998, Rahman, Rafig, and Momen 2011, Riwajanti 2013).

MF and Islamic finance share a number of common principles and elements. MF principles conform to the broader goals of the Islamic financial and economic systems (Abdul Rahman 2007, Dhumale and Sapcanin 1999). Islamic finance and Islamic MF are based on socio-cultural foundations and aim at financial inclusion and risk sharing (Ferro 2005). On the other hand, conventional microfinance does not fulfill the needs of many Muslim clients as they consider the option of conventional microfinance does not fulfill the needs of many Muslim clients as they consider the option of conventional financial products to be incompatible with the Magasid Al-Shariah (main objectives of Islamic law), which aim at preserving the wellbeing of people, namely their faith (din), their lives (nafs), their intellect ('aql), their posterity (nasl) and their wealth (mal) (Chapra 2000). An interesting study conducted by (Rahman and Dean 2013) examined the challenges faced by Islamic microfinance institutions (MFIs) and maps out suggestions in overcoming the issues. Among the solutions, they suggested that banks should engage more in MF and diversify their portfolio. In line with this contention, (Dusuki 2008) emphasises the need for greater involvement of Islamic Banks in MF in order to meet the financing needs of the economically marginalised in the society. He further argues that after almost three decades of continuous growth, it is time for Islamic Banks to take their role in economic and social development rather than focusing solely on profit maximization. In this regard, he suggests the establishment of a Special Purpose Vehicle (SPV) as one alternative to channel funds to the poor. This SPV can be funded by a number of charitable and benevolent techniques such as Qard Al-Hasan, Zakat or most recently cash waqf endowment. In line with that, (Lahsasna 2010) analysed and evaluated the role of cash wagf as a new financial model in the Islamic financial system. He argued that the cash waqf model can be used to develop and enhance the financial services for micro and medium sized enterprises (MMEs). He suggests that cash waqf is considered an effective tool for fund mobilization and of extraordinary significance for financing micro and medium sized enterprises (MMEs).

In spite of the academic interest in the involvement of Islamic Banks in development programs including MF schemes, there remains little research dedicated to specific issues such as the implementation of MF in Islamic Banks (IBs) particularly in Malaysia. In other words, there is a significant lacuna in the linkage between the theoretical and practical aspects of MF in Islamic Banks. As such, this research seeks to investigate the perspectives of senior managers and officers on the issues and challenges faced by Islamic Banks in implementing MF in Malaysia..

2. Literature Review

Riwajanti (2013, 269) stated that "Islamic Microfinance should be considered contributing to poverty alleviation, financial development, and also financial inclusion because it offers unique characteristics with rich of values and human oriented". Among the earliest who wrote about Islamic microfinance is Ahmed (2002) in his paper "Financing Microenterprises: An Analytical Study of Islamic microfinance institutions" in which he provides the theoretical basis, operational framework, and empirical support for the establishment of Islamic MFIs. He conducted a survey on three Islamic MFIs in Bangladesh to determine the main challenges, and compared between conventional and Islamic institutions which differ in both principle and practice. Ahmed (2002) found that Islamic MFIs are faced with three main challenges which are dilution in the application of Islamic modes of financing, lack of funds, and lack of proper training for Islamic MF officials. Unfortunately, his findings cannot be generalised as they focused solely on Bangladeshi Islamic institutions. Another excellent comprehensive work on Islamic MF was conducted by Obaidullah (2008) who examined the landscape and challenges confronting Islamic MF at three levels, the micro level, the meso level and the macro level. Their study suggests strategic initiatives include a move towards collective resolution of Shariah issues, increase bank participation in microfinance, provision of education and training, technical assistance through awqaf and zakah funds, and development of an enabling regulatory and policy environment. Besides that, Rahman and Dean (2013) highlighted the challenges faced by the Islamic MFIs from which they suggested to overcome the barriers faced by MFIs. Rahman and Dean (2013) noted that there are internal and external practices that can determine the effectiveness and success of MFIs. They stated that low market penetration, sustainability of MFIs and high administrative costs are among the challenges faced by MFIs. As such, they suggested solutions such as increasing bank participation in MF and diversifying their portfolio, providing education and training for staff, developing other models that promote partnership based financial contracts that are applicable to Islamic MFIs and the development of an enabling regulatory and policy environment. In spite of the growing academic interest in the issues and challenges of Islamic MF development, there remains limited research dedicated to specific issues in this field such as the engagement of Islamic Banks in MF particularly in Malaysia. The call for more serious involvement of Islamic Banks in development programs including microfinance schemes are found in few studies (Abdul Rahman 2007, Dusuki 2008, Rahman and Dean 2013). For instance, Dusuki (2008) emphasizes the need for involvement of Islamic Banks in MF in order to meet the bottom line of the society.

Abdul Rahman (2007) argues that there is a nexus between MF and Islamic banking as many elements of MF are included in the broad objectives of Islamic banking. He calls for the integration of Islamic MF as part of Islamic banking. Abdul Rahman (2007) stated that the main concern of Islamic Banks to introduce MF concerns securities and collateral which, in most cases, are not available to low-income customers. However, the group-lending model proposed by Grameen seems to offer an alternative to the problem of collateral, whereby the group model creates a system of enforcement between members known as "social collateral" which ensures a low rate of default (Hailey 2009). Moreover, Rahman and Dean (2013) further detailed that this group-based lending methodology replaces physical collateral with social collateral, aimed to minimise the credit risk. They add that this methodology which is promoted by the Grameen Bank model, has been successful in solving the problem of credit risk by forming a group and weekly payment. However, the issues of moral hazard and economic viability have not successfully been resolved (Rahman and Dean 2013).

Abdul Rahman (2007) stated that MF is the missing element in Islamic banking despite the similarities between the two sectors. He calls for utilising the Islamic contract such as mudarabah, musharakah, ijarah and murabahah as potential alternatives to current interest-based MF especially for Muslim clients. Additionally, he proposes that the wakalah contract practiced by takaful companies is a real potential alternative structure

for Islamic Banks to offer Islamic MF instruments. In line with this contention, Obaidullah (2008) called for a "Review of Central Bank policies in Muslim countries policies to encourage banks to engage in microfinance". Moreover, Hassan et al. (2013) proposed a model to integrate MF into Islamic Banks in Malaysia. Despite the growing demand for Islamic Banks to offer MF, many institutions are reluctant to adopt it because of the perceived high risks. Theoretically, banks refrain from MF mainly due to high risks and costs, information asymmetry, adverse selection, and moral hazard (Hassan et al. 2013). However, the default risk, which is the biggest concern for all financial institutions, both Islamic and conventional, can be managed. According to Morduch (1999), the repayment of MF loans in almost all cases is over 95% (p. 1572). Mokhtar, Nartea, and Gan (2012) argued that Amanah Ikhtiar Malaysia (AIM) has recorded a 98.98% loan repayment performance. This high rate of repayment strongly indicates that the credit risk can be overcome and should not deter Islamic Banks from engaging in MF.

3. Methodology

This study uses the qualitative method to investigate the views of senior managers and officers on the issues and challenges faced by Islamic Banks in implementing MF in Malaysia. This method is usually conducted when a problem or an issue needs exploring, variables need measuring, silent voices need to be heard and a complex and detailed understanding of an issue is required (Creswell 2007). Moreover, Creswell (1994) mentioned that gualitative researchers are interested in meaning, typically rich details and insights into participants' experiences and their structures of the world. On this basis, the researchers addressed a number of Islamic Banks in Malaysia of which four of them agreed to cooperate. The identities of the banks were kept confidential by assigning pseudonyms of B1 for Bank 1, B2 for Bank 2, and so on. Respondents were assigned by their respective banks as specialised and experienced enough to discuss MF with the researcher. The respondents have served as the Head of Department, SMEs managers and product managers.

This research employs purposive sampling. According to Babbie and Mouton (1998), sampling in qualitative studies is always purposeful and directed at certain inclusive criteria, rather than at random. Neuman (1997) argued that purposeful sampling is appropriate if the researcher wants to develop a deeper understanding of phenomena. Marshall (1996) noted that a purposeful sample is the most common sampling technique that leads to choosing the most productive sample to best answer the research questions. Besides that, it is important to note that this study did not intend to focus solely on Islamic Banks that already have MF products, but sought to include banks with no MF products in order to explore the reasons preventing their involvement in MF.

Semi structured interviews were used with open ended questions to allow the participants to respond with greater depth (Seidman 1998). This kind of interview is best suited for small samples and is useful for studying specific situations to provide reliable and comparable qualitative data (Laforest 2009). Cohen and Crabtree (2006) mentioned that many researchers prefer to use semi-structured interviews. This is because within each topic the interviewer is free to conduct the conversation as he thinks fit, to offer better explanations, ask for clarification if the answer is not clear, and allow the interviewer to express their questions in their own terms and style of conversation. Therefore, the objective of the semi-structured interview is to allow new questions to be raised during the interview as a result of what the interviewee says, while ensuring you get indepth information on what you are researching (Cohen and Crabtree 2006).

The interviews were conducted in English and in the work place of the sampled managers. Interview times ranged from approximately 25 minutes to an hour. Participants were informed that the interviews would be held to confidentiality and utter discretion, and would furthermore be recorded to allow for transcription at a later time, and achieve general information allowing the data to be read. The audio recordings were listened to following the interviews. Each interview was transcribed verbatim. This technique is applied to make sense of the text data, such as text or image segment (Creswell 2008). Following this, a coding procedure was developed to categorize respondents' comments and organize the information for analysis along with extensive field notes and reflections after the interviews. The criteria of Guba and Lincoln (1985) was followed, who conceptualized a new dimension to determine the authenticity of a qualitative paradigm referred to as the trustworthiness criteria. Guba and Lincoln (1985) developed the following techniques: Credibility, Transferability, Dependability, and Confirmability. All aspects of these criteria were applied in this study, whereby a thick description of the context, and the activities involved at each stage of this research were explained in detail. Furthermore, a draft of this study was discussed with some experts in the field of research in order to ensure reliability and verify the interpretation.

4. Results and Discussion

Data for this study was composed of a total of five individual interviews from four Islamic Banks. The interpretation of the findings is organised along the lines of the study's research questions and sub-questions, the themes that emerged through the participants' responses and the applicability of several theories presented in the literature review. The transcription yielded six major themes, which were the criteria and products offered by Islamic Banks, the default risk, fund and shareholders willingness to involve in MF, operating cost, process Flow and regulatory restrictions.

4.1. Criteria and products offered by Islamic Banks

The study found that only two banks are currently providing MF namely B1 and B2. In contrast, B3 has recently paused from providing MF and B4 did not offer MF services. As stated in Table 1, both B1 and B2 offer MF for small businesses and enterprises. Moreover, both banks provide funds for their customers with a maximum amount of RM 50000 and a minimum amount that varies from RM 3000 to 5000 with a fixed period from one to seven years for B1 and B2 and from one to five years for B3. Furthermore, there is a big difference in profit rate between B1 and B2 whereby B1 charges only 3.6% p.a and B2 charges 8.3% p.a, whereas the profit rate for B3 was 2.5 % p.a. This difference may be due to the constraint conditions made by B1 whereby its product is exclusively for the government pensioners and army wives with a supposed relatively stable income to pay back the funds. Thus, B1 is more secured from the default risk and is therefore highly involved in MF. On the other hand, the product offered by B2 is open to all Malaysians who meet the criteria stated in the table below. The low profit rate provided by B1 compared to B2 may relate to the category of customers and to the initial cost of funds. Besides, Table 1 shows that B2 provides more Shariah compliant contracts which are Bay' bithaman Ajil (deferred sale) Musharakah and Murabahah, whereas B1 provides only one contract which is Tawarrug. As far as B3 and B4 are concerned, B3 has recently ceased providing MF to review the MF portfolio while B4 does not offer MF. Table (1) below provides a brief summary of the criteria and products offered by each Islamic Bank.

4.2. Default Risk

The current study found that all participants reported that the biggest challenge facing Islamic Banks in implementing MF is the high risk involved. There was a unanimous agreement throughout the interviews that this kind of financing should be provided by the government or other related financial institutions such as the Zakat institution and NGOs. Hence, the findings of the current study are consistent with those of Lahsasna (2010) and Obaidullah (2008) who suggest that providing technical assistance such as awqaf and zakah funds are considered significant and can be used to enhance the financial services for micro and medium sized enterprises (MMEs). In addition, all participants reported that all banks, Islamic or conventional, are very cautious in providing MF because of the high rate of default risk. In other words, most MF clients are not able to provide the necessary financial coverage or collat-

Table 1: Criteria and products offered by Islamic Banks

eral and many of them do not have any credit record. Some of the respondents commented:

...Actually we give to the people we know they are going to pay because we check first before we finance ... so we have to know the Central Credit Reference Information System (CCRIS) and how much debt they have...

... Normally when they approach us we look at their CCRIS which is a nationwide credit system checking for the customer credit ...

...Actually this kind of financing should be provided by government related financial institutions like baytalmal (the treasury) and baytalzakat...

Furthermore, participants reported that being an intermediary, Islamic Banks cannot risk the investors' money. To explain, MF means providing funds with no collateral and no securities and as such, Islamic Banks provide such financing with high profit rates. Consequently, the customers who are supposed to be assisted by these Islamic Banks end up paying more money and are subject to greater financial pressure. As a result, the likelihood of default is very high. One respondent had the following to say:

... Because sometimes the MF customers might be in situations where they cannot really save the money... we gave, they cannot pay...

Besides that, respondents revealed that another challenge that might face the Islamic Banks when they provide MF products is the low collection rate from the customers. This is strongly portrayed in the following comment:

| Bank | Availability | Product | Amount | Profit rate | Period | Mode of finance | Eligibility |
|------|-------------------|-------------------|---------------------|----------------|-----------|---|---|
| B1 | Yes | Small business | RM 5-50 thousand | 3.6% p.a | 1-7 years | Tawarruq | Pensioners Army Wives Private Sector Registered company Takaful insurance |
| B 2 | Yes | Small business | RM 3-50 thousand | 8.3% p.a | 1-7 years | Bay'bithman Al-Ajil (deferred sale) Musharakah Murabahah | Malaysian 21-60 Years old Registered Company Operating for 3 years |
| B 3 | Previously yes | Small business | RM 3-50 thousand | 2.5% p.a | 1-5 years | N.A | Malaysian entrepreneur 18- 60 Years old Mostly Registered Company Operating for 2 years |
| B 4 | N.A | N.A | N.A | N.A | N.A | N.A | N.A |

N.A: Not Available

..... You cannot just do business for a year then you close down because there is a collection problem... because if you keep on write off when the customers are not able to pay then in the long term it is not a business strategy but it is more like a social responsibility...

4.3. Funds and Shareholders

In response to this question, participants discuss their views and perceptions on the capital that Islamic Banks receive from their investors and the saving of their customers. Participants mentioned that it is very risky for Islamic Banks to provide MF from the investors' capital and savings of the customers because of the high default risk involved in MF. As such, the main concern of Islamic Banks is how to attain the objective of their investors and customers by increasing their profit and return. Besides, participants revealed that most saving customers and investors are not willing to take the risk. Rather, they are very sensitive to the rate of return. This is strongly portrayed in the following comments:

...The bulk of our capital comes from our investors so when we take the money from our investors we cannot simply take all the money and give it to poor people and tolerate them and tell the investors you have lost....

...Your shareholders must be willing to take risk... you need the surplus money investors want to invest ...

.... the lower you pay to investors, they will shift to other banks, Islamic or conventional, so they are very sensitive...

4.4. Operating Costs and Human Capital

Another major problem for Islamic Banks in practicing MF is the high operating costs. Participants stated that when banks provide MF, that means they are going to have many customers with a relatively small amount of money. Such a kind of business involves a lot of work such as monitoring and following up with the status of each customer. Therefore, this kind of financing requires well-trained staff who possess different skills and have good experience to run and manage such works. Below are some of the interviewees' comments on this issue:

..When you give one million for example, this may be for five accounts, but in MF, this may be for a few hundred accounts

...we have to make sure we have to monitor... through regular reports between the bank and the Credit Guarantee Corporation (CGC) to make sure the reporting is not bad...

... We are supposed to have a very good set of people who are able to manage the financing, the collection, the customer funding and things like that... it cannot be normal banking financing sitting and making people to come so they have to go and visit their customers you have to be part of them you have to share their problems to provide advisory services...

4.5. Process Flow and Regulatory Restrictions

In response to this question, the study found that most of the participants agreed that customers constantly have problems with the process flow in order to apply and secure funding from Islamic Banks. This is because most Islamic Banks are very cautious to ensure that the customer is capable to pay back the money and because of the high risk associated with MF products. Nevertheless, participants mentioned that when the Credit Guarantee Corporation (CGC) is involved to provide financial coverage to the applicant, it makes the process even slower. As a consequence, the products become less attractive to customers and usually people look for alternative schemes that meet their needs with less complicated procedures. Respondents have the following to say:

.... I think the whole process flow... is very slow and time consuming ... you have to do many things and sometime the CGC needs to enquire to get approval...

...People prefer personal loans because it is faster and you can get more funds without the need for CGC....the procedures of the MF is more complicated while the personal loan is easier...

5. Conclusions

This research found that MF is almost absent in the practices of Islamic Banks. Only two Islamic Banks provide MF products. One provides funds for registered and operating companies and the other provides funds for pensioners or army wives. This means the targeted beneficiaries have stable salaries and relatively secure incomes. From here, it is obvious that none of the Islamic Banks provide MF as practiced by MFIs such as Amanah Ikhtiar and Grameen Bank whereby the poor are provided the funds with neither collateral nor securities. For instance, the Grameen Bank proposed a model that seems to offer an alternative to the problem of collateral, whereby the group model creates a system of enforcement between members known as "social collateral" which ensures a low rate of default and increases the repayment rate, decreases adverse selection and significantly reduces loan cost and minimizes the credit risk (Hailey 2009, Hassan et al. 2013). However, in the case of Islamic Banks, most of the applicants are considered non-bankable and do not have any credit worth due to their low incomes and lack of collateral "physical assets". As a result, Islamic Banks are very cautious to provide MF because granting credit is very risky and the default risk in this case is very high. In addition, investors and saving customers do not want to take the risk. They are mainly concerned with the return rate. Nonetheless, Hassan et al. (2013) proposed a framework for integrating MF in Islamic banking operations that can be viable using any of the four Shariah compliant products such as Ijarah financing, Musharakah mutanagisah (diminishing partnership), Murabahah financing and Mudarabah contract. This model could be used by Islamic banks to reduce the issue of default risk.

Besides that, this study found that the process flow, regulatory restrictions, operating cost, and the human capital are other main challenges faced by Islamic Banks in providing MF. Consequently, this finding is consistent with those of Hassan et al.

(2013) and Rahman and Dean (2013) who suggested that the government, especially the central bank and market regulators, should facilitate and support the engagement of Islamic Banks in MF. Moreover, Islamic Banks should have dedicated and competent managers and staff, provide training for them, and keep the minimum and reasonable ratio of staff to serve their clients.

To sum up, currently MF in Islamic Banks is almost non-existent. Despite all the mentioned challenges, Islamic Banks are called upon to better participate in economic and social development through greater involvement in MF. Islamic Banks should redirect their priorities from solely moneymaking and profit maximising to provide corporate social responsibility to promote peace and stability among members of the society (Hassan et al. 2013).

The findings of this research represent a general outlook of the main challenges of implementing MF in Islamic Banks in Malaysia and provide a better understanding to improve the involvement of Islamic Banks in MF. Thus, the results of this study are expected to assist Islamic Banks in Malaysia in making decisions regarding the development of MF schemes. Future research should be carried out to map out more suggestions in overcoming the issues and challenges.

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Abstract

This research critically analyses British Energy (BE) by attempting to answer four tasks. First, it identifies and assesses the major financial development at BE over the past twelve years, 1998 to 2010, and to what extent this has been influenced by general economic trends, sector specific trends, political and internal organization factors. Second, it classifies the major stakeholders involved with BE and assesses their situation throughout the past twelve years. It identifies and reviews areas where conflict of interest exists. Third, it identifies the regulatory bodies involved in these events and critically assesses the strengths and weaknesses of their respective performances. Finally, it documents lessons learnt from the events at BE with respect to financing and regulations of major organizations in the public/private domain. It also sheds light on implications for other organizations.

Key words: British Energy, Financial Development, Growth, External Forces, Internal Forces, Stakeholders, Conflict of Interest, Regulatory Bodies.

1. Background of British Energy (BE)

In late 1995, British Energy was set up to own and operate the eight most modern nuclear power stations in the UK. It was the holding company of British Energy Generation Ltd and British Energy Generation (UK) Ltd which together owned and operated seven Advanced Gas-Cooled Reactor (AGR) stations and one Pressurised Water Reactor (PWR) station. It was privatized in 1996. Since then it has diversified into other businesses including non-nuclear generations, the supply of gas and electricity and the generation and sale of electricity overseas (Competition-Commission, 2009). In 1999, its stocks were floating on top of the stock exchange as it disbursed £450m dividend. However, it also faced a severe financial crisis in 2002 due to many reasons including low energy prices and poor management but the government rescued it and restructured it financially. Later in 2008 it was acquired by EDF of France for £12.5bn (Crooks et al, 2008).

1.1. Investment and Divestment in Humber Power:

In response to the government restriction policy regarding constructing new gas-fired power stations, British Energy (BE) undertook diversification strategy. It invested £15m in Humber Power, a gas-fired power plant based in South Humber, in 1997 and got a 12.5 per cent stake in the company along with four other investors (Jane, 1997a; Jane, 1997b; Andrew, 1998a). The bold initiatives taken by BE in terms of investing £15m in its first venture, Humber Power, reducing debt from £700m to £360m, and strengthening net cash flow from £140m to £54m pleased the investors (Jane, 1997a). However, later in 2001 BE sold its interest in the Humber Power for £20m cash due to financial difficulties (Andrew, 2001).

1.2. Joint Venture with AmerGen:

Another strategic decision made by BE was to enter into a 50-50 joint venture, known as AmerGen, with Philadelphia based energy utility 'PECO' to build a national portfolio of nuclear generation assets in the US in September 1997. According to Dickinson, president of PECO, the joint venture would provide excellent strategic and competitive opportunities for both the companies (Simon, 19997a).

AmerGen acquired a nuclear power plant at Three Mile Island for \$100m, paid \$23m in cash and \$77m payable over five years, in 1998 (Andrew, 1998) which according to analysts was a great buy (Orlebar, 1998). Because of little future prospects for BE in the UK and an attractive US electricity market, it invested in Three Mile Island which was notorious for nuclear accidents in 1979 (Andrew, 1998b; Orlebar, 1998). However, BE was required to get approval for the purchase from a number of regulatory bodies including Nuclear Regulatory Commission, Federal Energy Regulatory Commission, Securities and Exchange commission, Pennsylvania Public Utility Commission and New Jersey Board of Public Utilities (Tracy and Andrew, 1998). According to Kranhold (1998) acquiring utilities in the US did not consist of great complications and restrictions but it did in the case of the nuclear industry as it was concerned with national security.

1.3. Joint Venture with Southern Electric:

According to Rob, chairman of BE, BE formed a joint venture with Southern Electric to construct 50 MW non-nuclear power plants in Wales and England in 1997 with further intention of building about 12 such plants costing about 15m each. As a result, the share price of BE rose up by 13p, an increase of 3.5 per cent to 385p, because the company made £4m pre tax profit and realized an exceptional gain of £110m despite the company's expectations to incur losses as it incurred a loss of £53m the previous time (Virginia, 1997).

1.4. Acquisition and Sell off of Swalec:

BE acquired the South Wales Electricity (Swalec), retail energy supplier, from Hyder for £175m in 1999 which had 980,000 electricity and 320,000 gas customers. BE's decision about acquiring the supply business was mainly made because of government's blockage to bid for coal-fired power station of PowerGen and National Power, lower prices of electricity due to fierce competition in the market, and new trading rules and regulations by regulators. As a result, BE share price dropped down by 2.15p to 517p (Andrew, 1999). However, after one year, BE sold it off to Scottish and Southern Energy for £210m in 2000 (Anonymous, 2000) in order to invest those proceeds in North America as BE had two options, that is, either to grow its UK retail supply business which was expensive or to invest somewhere else, according to Peter Hollins, chief executive (Mathew and Andrew, 2000).

1.5. Internal Factors:

According to Taylor (2007), an antagonistic nature of former directors and managers at board level had been found since 1996 until 2001. Furthermore, some of the conflict was rooted in the simmering hostility of English-Scottish divisions at the time of BE's creation in 1996. Similarly, there were two boards that were being operated at BE and thus it was perplexing. However, the growing crisis brought a belated unity under Chairman Robin Jeffrey in 2001.

1.6. Acquisition of Eggborough:

To widen the customer base, BE adopted diversification strategy and acquired 2GW Eggborough coal-fired power station for £640m, based in Yorkshire, from National Power in 2000 to complement its nuclear base load capacity (Anonymous, 2000b; Ringshaw, 2002). According to Ofgem, the UK energy regulator, the acquisition by BE would increase competition further. However, buying it, BE faced no competition, according to the New Energy Trading Agreement (NETA) (Anonymous, 2000b). According to Andrew (2002), BE incurred a pre-tax loss of £493m in 2002 because of the previous management's overpayment for Eggborough and poor long-term power purchase contracts with BNFL. More precisely, BE wrote off £300m for the value of Eggborough because of £209m for the longterm power purchase contracts with BNFL which happened due to a fall in the power price in the UK.

1.7. Joint Venture and Lease Agreement with Ontario Power Generation:

BT formed a 50-50 joint venture, Huron Wind, and entered into 18 years long lease agreement with government-controlled Ontario Power Generation for Bruce nuclear plants for C\$625m plus a yearly rent of C\$50m to C\$150m which made the deal worth a total of C\$3.2bn (Ken, 2000; answers.com, 2009). Furthermore, BE had the choice to extend the contract for a further 25 years. According to Anonymous (2000c) four out of eight Bruce nuclear reactors were working but the plant had the capacity to produce 6.216GW electricity if operated fully.

However, the Ontario Plant was required to accept responsibilities for, including, future liabilities, waste storage and disposal, and decommissioning of the station (Anonymous, 2000c). British Energy sold its 82% stake in Bruce Power of Canada to a consortium led by Cameco Corporation for £309m (UK Business Park, n.d.) because the company was facing severe financial crisis, pressure from government, regulators and competitors and, therefore, was on the brink of bankruptcy (n-base, 2002).

1.8. Partnership with Amec:

In order to build a 600 MW wind farm in the Hebrides Islands of Scotland, BE formed a strategic partnership with Amec in 2001 because of the British government's restrictions on building new nuclear plants and finding alternatives for generating electricity (answers.com, 2009).

1.9. Financial Restructuring:

Department of Trade and Industry (DTI or the Department) provided loan facility of £650 m to BE with a condition to restructure its financial arrangements after the collapse in electricity prices in England and Wales by 30 percent due to new market electricity trading arrangements (NETA) regulations, rising costs of production (Andrew, 2000), temporary shutdown of Torness reactor for five days due to lightening strike that cost BE hundreds of thousands of pounds, and reduced income because of four reactors closure at Torness and

Dungeness in 2002 that in turn adversely affected BE in terms of financial loss, reputation and collapse in share price (NAO, 2006; n-base, 2002). Similarly, BE's nuclear powers were paying higher rates of £14000 per mega watt while gas and coal were paying £9500 per mega watt. Consequently, BE needed £450-500m to meet its bond commitments, reducing costs and improving revenue (n-base, 2002).

In the financial restructure of BE, shareholders were given just 2.5 per cent stake in the business while the remaining was retained by government (as a creditor) and other creditors such as banks, bondholders, and those who had long contracts to sell power to BE. Though shareholders were not happy with 2.5 per cent stake they would have received nothing in the case of bankruptcy. Due to covenants and legally binding agreement of creditors with BE, shareholders had no power to stop the creditors from delisting BE from London Stock Exchange in 2004 (Dennis, 2004; Dickson, 2004).

As per the Department policy, BE was not supposed to be helped financially because the closure of inefficient firms would have helped improve the productivity of UK. But, on the other hand, the unplanned closure of BE would have significant bad consequences for UK in terms of safety, electricity supply and decommissioning costs (NAO, 2006; n-base, 2002). In the course of restructuring, BE returned £16.5m to the Department because restructuring BE cost the Department £29.1m for hiring advisors during September 2002 to January 2005. In 2005, the company's total worth was £787m of which £275m was financed through bond issue during the restructuring. Besides putting other covenants on BE, the Department had the power to convert the equity investments, made by Nuclear Liabilities Fund, into gilts. However, after undergoing the tough processes and procedures, BE share price doubled because of increase in the wholesale electricity prices in January 2005 (NAO, 2006).

1.10. Partnership with Doosan Babcock:

BE signed a seven year long £550m partnership deal with Doosan Babcock in 2007 which will provide a mobile work-force of technical and engineering staff to support its mechanical site services, boiler and ancillary, engineering and technical support and non-destructive examination services for nuclear power generator London (theEngineer, 20090; Anonymous, 2007).

1.11. Acquisition of BE by EDF:

EDF acquired BE for £12.5bn in 2008 but after agreeing to some conditions implied by European Commission, that is, to sell two fossil-fuel power stations and a promise to auction some of the nuclear power stations' output on the open market (Crooks et al, 2008). Similarly, the pension fund Invesco and other minority shareholders were offered improved terms of either cash or a mixture of cash and contingent value rights (CVRs) and EDF raised the initial offer of 765p a share to 774p as well due to their severe concerns before the takeover (Macalister, 2008). Prime Minister Gordon Brown supported the deal as it was bringing many benefits to UK including good value for taxpayer, shareholder, long-term energy security, and low carbon emissions in future. Similarly, according to Sir Adrian the deal would help Britain's energy security as it would no more be prone to international gas and petrol prices (Williams, 2008).

2. The major stakeholder groups involved with British Energy____

The main persons, groups and organizations who either affected or were affected by the activities of BE either directly or indirectly along with some conflicts of interests that occurred between these groups and organizations are given below.

2.1. Shareholders:

In 1998, BE share price became the top performer of the FTSE index when its share rose by 5.5p to 575p from 203p in July 1996 (Andrew and David, 1998). Though dividend was cut by 50 per cent, the investors of BE were pleased with the BE ability to get power plant life extensions which would save BE £150m annually which besides the warning of losses share prices rose by 12.5p to 175p (Andrew, 2000). According to Anonymous (2000), BE invested heavily in generation capacity and maintained disbursing high dividend to shareholders until 2001 in order to give positive signals to the stock market so the share price did not fall down (n-base, 2002). According to Andrew (2002) shareholders were more concerned with the halved dividend they received two years ago and not with whether the company could afford to replace its power stations and meet other liabilities.

To make things worse, the credit rating agencies cut BE's rating to 'junk' grading which meant very risky investment and so it further discouraged investors to buy a stake in BE and put the existing investors at more risk of losing their investment. Consequently the company found itself in trouble and was likely to go bankrupt (n-base, 2002). As a result, shareholders were likely to get nothing whereas bondholders could recoup some of their investment (n-base, 2002), therefore, shareholders challenged the rescue deal under which investors would be left owing just 2.5 per cent of the company with warrants to acquire another 5 per cent (Eaglesham and Taylor, 2004).

2.2. Environment and Public:

There were issues concerned with the sales of Three Mile Island as it affected more than 2000 people who claimed to be harmed by the radiation from the plant (Simon, 1997b). Environment group SERA, which is affiliated with the Labour Party and has over 100 MPS in its membership, advocated that BE should be allowed to go into liquidation because some of BE's power generation sites were potentially damaging the environment. Environmental groups and Energy Probe, advocacy group, criticised that when BE's Ontario Power's deals would expire then who would be responsible for future liabilities, waste disposal and decommissioning of station as that would cost millions of dollars (Anonymous, 2000c).

2.3. Government:

Government had a stake in BE due to its nuclear power stations as it was concerned with national security (Kranhold, 1998). Similarly, Government wanted to create more competition in the wholesale electricity market in order to put downward pressure on the power prices but on the other hand BE would suffer from this decision as nuclear power stations were inflexible and assuming high fixed costs in terms of turning on and off (Anonymous, 2001). However, Government saved BE from going bankrupt as it would have severe consequences for UK in terms of decommissioning the nuclear power plants, safety, and enormous loss to share holders (n-base, 2002).

2.4. Tax payers:

According to National Audit Office (NAO), taxpayers could have gained more from the privatization of BE if government had sold the shares in stages (Andrew and David, 998). Tax payers had a stake in the company as it assumed £2bn of nuclear liabilities in the financial restructure of the company (Jameson, 2002). Similarly, Forman (2006) argues that government decision to bail out BE in 2002 left the taxpayers £5.1bn of liabilities. Whereas, according to NAO, though BE had funds in surplus, the volatility of the market left the government and taxpayers exposed to potential decommissioning liabilities (Bream, 2006).

2.5. Creditors:

2.5.1. Lending Organizations:

Barclays, one of the major creditors, had a stake in BE as it had advanced funds to BE for acquiring Eggborough power station from PowerGen. As BE was facing financial crisis in 2002 that could put the lending organizations money to potential risk of loss in case of bankruptcy, therefore, it got entitlement to a share in the assets of the company as BE was on the brink of bankruptcy. This measure put the bondholders and shareholders at more risk of recouping little in case of BE's bankruptcy (Timeonline, 2002).

2.5.2. Bondholders:

Bondholders were kept more prone to loss when BE invested £490 million loan in a coal-fired power station when it was on the brink of bankruptcy (Timeonline, 2002). In the financial restructure of BE in 2002, a group of bondholders had financial interests in Eggborough, that is, they could buy this in 2010. So it is likely to be continued when EDF acquires BE (Anonymous, 2008). Investors criticized BE for its overpaying for Eggborough power generating station, as it were to write £300m off the value of the Eggborough in 2002, as this put investors at more risk of losing their investment (Ringshaw, 2002).

2.5.3. Government:

It advanced £650m to BE and financially restructured the company by giving control of the company to bondholders and creditors. However, in return for the loan facility BE was required to pay into Nuclear Liabilities Fund which would be used for decommissioning the aged power stations along

with giving 65 per cent of its available cash each year towards the liabilities, which were estimated to be £5.2 billion (Jameson, 2002).

2.6. Competitors:

Competitors of BE who were producing electricity by using coal, gas, oil, as well as heavy users of power from industry made a strong representation to Government against any special treatment of BE in its financial trouble which could impact them in any way (n-base, 2002).

2.7. Customers:

According to McCarthy, due to increase in supply of power there was fierce competition among the power producers and it was giving more value to customers by offering low prices. As BE was selling most of its energy in the wholesale market, therefore, it was not profiting that much, rather at one time was losing money due to higher production cost and low wholesale electricity price. On the other hand, the wholesale dealers were benefiting as they were buying cheap electricity from BE and others and were selling at relatively higher prices to consumers since 2000 to 2004. Customers were benefiting from the tough competition and, therefore, were switching their sources of supply as 14 million customers had already switched and 167,000 had been switching each week (EnergyOnline, 2001). However, when the wholesale prices went up BE started significant earning due to its nuclear generation capability.

2.8. Employees:

Employees had a stake in BE as they had been working and receiving rewards from the company. To cut cost, BE took the downsizing strategy and thus cut around 1500 employees with further intention to keep cutting human resources and save £20m a year (Macalister, 1999). Due to downsizing strategy, it had some problems with operating the plants fully which were criticized by NII as well (Macalister, 1999).

2.9. Regulators:

Different regulatory bodies were concerned with BE, for example, NII with safety and security, Ofgem with benefiting customers by bringing competition in the energy markets, and FSA with financial matters of the business among others. Regulators are discussed in detail in Task 4.

2.10. Conflicts of Interests:

2.10.1. Conflict of Interest between Government and BE's Competitors:

Another conflict of interest occurred between government and BE's competitors as the non-nuclear power generating companies, Drax coal-fired power station, AES, and other major generating companies in the UK and even the Belgium government, raised their voice and threatened the UK government over its £650m loan facility which they considered to be against the competition regulations (Pressurewire, 2001).

2.10.2. Conflict of Interest between Government and Regulators:

Government and regulators had a row over the BE's inability to make money. The government wanted BE to survive due to many reasons, therefore, wanted Ofgem to bring changes to Neta but Ofgem did not support bringing any changes because by increasing the prices of electricity the regulator role, as bringing competition into the electricity market, would be lost. However, Ofgem suggested that if government wanted to support BE due to environmental reasons, then it should take specific measures which target those sectors only rather than bringing in changes in Neta (Moore, 2002).

2.10.3. Conflict of Interest between Shareholders and Creditors:

In the financial restructuring of BE, the company control was given to bondholders and creditors by leaving existing shareholders just 2.5 per cent of the company. Shareholders were demanding more rights and improvement in the rescue package but due to creditors covenants and binding agreements with BE they did not hold much water as shareholders would have got nothing in the case of bankruptcy (DICKSON, 2004; Dennis, 2004).

2.10.4. Conflict of Interest between Environmental Groups and Ministers:

Scottish Wildlife Trust (SWT) and the Royal Society for the Protection of Birds (RSPB) warned ministers to take legal action if they give go-head to the Lewis Windpower, a joint venture by BE and Amec, scheme as that would have negative impacts causing erosion, disturbance and habitat loss and would be damaging Scotland's natural heritage. On the other hand, developers advocated that scheme was worth pursuing as it would have created more than 550 jobs, help reduce carbon dioxide emissions, and generate massive revenue for the community (Macaskill and Lamarra, 2004).

3. The regulatory bodies involved in these events

A number of regulatory bodies were involved in the activities of BE both nationally and internationally, for instance, NII, Ofgem, DTI, and Nuclear Regulation Commission, Federal Energy Regulatory Commission, Securities and Exchange Commission, Pennysylvania Public Utility Commission and New Board of Public Utilities. Some of the most important regulatory bodies are discussed as follows.

3.1. Nuclear Installation Inspectorate (NII) and Health and Safety Executive (HSE):

NII, a branch of HSE, reviewed the strategy of BE for decommissioning their seven nuclear licensed sites by inspecting the company's technical and financial aspects along with BE's plans as to whether those were comprehensive and appropriate. Though, NII gave a satisfactory signal to BE, the final decision would be based on the efficient and intriguing plan of BE (Pressurewire, 2001). Unlike US nuclear regulators, NII did not provide a book defining how the plant should be run rather it examined the nuclear operators' ability as to whether they had sufficient knowledge about how the nuclear operators were run. If NII had been satisfied by nuclear operators then they would get a license for operation (Simon and David, 1996). After thorough reviews and inspections were made by BE and NII, the lives of Hinkley Point B in Bristol and Hunterston B in Ayshire had been extended by five years to 2001. However, NII had the authority to shut down at any time any of the nuclear reactors which it believed unsafe (Dorsey, 1998).

NII was satisfied with BE, therefore, its eight plants were confirmed to be operating but the Sizewell B plant was suggested to employee sufficient staff to deal with severe accidents and to maintain a higher standard of safety. According to Laurence Williams, chief inspector of NII, safety was of paramount importance and therefore new safety trends and safety standards should have been anticipated for future as the loss associated with nuclear power plants could not be afforded when it would be too late (Macalister, 1999). To take precautionary measures against the potential risks due to planned fire-fighter's strike, nuclear power stations were told to close all non-essential work. Furthermore, NII showed more interest in increased fire watches and the postponement of hazardous activities such as chemical deliveries (Marianne, 2002). BE's Hunterston B and Hinkley Point B nuclear plants were shut due to the cracks in their boiler pipes in August 2006. However, NII was expected to allow it to restart operations on condition it provide sufficient data about the state of the reactors (Shelley, 2007).

3.2. Office of Gas and Electricity Markets (Ofgem) and New Electricity Trading Arrangements (NETA):

Energy regulator, Ofgem, had the power to impose fines up to £100,00 and the removing of the license of any generator found to be exploiting its market position under the new legislation in case of violating the 'good behaviour' clause associated with license of operation. However, generators in response to the new legislation could consider approaching the Office of Fair Trade (OFT) and Competition Commission (CC) against the unfair treatment of the power station (Andrew, 1999; Matthew, 2000). According to Matthew (2000), NETA of Ofgem would minimize the opportunities for future price-fixing and tackle market abuse of any kind including license modifications. According to Mr Wilson, one of the factors of BE's collapse was the falling prices of electricity due to NETA. However, the regulator blamed previous NETA policies that stimulated over-investment in gas-fired power stations in 1990s because of higher prices (Taylor, 2003).

Mr Mogg, chairman of NETA, encouraged the differential charging to reflect the true cost of transporting electricity and gas to individual customers (Eaglesham, Hargreaves and Taylor, 2003). Edward Leigh, chairman of the Public Accounts Committee, criticised NETA because consumers did not benefit much from its 40 per cent plummeted wholesale prices. Similarly, Ofgem was criticised for its high cost of introducing NETA as they believed that wholesale prices would have fallen due to increased competition in the market (Taylor, 2003). The regulator also acknowledged that it couldn't completely shield customers from soaring oil, gas and coal prices that have driven increases in consumers' bills (Williams and Herron, 2008).

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3.3. Department of Trade and Industry (DTI):

Department of Trade and Industry (DTI) and the Committee of Public Accounts raised the significant issue of the taxpayers' exposure to BE's enormous nuclear liabilities because it forecasted wrongly the plummet in electricity prices to be 10 to 15 per cent instead of 40 per cent (Taylor, 2004a; Eaglesham and Taylor, 2004). Therefore, it recommended the DTI to closely monitor the company's ability to meet its liabilities without putting taxpayers' money at risk (Eaglesham and Taylor, 2004).

According to auditor Sir John Bourn, DTI intervened in BE when it could not meet its obligations but it should have made sure that BE started providing good return on investment as well. DTI intervention in BE was advocated by a spokesman for the industry as it was concerned with taxpayers money which was to be safeguarded; that in turn hinged upon BE's financial performance [Forman, 2006]. Though DTI identified, monitored and evaluated the risks to some extent it failed to manage those risks (Taylor, 2004a) due to the fact that BE was a private company and competitors of BE would have raised their concerns about fair market and competition (Taylor, 2004b).

3.4. Competition Commission (CC):

Though six out of eight British generators agreed to the 'good behaviour' license condition BE and AES of America did not accept them and approached the Competition Commission. Competition Commission argued that the clause was unnecessary to protect the public interest. As a result, Callum McCarthy removed the 'good behaviour' license condition (Barker, 2000; Matthew, 2000).

Removing the clause cost BE and AES £163,981 and £75,955 respectively because of an enquiry conducted by Competition Commission into new market abuse licence conditions imposed by Ofgem (Barker, 2002). Similarly, European Commission probed the government for its possible intention to rescue BE illegally by providing financial aid and made the government take the responsibility of decommissioning liabilities under the new plan (Taylor, 2004a).

3.5. Financial Services Authority (FSA):

FSA forced BE to issue a statement suspending its shares and warning of potential insolvency after the revelation of metal fatigue in fans that were used to cool several of BE's reactors that could result in reduced output and thus earnings (Dan, Andrew, Aline and Ken, 2002). FSA probed investigation into BE to find answers to BE's mysteries to let shareholders know what could put them at risk as the company did not inform the market about the problems it was facing. Similarly, the Canadian Nuclear Safety Commission, which regulates BE's Bruce nuclear subsidiary, required the parent company to guarantee C\$222m (£90m) of payments to the regulator in the event of Bruce Power's shut down due to any reason (Dan, Andrew, Aline and Ken, 2002; Jeane, Carola and Matthew, 2002).

Nevertheless, FSA cleared BE after thorough investigation (Roberts, 2003). To protect minority shareholders that might be forced to sell their shares at a price they would consider unfairly low, UK Listing Authority, part of FSA, planned to devise a new rule in May 2004 (Dennis, 2004; Dickson, 2004). In response to BE's decision to sign covenants imposed by creditors including delisting of BE, BE argued that the company would have faced bankruptcy and the shareholders were likely to get nothing in that case (Dickson, 2004; Dennis, 2004).

4. Lessons and their respective Implications

4.1. BE should not have disbursed 450m to shareholders as dividend at the time of financial difficulty. Though, BE had some pressure from financial markets, shareholders and analysts that BE should disburse dividend to shareholder, if it had retained that amount, it probably could withdraw £650m as credit line facility for its over £1bn financial resources and would have faced the challenges successfully. From this it is implied that a company should forecast the future well by carrying out a number of analyses and research and inform its shareholders and other stakeholders about its position and strategies to come up to their expectations. Similarly, the company should have long term planning, strategic moves, financing, resourcing, future forecasts etc, and should not sacrifice a successful future for some unimportant issues.

4.2. BE should have not bought Eggborough coal power station for £615m in late 1999. Though it was a flexible operation it was not worth that amount and the time for purchase was not correct as it was going to face severe financial crisis. It is implied that before investment, a company should make sure of the potential impact of the investment (Cost/Benefit Analysis) on the contemporary business and additionally analyse the market, industry, national and international scenarios thoroughly.

4.3. BE neither anticipated the future nor did it manage its risk, mainly commercial risk, competitors risk, market risk and regulators risk. Failing to assess the risk effectively, it did not do anything about it rather it made an unattractive investment and disbursed dividend at the time when it was going to face severe financial crisis due to falling industry concentration, growing new entrants into the market and hostile regulators who intended to drive down energy prices. It is implied that a business should thoroughly scan the environmental scenarios and act proactively. It is suggested that a vertical integration, by buying regional electric supply companies, would have helped BE to better cope with the hard time of plummeting energy prices, but BE's history shows little efforts about the move.

4.4. BE's internal factors such as the simmering hostility between English and Scottish divisions that arose from the shotgun wedding from which BE was formed and the 'dysfunctional' board which was perplexing, led to lack of harmony in the company that in turn contributed to diverting efforts and attention from more important issues. It can be implied that a company should be all-united, dedicated, harmonized and be clear about its long term plans, strategic moves and direction so think out of the box and achieve its desired goals and objectives by putting forward best possible efforts and resources.

4.5. Though BE's board was rich with talent it lacked some expertise in its board level management who had relevant experience of nuclear power. Due to lack of expertise and low level of knowledge about the nature of the business BE did not cope well with the hard times of the financial crisis of 2002. Relatively high fixed costs and inflexible operations are the nature of the nuclear power generation business which implies that a company should have expertise in its board level management that could employ different strategies like financial flexibility and diversification of the business to reduce exposure to the power prices by developing broader portfolios and investing in other assets that could help the business reduce its risk as is evident by German nuclear generating firms. The conclusion is that relevant expertise, experience, and knowledge about the nature of the business are the prerequisites to success.

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Islamic Spirituality, Organizational Commitment, and Organizational Citizenship Behavior: A Proposed Conceptual Framework

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Abstract

Despite the number of studies conducted on the concept of spirituality in the workplace, the benefits of workplace spirituality within organizations and the associated effects to outcome and performance level, there have been very few research attempts focusing on the religious aspects of spirituality. As such, the present study aims to improve employees' performance by introducing the construct of Islamic spirituality in the workplace and explore its contribution to the overall development of modern organizations. This study proposes a theoretical framework of Islamic spirituality within the workplace and looks at the effect of Islamic spirituality to predictive employee behavior, with particular emphasis on organizational commitment and organizational citizenship behavior (OCB). This research concludes with a call for researchers to empirically examine the link between Islamic spirituality, organizational commitment, OCB, and job performance. This contribution to the body of existing literature aims to strengthen empirical research on the relationship between these constructs.

Key words: Islamic spirituality, Spirituality in the Workplace, Organizational Commitment, Organizational Behavior Citizenship

Introduction

Organizational behavioral science has been a focal point for at least three decades. We are now in the new millennium and there are still significant human resource problems encountered by organizations and industries. Human resource researchers are still exploring and grappling with employeerelated problems, which decrease performance level and reduce organizational performance (Achour 2012). In these decades, managers were preoccupied with restructuring their organizations to improve employee's performance and enhance productivity to meet the competitive challenges in their international markets, and satisfy the quality expectations of their customers (Luthans 2005). Today, corporate organizations continuously spend billions of dollars to enhance employee work performance, and enable employees to attain the organizational objectives and targets. It is widely recognized, employee work attitude and service performance are key factors to attain business goals, achieve peak performance and establish a competitive advantage (Karatepe & Sokmen, 2006).

A number of studies support the claim that; workplace spirituality exercises a significant impact on personal attitudes and plays a major role in overcoming the problems that many organizations face, such as organizational commitment, poor work performance and lack of job satisfaction (Ahmadi, Nami, & Barvarz, 2014; Gupta, Kumar, and Singh, 2014; Emmons, 1999). The emergence of spirituality in the workplace was introduced by Greenleaf (1991) in his essay "The servant as Leader". Since then, the topic of spirituality in the workplace has become very popular, studied by many prominent scholars, included in many management books and recognized by many popular journals (Gupta et al., 2014). Although, the importance of spirituality in the workplace is recognized more readily today, it is however, still in its formative stages of research, which is the reason why there is no widely accepted definition of spirituality at work.

The practice of spirituality already exists in the business sector. For instance, corporations like IBM and Microsoft introduced several training programmes and workshops including spiritual lecture sessions, as previously, employees' felt a lack of spirituality (Gupta et al., 2014). Rego and Pina e Cunha (2008) mentioned that when an employee feels involved in a richly spiritual organizational climate, they become more effectively attached to their organizations, experience a sense of loyalty and act in a more engaged and collaborative manner. Thus, an employee develops a psychological attachment to the organization and becomes more committed and productive within their organization. Moreover, several studies have been conducted on the concept of spirituality in the workplace, and the benefits of workplace spirituality on an organization's outcomes and performance levels. These studies proved that companies who respect spirituality in the workplace tend to exemplify commitment and productivity amongst employees (Ashmos & Duchon, 2000; Giacalone & Jurkiewicz, 2003; Gupta et al., 2014; Harrington, Preziosi, & Gooden, 2001; Lee, Sirgy, Efraty, & Siegel, 2003; Milliman, Czaplewski, & Ferguson, 2003; Rego & Pina e Cunha, 2008). Furthermore, spirituality improves and sustains human wellbeing, which leads to satisfaction, harmony between staff and as a consequence, tends to exemplify OCB (organizational citizenship behavior) (Avey, Wernsing, & Luthans, 2008; Krishnakumar & Neck, 2002; Miles, Borman, Spector, & Fox, 2002). According to Pawar (2009), workplace spirituality is considered as a great precursor for organizational citizenship behavior (OCB), which improves human wholeness, and subsequently enhances organizational performance.

Despite the number of studies that have been conducted on the concept of spirituality in workplace, and the benefits of workplace spirituality on personal attitude, behavior, organizational outcome and performance level (Ashmos & Duchon, 2000; Giacalone & Jurkiewicz, 2003; Harrington et al., 2001; Lee et al., 2003; Milliman et al., 2003), seldom has research been attempted from a religious perspective (Kamil, Ali Hussain, & Sulaiman, 2011). It is important to note that most of these studies have been addressed from a western value system, which may not necessarily be congruent with the very religious nature of Islamic spirituality (Kamil et al., 2011). Fernado (2005) as seen in Tsafe and Abd Rahman (2014) claimed that the practice of workplace spirituality in the non-Christian and non-western setting remained unaddressed and sparse. Therefore, this research aims to propose a theoretical framework of spirituality from the Islamic management perspective, enrich the understanding of the Islamic spirituality in the workplace phenomenon and define its contribution to the overall development within a modern organization.

Literature Review

According to Markow and Klenke (2005) there are more than seventy definitions of spirituality. However, most of these definitions acknowledge that spirituality at work involves a sense of wholeness, connectedness at work and deeper values. Karakas (2009) stated that "spirituality" comes from the Latin word "spiritus" or "spiritualis" that means breathing, breath, air, or wind (Merriam-Webster). Spirit is also defined as "an animating or vital principle held to give life to physical organisms" (Merriam-Webster). Mitroff and Denton (1999) define spirituality in the workplace as the desire to find one's ultimate purpose in life, develop a strong connection between either coworkers or other people associated with their work, and have consistency between one's core belief and the values of their organization. In addition, spirituality has been also defined as; "the relationship of the human person to something or someone who transcends themselves" (Bullis, 1996, p. 2), "devotion to the immaterial part of humanity and nature" (Barker, 1995, p. 363), "the human search for purpose and meaning of life experiences" (Sheridan & Hemert, 1999, p. 129), "a relationship to force greater than oneself" (Netting, Thibault, & Ellor, 1990), "the essence of the individual" (Carroll, 1997, p. 27), "one's basic nature" (Carroll, 1998, p. 2), "the unique inner search for fullest personal development through participation into transcendent mystery" (Delbecq, 1999, p. 345), "...the recognition that employees have an inner life that nourishes and is nourished by meaningful work that takes place in the context of community" (Ashmos & Duchon, 2000, p. 137). In these definitions, spirituality can be viewed as a multifaceted and elusive concept and it is difficult to clearly define a common definition of spirituality in workplace (Karakas, 2009). In other words, this review of literature determines that there is no single agreed-upon definition of the term spirituality amongst those who conduct research in this field. However, the common ground between these different definitions is that spirituality is about living in connection with others and a supreme power (Tischler, Biberman, & Mckeage, 2002). Summarizing the aspects of preceding definitions, the following definition has been formed: Spirituality in the workplace can be described as; the effort to find one's ultimate purpose and meaning of life, that should allow individuals to align their beliefs and values with the values of their organization, through developing a strong relationship with one another in their workplace, and experience with the supreme power.

Islamic Spirituality

Islam sees spirituality as the linking of actions to the fundamental purpose of life. For instance, a Muslim's purpose of life is to worship Allah (Qur'an, 51:56). Spirituality connects the actions of an individual to the purpose of their life (Adnan Khan, 2009)¹. Nasr (1987) defines Islamic spirituality as the presence of a relationship with God that affects the individual's selfworth, sense of meaning, and connectedness with others and nature. The relational quality of spirituality is understood to be a core theme of Islam that comprises beliefs, rituals, daily-living behaviors, and knowledge. Similarly, adherence to the set of Islamic rituals and codes results in an individual's striving to become closer to God and find personal worth and actualization (Khodayarifard et al., 2013). Mohsen (2007) defines Islamic spirituality as a concept that is embedded in piety (taqwa). The concept of taqwa has been interpreted in many ways. According to Al-sharawi (2004), Taqwa means to avoid Allah's punishment by doing what he commands and keep away from doing what he prohibits. Mohsen (2007) and Kamil et al. (2011) categorized Taqwa into two components, that is, spirituality and

1. http://www.khilafah.com/index.php/concepts/belief/5660-islam-and-spirituality-

responsibility. In this study, we focus only on Islamic spirituality in the workplace phenomenon and its contribution to the overall development of modern organizations.

Religious worship, such as prayers, fasting, charity, and pilgrimage are set to enhance the Muslim relationship with God and with society; otherwise these would become empty rituals devoid of value (Al-Ghazali, 2004). All of these religious rituals are set to the advantage of worshippers and their acquisition of the highest states of spiritual and physical fitness (Ibrahim, 1997). In line with this contention, Hawa (2004) suggests that spirituality cannot be maintained unless all of the religious rituals of fasting, pilgrimage (haj) and charity (zakah) are observed regularly. Muslims are commanded to conduct these rituals which provide them with daily, weekly and yearly nourishment for their spirits, and strengthen and renew their beliefs whilst cleansing their hearts from the stains of sins and impurity (Grine, Fares, & Meguellati, 2015). The definition shared by both Al-Ghazali (2004) and Hawa (2004) also implies that physical appearance, financial status, or ethnic background are irrelevant to the worth or effective value of spirituality; rather, it is the inner purity from sins and submission to God that counts in the field of spiritual devotion and discipline. To substantiate her view, in her book (The clarity in the purification of the souls), Hawa (2006) argued that the purification of the soul is maintained by performing religious rituals such as prayers, charity, fasting, pilgrimage, and reading the Qur'an. Recitation of the Qur'an is a significant means of enlightening the spirit; by contemplating its meaning offers support, simultaneously motivates Muslims to cope effectively with life problems and further enhances the quality of their decision making (Achour, Grine, Mohd Nor, & MohdYusoff, 2014). Summarizing the aspects of previous definitions, the operational definition of Islamic Spirituality for this research is the presence of a relationship with God that comprises belief, performing religious rituals, living a lifestyle that is in line with Islamic rules and principles, which enhance a relationship with God and society.

People often confuse between the concept of spirituality and religions (Dialmy, 2001; Zinnbauer, Pargament, & Scott, 1999, Gupta et al. 2014). Traditionally, spirituality has been linked with religion, but more contemporary views of spirituality are described as being humanistic and secular (Penman, 2012). For example, religion has been conceptualized as "a search for the significant in ways related to the sacred" (Pargament, 2002, p. 169), "the external definition of faith" (Joseph, 1988, p. 444), "an organized set of beliefs and practices of a faith community" (Furman & Chandy, 1994, p. 21), "believing" (Gotterer, 2001, p. 188), and the "acceptance of a particular set of beliefs and ethics" (Cascio, 1998, p. 524). Badrinarayanan and Madhavaram (2008) determined several differences between spirituality and religiosity. According to them, spirituality is a highly appropriated topic to be discussed in the workplace compared to religiosity, it is a broader concept that represents belief and values, and it has a strong theoretical and empirical support for a connection between spirituality and ethics compared to religiosity which has an unclear relationship between religion and ethics. Similarly, Gupta et al. (2014) mentioned that spirituality has a strong hypothetical and empirical substantiation compared to religiosity. Osman-Gani, Hashim, and Ismail

(2013) examined the impact of religiosity and spirituality on employee performances within a multi-cultural and multi-religious organization. Their findings revealed that the coefficient of spirituality is higher than religiosity, which indicates that better spiritual condition influences employees more to achieve a better performance compared with ritual activity performed.

Depending on an Islamic perspective, Rulindo and Mardhatillah (2011) state that the main difference between the western and Islamic perspectives vis-à-vis spirituality is the very position of spirituality toward religion. According to the Western perspective, some argue that spirituality is rooted in religion while others separate spirituality from religion. In Islam however, al-Ghazali's famous work Revival of Religious Sciences (Ihya 'Ulum al-Din) believes that spirituality (ruhaniyyah) generates belief and faith for religion. In line with this contention, Hawa (2004) suggests that spirituality cannot be maintained unless all religious rituals of prayer, fasting, pilgrimage and zakat are observed regularly. In essence, people perform religious rituals to achieve personal satisfaction, happiness, improve their performance, increase their job commitment, enhance work satisfaction, improve their focus, balance and concentration, whilst sustaining their health and well-being.

Organisational committment

Organizational commitment is one of the most widely examined variables in the literature. This broad interest is perhaps owing to the effect of organizational commitment on attitudes and behaviors such as; intention to leave, turnover, organizational citizenship behaviors, attitudes towards organizational changes and maintaining a high level of performance in an organization (Allen & Meyer, 1996, 2000; Meyer & Herscovitch, 2001).

The concept of organizational commitment has been defined in many ways. Mowday, Steers, and Porter (1979) defined organizational commitment as the relative strength of an individual's identification and involvement within an organization. Organizational commitment is the extent to which the employee's goals and values are in alignment with the organization's values and norms (Mowday et al., 1979; Sanders III, Hopkins, & Geroy, 2005). According to Bielby (1992) commitment is "an attachment that is initiated and sustained by the extent to which an individual's identification with a role, behavior, value, or institution is considered to be central among alternatives as a source of identity" (p. 284). Organizational commitment is an individual's psychological attachment to an organization that decreases the likelihood that the employees will leave the organization (Meyer & Allen, 1991).

Meyer and Allen (1991) developed one of the most-cited measurement models of organizational commitment. This model has been conceptualized into three general components: Affective, continuance, and normative commitment. Meyer and Herscovitch (2001) stated that the component of commitment is different from one to another and the key differences were in the mind-set presumed to characterize the commitment.

Organisational Citizenship Behaviour

Organizational citizenship behavior (OCB) is considered as one of the most widely studied topics in organizational behavior research (Kim, 2011; Organ, 1988; Podsakoff & MacKenzie, 1997; Smith, Organ, & Near, 1983). According to Podsakoff and MacKenzie (1997), organizational behavior citizenship has become more widespread among scholars and managers which stems from the belief that these behaviors enhance and boost organizational effectiveness. Podsakoff, MacKenzie, Moorman, and Fetter (1990) advocated that OCB significantly correlates to employee performance and organizational effectiveness. Vigoda and Golembiewski (2001) noted that OCB is considered an important aspect for developing service quality, general outcomes in public organizations, effectiveness, fairness, and thus creates a healthy organization climate. According to Organ who is considered to be the first scholar who attempted to measure the construct of OCB and contributed to the literature, OCB effectively attributes financial and human resources, as well as effectiveness in an organization. OCB is also defined as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization" (Organ, Podsakoff, & Mac-Kenzie, 2006, p. 3). In other words, OCB includes volunteering for tasks, going above and beyond the call of duty, adherence of rules and procedures of the organization, maintaining and developing a positive attitude, making sacrifices, and helping co-workers.

Scholars have used many terms to describe organizational citizenship behavior such as contextual performance (Motowildo, Borman, & Schmit, 1997), prosocial organizational behavior, organizational spontaneity, and extra-role behavior (LePine, Erez, & Johnson, 2002). Motowildo et al. (1997) noted that contextual performance behaviors are not part of the employee's job description, and not financially rewarded. Contextual behaviors involve self-discipline, persistence, and willingness to exert effort and go beyond the call of duty (Van Scotter, Motowidlo, & Cross, 2000). Despite the fact that OCB can improve organization performance and effectiveness, the formal organizational reward system does not recognize the behavior (Chiang & Hsieh, 2012). In fact, accumulated occurrences of displayed OCB are usually assumed to benefit the performance of organizations (Organ et al., 2006; Podsakoff, MacKenzie, Paine, & Bachrach, 2000).

Relationships among Constructs

As mentioned above, workplace spirituality values have emerged as a new perspective to enhance individuals in various ways, including ethical choices, strategic decision-making, and enhancing employee performance and effectiveness. This section reviews the previous studies on the relationship between spirituality in workplace, organizational commitment, and OCB.

Workplace spirituality and organizational commitment

Despite the mushrooming research on organizational commitment predictors and antecedents, the role of spirituality in the workplace on organizational commitment has yet to be determined. The research relating to spirituality in the workplace is only now starting to move from a conceptual phase to an empirical phase (Gupta et al. 2014). A number of studies investigate the relationship between workplace spirituality and employee satisfaction, organizational performance, and organizational commitment (Asmos and Duchon, 2000; Milliman et al., 2003; and Tischler et al., 2002). Rego and Pina e Cunha (2008) explored the impact of spirituality in the workplace and organizational commitment of employees. Their findings suggest that, employees seem to display and develop higher and stronger effective and normative commitment compared to continuance commitment when they feel a stronger presence of spirituality in the organization. In addition, when employees experience a sense of community with their colleagues and feel engaged in spiritual organizational climates, they become more effectively attached to their organizations, experience sense of loyalty, and act in a more engaged and collaborative manner. Thus, employees develop psychological attachment to the organizations and become more committed and productive to their organization. Milliman et al. (2003) explored the relationship between workplace spirituality and employee work attitude. The study found that the spirituality dimensions of: meaningful work (t-value= 4.86, p < .001); sense of community (t-value= 4.36, p < .001); and alignment of values (t-value= 5.83, p < .001) were significant and positively related to the organizational commitment of the individuals. The study indicates that the high level of spirituality in the workplace practiced by employees will lead to a positive impact on employee work attitudes and ultimately the effectiveness of the organization.

Another interesting study by Mat Desa and Koh Pin Pin (2011) examined the impact of workplace spirituality on affective commitment. The study shows that employees who possess the sense of enjoyment and joy at work will naturally be affective and committed to the organization. Moreover, the authors suggest that organization and employers should pay extra attention to their employee's spiritual feelings, and encourage them to engage in the corporate activities such as corporate social responsibilities and green projects that will enhance and develop their inner life and sense of community. In the same way, Chawla & Guda (2010) examined the relationship between spirituality in the workplace, organizational commitment, job satisfaction, and a propensity to leave. The result alluded to a positive association between workplace spirituality, organizational commitment and job satisfaction. Suleiman, Ismail, Nor, & Long (2012) examined the impact of workplace spiritually on academicians' organizational commitment particularly normative commitment. The study reported that all the five dimensions of spirituality in the workplace were found significantly and were positively associated with normative commitment. Therefore, academicians who practice and value spirituality in their workplace, are more likely to exhibit positive normative commitment. Gupta et al. (2014) examined the effect of workplace spirituality on job satisfaction. The result showed a positive relationship between all the dimensions

of spirituality in the workplace and job satisfaction. Pawar (2009a) investigated the influence of workplace spirituality and individual spirituality on three work attitudes; namely, job satisfaction, job commitment, and job involvement. His findings show a significant positive correlation between spirituality in the workplace and the three work attitudes, whereas an insignificant relationship was found between individual spirituality and work attitudes.

Spirituality and OCB

The concept of OCB has recently received significant attention among researchers and is recommended for further examination (Milliman et al. 2003). Amongst the earliest researchers who have studied the association between workplace spirituality and OCB is (Tepper, 2003). In his work, he proposes spirituality in workplace as an antecedent to employees' OCB. He pointed out that spiritual employees, who have greater meaning and purpose in their work tend to perform and exemplify frequent acts of OCB. Kazemipour and Mohd Amin (2012) stated that one of the dimensions of spirituality, which is connectedness and interaction between employees and their co-workers at work, increases employee's sympathy, eventually strengthens relationships and improves behavior amongst employees. They add that practicing emotional and physical spirituality within the workplace helped employees to build a good and strong relationship with co-workers and they experienced a sense of alignment between their values and organization's values and norms, which sequentially stimulated them to enjoy their work and find fulfillment. In addition, workplace spirituality is considered as a greater precursor of organizational citizenship behavior, which improves human wholeness (Krishnakumar & Neck, 2002), encourages employees to be happy (Giacalone & Jurkiewicz, 2003), and subsequently make employees perform extra role behavior and enhance organizational performance (Pawar, 2009; Rego & Pina e Cunha, 2008). Besides that, employees who help colleagues and members of an organization are respectful to others and lean towards displaying more acts of OCB (Avey et al., 2008). Kutcher, Bragger, Rodriguez-Srednicki, & Masco, (2010) investigated the relationship between religion and OCB as well as the relationship between one's religious beliefs and practice, stress and burnout, and meaningful job attitudes. They found a significant positive correlation among spiritual well-being and OCB (r= .29, P< 0.01).

Another relevant study conducted by Kazemipour and Mohd Amin (2012) surveyed 305 nurses to examine the relationships between workplace spirituality, OCB, and affective commitment. This study enquires whether affective commitment plays a role of mediating between workplace spirituality and OCB. The study found that there is a significant and positive influence of workplace spirituality on OCB (r = .401, p < .001), and affective commitment (r = .593, p < .001). This indicates that nurses who had spirituality in their workplace tend to perform more acts of OCB and felt greater emotional attachment to their organizations (Kazemipour & Mohd Amin, 2012). The study also found that affective commitment was a partial mediator between workplace spirituality and OCB. Nasurdin, Nejati, and Mei (2013) examined the effects of workplace spirituality dimensions on OCB and the role of gender as a moderator between the two variables. The study reported that only one form of workplace spirituality (meaningful work) has positive relationships with all dimensions of OCB. Nasurdin et al. (2013) indicates that when employees possess a deep sense of meaning and purpose in their work, and have a sense of community, display connectedness with others, have alignment with their personal values and their organization values, they are bound to become more satisfied, more creative, which increases honesty and trust; these employees are more committed to their organizations, and will ultimately enhance and develop organizational performance.

Another interesting study conducted by (Kamil, 2011) attempts to enrich the understanding of organizational citizenship behavior from an Islamic Perspective (OCBIP) and the role of Islamic spirituality and Islamic social responsibility as antecedent of (OCBIP). Kamil (2011) hypothesized that spirituality effects employees' performance of OCBIP. The findings shows that there is no relationship between IS and OCBIP and the path coefficient was found to be insignificant indicating that Islamic spirituality is not a determinant of OCBIP. Kamil (2011) concluded that employees, who have a high level of Islamic spirituality without possessing good manners, might not necessarily exhibit OCBIP within the workplace. Besides, he suggests and encourages researchers to examine the impact of several contextual variables with the constructs of Islamic spirituality and OCB.

Proposed Theoretical Framework and Development of Hypothesis

From this literature review, it is clear that Spirituality in the workplace has been an area of interest of many researchers (Amin Mohamed, Wisnieski, Askar, & Syed, 2004; Garcia?Zamor, 2003; Kamil et al., 2011; Karakas, 2009; Kutcher et al., 2010; Mat Desa & Koh Pin Pin, 2011; Milliman et al., 2003; Nasurdin et al., 2013; Osman?Gani et al., 2013; Pawar, 2009; Rego & Pina e Cunha, 2008; Tepper, 2003; Tsafe & Abd Rahman, 2014). These researchers recommend further insight into the area of spirituality in the workplace and propose examination of different factors that are related to spirituality in the workplace. For instance, (Karakas, 2009; Osman?Gani et al., 2013; Pawar, 2009) suggests that the inclusion and the integration of additional variables such as spirituality will lead to improve productivity and support organizational performance. Petchsawang and Duchon (2009) noted that more empirical studies are needed to examine the association between spirituality and work outcomes such as organizational commitment, job satisfaction, and job performance. Garcia?Zamor (2003) recommends focusing on new organizational culture (workplace spirituality) in which employees feel happier and have a sense of belonging to a work community. Fernado (2005) as seen in Tsafe and Abd Rahman (2014) claimed that studies on spirituality in the workplace in the non-Christian and non-western setting remained undressed and sparse; and further insight should be consider in this area.

Therefore, despite the widespread acknowledgment and the impressive amount of literature on the importance and value of spirituality in the workplace; limited research examines the

influence of Islamic spirituality on organizational commitment, OCB, and ultimately job performance. To elaborate, most of this previous research has been addressed from a western value system, which may not necessarily be familiar with the Islamic perspective of spirituality (Pio, 2010). Moreover, other factors impacting employee's behavior particularly organizational commitment and OCB have been studied before and similar outcomes are expected to be attained. Thus, the present study attempts at improving employees' performance by introducing the construct of Islamic spirituality in the workplace phenomena and explore its contribution to the overall development of modern organizations. Kamil et al. (2011) suggests researchers to examine the impact of several contextual variables with the construct of Islamic spirituality. Furthermore, this study focuses on Islamic spirituality as a concept that distinguishes the Qur'anic spirituality from the other spiritual concepts. According to Kamil et al. (2011) Islamic spirituality as presented in the Qur'an consists of certain salient spiritual aspects associated with pious people. These include; belief in Allah (Iman bil-lah); observance of rituals (Ibadat) which comprise prayer (Salat), fasting (Saum), charity (Zakat), and pilgrimage (Haj); Remembrance of Allah (Dhikrullah), and Repentance/Forgivingness. Osman-Gani et al. (2013) noted that prayer which is one of the rituals, constitutes an integral component of spirituality and has been positively associated with spirituality in business movement. Moreover, performing regular rituals such as prayers at the workplace can be beneficial and influential in solving life problems (Achour et al., 2014), enhancing social relationships (Al-Khalifah, 1994), and promoting a bond of brotherhood and unity among worshipers (Kamil et al., 2011). In the same way, remembrance of Allah at the workplace is set to strengthen the bond with Allah (Kmail et al, 2011), and to help Muslims to overcome life's problems such as pressure of work, anxiety, and stress (Achour et al. 2014). Therefore, observance of rituals such as prayers, Remembrance of Allah and practicing forgiveness at the workplace are assumed to increase joy and satisfaction among employees at work, as a result, influencing them to be more loyal, dedicated and effective within their organization.

In addition to the above-mentioned arguments, Islam considers job performance, tasks, and activities as integral to satisfying God and seeking his pleasure. In fact, Achour et al. (2014) stated that doing a job in a perfect way is considered as an act of worship (lbadat); and has two critical criterions, which are set for the acceptance of this as a good deed: The first one pertains to the very sincere intention of the doer; whilst the other relates to the quality and perfection of the work. Moreover, work performance and tasks require Muslim employees to exemplify devotion to Islamic and ethical values such as sincerity, honesty, precision, and conscientiousness (Achour et al., 2014). In the same way, Seddik (1996) mentioned that to adhere to the spiritual values, which include Islamic ethics, such as; good manners, sincerity, satisfaction, contentment, modesty, as well as the preservation of human dignity and pride, will lead to an increase in the love displayed amongst the people and provide support to them. As a consequence, the feeling of being respected and loved by others might lead to an experience of joy at work and influence employees to be more committed, productive, and effective within their organization.

Furthermore, Islam encourages individuals to be excellent with any act, deed or work they perform, and called this Ihsan "excellence and perfection". Ihsan as mentioned by the Prophet Muhammad peace be upon him is; "to worship God as if you are seeing him; and although you do not see Him, He sees you"². Osman-Gani et al. (2013) mentioned; "believing that one is always monitored by God (Ihsan) has a better impact than just performing ritual activities of religion" (p. 367). Therefore, the feeling of being watched by God might inspire employees to do their job in a perfect manner and motivate them to go above and beyond the call of duty. Therefore, it is assumed that observance of rituals, Remembrance of Allah within workplace, and following Islamic values and principles such as Ihsan "excellence and perfection" will lead to high levels of organizational commitment and ultimately greater displays of OCB and consequently increase productivity amongst employees.

| Base | ed | on | this | above | theor | etical | ration- |
|------|-----|--------|------|------------|-------|--------|-----------|
| al, | the | follov | ving | hypothesis | could | be | proposed: |

H1: The more spiritual the workplace, the greater is the organizational commitment and OCB of the individual.

H1a: The more belief in Allah of the employee, the greater is the employee's commitment and OCB

H1b: The more religious rituals at the workplace, the greater is the employee's commitment and OCB

H1c: The more remembrance of Allah at the workplace, the greater is the employee's commitment and OCB

H1d: The more forgiving the employee, the greater is the employee's commitment and OCB

Conclusion

The present study was an attempt to primarily propose a theoretical framework that defines and explains the concept of spirituality within the workplace from Islamic management perspective. Although a number of studies have been conducted on the concept of spirituality in the workplace and the benefits of workplace spirituality on organizations' outcome and performance level (Ashmos & Duchon, 2000; Giacalone & Jurkiewicz, 2003; Harrington et al., 2001; Lee et al., 2003; Milliman et al., 2003); very few studies have been attempted from the religion perspective, whereby the four components of Islamic spirituality are considered. In other words, most of this previous research has been addressed from a western value system, which may not necessarily be familiar with the Islamic perspective of spirituality. As a consequence, this research endeavours to study spirituality from the Islamic management perspective and proposes a model to enrich the understanding of the Islamic spirituality in the workplace phenomenon and its contribution to the overall development of modern organizations, with particular emphasis on organizational commitment and OCB.

2. Hadith narrated by Muslim.

Figure 1: Research Theoretical Framework



This study calls researchers to build on our study and empirically examine the link between Islamic spirituality, organizational commitment, OCB, and job performance. This study will extend and contribute to the existing body of literature and strengthen the empirical research on the relationship between these constructs.

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The Impact of Free Market Economy or Neoliberalism on Labour: Evidence from the Garment Export Sector in Bangladesh

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Abstract

Developing a strong theoretical debate for research and practice in globalization and neo-liberalization has, to date, nevertheless remained a largely unfulfilled challenge. This article helps to elicit some discussions by presenting some leading scholar's ideology and concepts over capitalization and free market economy. Discussing verities of capitalism, the global process and new institutional economics, it is however often advocated that manufacturing workers in developing countries, as the benefit of the free market economy, would receive economic benefit and spur social status. Nevertheless, the author argues that job growth through the free market economy in developing countries explicitly resulted in income inequalities and decline of workers' emancipation. Up to a decade or so ago many researchers speculated that free market economy would probably stop exploiting workers and a major political and economic policy in favour of free market economy would be beneficial for the workers in a true sense. However, again, this so-called ideology was destroyed as capitalism spurred through unbounded investments in the developing countries and created an antagonistic milieu in a country like Bangladesh. By the turn of the century the capitalist mode began to shift from its classical mode to the neoclassical mode, which is also considered as globalization and the neo-liberalization trade epoch in which, however, a simple and a realistic view is workers in developing countries have been facing enormous challenges and garment workers in Bangladesh are not an exception. It is indeed moreover arguably time for reconsidering the global and national political-economic policy for an alternative vision for humanity.

Key words: Free Market Economy, Capitalism, Globalization, Neoliberalism, Inequality International Trade, Trade Unions, International Political and Economic Policy, ILO, WTO and Bangladeshi Garment industry

Introduction

The researchers draw a common apprehension that the extent to which social science, tends not only to describe and classify empirical facts, but also to interpret them with resources to their underlying causes and create a reasonable and considerable explanation by incorporating them with social sciences, epistemologies and logic, moreover, it creates a considerable difference as well (Jentsch, 2004). If, again, more explicitly, we do not have faith in Popperian unity of sciences, but prefer the Weberian approach, in which Weber precisely and logically pointed out that social and cultural science deal with those subjects that can be explained only via explicative understanding because interpretation is essential in every aspect Jentsch cited in (Weber [1922] 1964:3).

Nevertheless, to some extent, researchers may not or should not agree with others who have different perceptions and findings on a similar topic. Especially it happens when exploring things in a multidisciplinary and international context (Becker & Niehaves, 2007).

Becker and Niehaves (2007, p. 201) pointed out that,

"The discussion of epistemological issues must, at least for the time being, be considered as an open issue. The individual or social-collective selection of an epistemological position, however, necessitates the extensive publication of the epistemological assumptions made. Here, epistemology can be understood as the science of analysing the way human beings comprehend knowledge about what is perceived to exist. It addresses the question of how a person can arrive at 'true' cognition. In order to do so, basic epistemological questions can be differentiated from one another and will be presented below in the form of an epistemological reference framework."

Moreover, to support the above quote, the author of this article possesses an indistinguishable ideology which is during investigations, researchers, the extent to which they try to investigate in a real world not in an elusive world, particularly one that exists independently of cognition, thus, independent researcher may have a different thought in a different and similar topic, but they all should assume a real world from an ontological realism (see Becker & Niehaves, 2007). Becker and Niehaves (2007, p. 203) further found in their study that:

"Kantianism attempts to overcome the differences between those two approaches. According to Kant, it is vital to distinguish between: (1) 'things in themselves' referred to as noumena (thingin-itself); and (2) the appearing of those things to an observer, referred to as phenomena. Following Kant, there exist both entities that are independent from human consciousness (noumena) as well as constructs that depend on human consciousness (phenomena). Thus, knowledge which can be acquired by an observer is restricted to phenomena. In contrast, the things themselves (noumena) are unknowable. Kantianism therefore holds that our mind forces the world we perceive."

If we believe in Kantianism, again, we need to understand one thing very explicitly that in which world we live now! Every theory has its pros and cons. However, rationally, researchers should consider researching the issues that have an enormous impact on the society. A true researcher tries to adopt the unbiased issue to sort the global and social issues. Talking about the epistemological assumptions within the research matters, again, if we wish to consider the Hegelian theory that "a human is what his actions are", then of course, human (researchers) are responsible for revelling in the truth of the world. Again, there is some debate whether your proposition carries truth or not? Whatsoever, a central and vital topic in epistemology is the question as to how humans can achieve "true cognition? Thus, the author of this article tried to investigate the issue from ontological and epistemological assumptions by understanding some leading scholars' statements to unearth the truth of the current dilemmas of so-called globalization or free market economy.

A brief history of free market economy and globalization and why does it matter?

The Bourgeoisie (i.e., capitalism) cannot exist without constantly revolutionizing the instruments of production....Conservation of the old modes of production in unaltered form was, on the contrary, the first condition of existence for all earlier industrial classes....The bourgeoisie, during its rules of scare one hundred years has created more massive and more colossal productive forces than have all preceding generations together.

-Karl Marx and Friedrich Engels, 1847

One of the finest scholars in the globe "David Harvey" a true Marxist and anthropology professor, geographer and authority of Karl Marx's work Capital, has just published several books on globalization, neo-liberalization, capitalization and many more. One of his books was published under the name of 'A Brief History of Neoliberalism". This book was reviewed by many international scholars.

The author of this article found profound interest in Harvey's book in which the information is most accessible and succinct and overview of neoliberalism as an ideology and economic practice can be written off. It sticks with the organic idea, the devastating impact it has had on labour in both the advanced and developing world, and how it deepened crisis tendencies within the system. Harvey has done the left a great service in laying out a clear, concise, and provocative history of neoliberalism, one that can helps educate a new generation of having an ideal of a current upheavals of the world.

Harvey's most recent book, A Brief History of Neoliberalism, anatomize the inner workings of what has come to be one of the most salient features of late 20th and early 21st century economic and social life: the gradual shift, which was inherently national, but now global and thus national. The state governments, the extent to which with the geopolitical and geoeconomic policy compromising national and global citizen's interest and menacing the lower earners by offering a wretched work with garish wages. The final version of this process is to spur throughout the nations of the global economy, toward economic and social policies that have given an increased liberality and centrality to markets, market processes, and to the interests of capital (see Harvey, 2005 & Thompson, 2006).

The striking point is, however, Harvey (2005) in his book explicitly portrayed the history of neoliberalism, which not only brings the history, but also lets others understand where the tensions are coming from. The author found extensive interest in Harvey's 'A brief history of Neoliberalism'.

Similarly, Thompson (2006, p. 23) reviewed Harvey's notion of Neoliberalism which is:

"Neoliberalism is the intensification of the influence and dominance of capital; it is the elevation of capitalism, as a mode of production, into an ethic, a set of political imperatives, and a cultural logic. It is also a project: a project to strengthen, restore, or, in some cases, constitute anew the power of economic elites. The essence of neoliberalism, for Harvey, can be characterised as a rightward shift in Marxian class struggle".

The review is particularly useful and Harvey (2005) explicitly pointed out that neoliberalism is however simply a process of capital expansion of capitalists who have been generating more income by exploiting proles and commoners of the world in which process commoners are restrained by the socalled Utopians who are drastically violating global citizen's harmony and prosperity.

Harvey again critically evaluated how neoliberalism created an antagonistic milieu in this globe and how it has been congenial for the world giant retailers. Harvey (2005, p. 34-35) found that:

"In the US, the Walton family has become immensely rich as Wal-Mart has surged into a dominant position in US retailing but with integration into Chinese production lines as well as retail stores worldwide. While there are obvious links between these sorts of activities and the world of finance, the incredible ability not only to amass large personal fortunes but to exercise a controlling power over large segments of the economy confers on these few individuals' immense economic power to influence political processes. Small wonder that the net worth of the 358 richest people in 1996 was equal to the combined income 34 of the poorest 45 per cent of the world's population--2.3 billion people. Worse still, 'the world's 200 richest people more than doubled their net worth in the four years to 1998, to more than \$1 trillion. The assets of the top three billionaires [were by then] more than the combined GNP of all least developed countries and their 600 million people".

Again, interestingly, class division and class power are two underlying issues, however, they become more prominent as this world is still mendaciously creating an antagonistic milieu in the global society where income inequality is one of the prime obstacles for many who have minimal income and lost emancipation to some extent. But, Harvey (2005) nevertheless asked a fundamental question what is the exact meaning of class? As we know, however, again, this concept is still dubious to many because this is always a misty concept. But, neoliberalism once again reproduced a concept which is obvious at the moment. If neoliberalism was appointed to solve the issue of class conflict and if it was originated to obfuscate the market system, then of course we can see a clear example of an unrealistic event which is not only provocative but highly unethical as well, thus neoliberalism again is a vague concept as many have found (see Quiggin, 1999; Harvey, 2005 & Potrafke, 2013).

The work of Harvey further prompted the issue of class struggle. In his analysis, again, the author found that there are two fundamental questions thus far being posed by Harvey. What Harvey tried to say is, however, class power and economic power is not or should not consider simultaneously. The answer is the restoration of class power may not be the economic power of the class struggles. The author of this article has found a similar notion in many countries where class consciousness has been more prominent than the economic power of the particular class. For example, in Bangladesh, where 80% of workers employed in the garment industry are women and they had no any social status in the past, but have a social status at the moment by compromising the economic benefit concurrently (see Majumder & Begum, 2000; Absar, 2001; Rock, 2003; Ahmed, 2013; Mottaleb & Sonobe, 2011).

In Thomson's review, however, Karl Marx's class struggle subsumed that Harvey clearly pointed out in his discussion. More explicitly, when free market economy, globalization or neoliberalism are synergistically working and prompting the class struggle issue, nevertheless, to some extent, this discussion is inevitable. Thus, Thomson in his review found Harvey's concept over Marx's class struggle, however, the essence of neoliberalism, for Harvey, the point is, it can be characterised as a rightward shift in Marxian class struggle in the new shift of market economy (see Harvey, 2005 & Thompson, 2006).

The Thompson's (2006, p 23) review included,

"Capital is not simply money, property, or one economic variable among others. Rather, capital is the organising principle of modern society. It should be recalled that, in his Grundrisse, Marx explicitly argued that capital is a process that puts into motion all of the other dimensions of modern economic, political, social, and cultural life. It creates the wage system, influences values, goals, and the ethics of individuals, transforms our relation to nature, to ourselves, and to our community, and constantly seeks to mold state imperatives until they are in harmony with its own. Neoliberalism is therefore not a new turn in the history of capitalism. It is more simply, and more perniciously, its intensification, and its resurgence after decades of opposition from the Keynesian welfare state and from experiments with social democratic and welfare state politics."

Therefore, it is obvious that the main agenda of neoliberalism is the process of maximization of all the social good towards maximising the reach and increasing the frequency of market transaction which is also considered as a market economy, which will eventually lead to bring all human action into the domain of the market and more exploitation will be seen (see Harvey, 2005; Thomson, 2006; Munck, 2010, Ullah, 2015).

Again, Harvey keenly described the enormous disparities and inequalities that exist in society. Aaron Leonard (2012) published Harvey's interview in which he asserted that:

"In New York city, the top one per cent earns on average something like \$3.7 million dollars a year. That means that they are earning about \$10,000 a day. There are a million people in New York City who are trying to live on \$10,000 a year. Half of the population of the City are earning less than \$30,000 a year. We haven't seen such disparities since the 1920s".

It is, without doubt, time for consideration in many places around the world, as well as for policy makers that globalization and neo-liberalization, market concept experience with an extensive unusual change which is very clear as one might not want to see. Income inequalities are not just seen in developing countries but also in the Western world as well. The above quote is one of the burning examples of income inequalities.

Nonetheless, Quiggin (1999, pp. 240-59) further pointed out that,

"During the long boom the distribution of income and wealth became more equal in all developed countries. It was widely argued that modern societies were effectively 'classless', being dominated by a large middle class, which supplied both the great majority of the workforce and the mass market towards which production was targeted. Since the beginning of the slowdown in 1970, inequality has increased in many countries. Growth in inequality has been most marked in the United States. On standard measures, real wages for workers with high school education fell throughout the 1970s and 1980s and have yet to return to the values of 1970. Nevertheless, there is no doubt that the inequality of wages has risen substantially. Most of the income growth in the United States over the past three decades has accrued to the top 20 per cent of households and, within that group, the top 1 per cent has benefited disproportionately. Similar increases in inequality have occurred in the United Kingdom and New Zealand".

Essentially, the demand for producing an equal income and wealth distribution has been placed for many years, however. But, still we don't see any dramatic changes in the public demand. Many scholars such as Quiggin (1999); Harvey (2005); Munck (2010) & Potrafke 2013 similarly pointed out that capitalism is not bringing the ultimate solution in the world, especially for the workers. But the question is what is the alternative version or system that we all can follow towards ensuring the better trade system which can offer an equal wage system as well? This fundamental question has been asked by many, but very little changed thus far.

Again, to support Harvey's statement, again, the author of this article found a similar notion from Munck (2010) who pointed out that globalization has come up with a new trade concept which simultaneously undermined the, as usual, business in this globe. This notion was supported by some other international researchers such as Harrod and O'Brien (2002); Silver (2003); Phelan (2006); Webster, Lambert and Bezuidenhout (2008) and Potrafke (2013). Thus, critical thinking and analysis took a significant position among the international academics and researchers.

Munck (2010, p. 219) further observed that,

"What began to occur in the last quarter of the twentieth century was the breakup of the dominant nation state-based economic model as what we now call globalisation kicked into gear. Economic internationalisation had flourished previously (1870-1914) but this time round its momentum seemed unstoppable. The potential threat of an alternative social and political order had evaporated with the collapse of the Berlin Wall in 1989. The 1990s were the period of easy globalisation: the corporations, the international economic organisations and the dominant nationstates paved the way for a new 'market-friendly' order".

Since 1978, there have been serious efforts to make sure that more financial transaction occurring in the world trade market towards making more profits in the name of so-called job creation philosophy. In this process, initially, to some extent, developing nations started enjoying quota free access to the western and European countries. It is without doubt that more jobs were created meanwhile; however, income inequalities spurred extensively (see Freeman, 1995; Friedman, 1999; Quiggin, 1999; Munck, 2010; Potrafke, 2013 & Ullah, 2015).

However, we are now in the main point to agree that globalization opened up doors for many, but closed for millions simultaneously! This flourishing of innovation is seen everywhere in the world - it includes the local, national, regional and global levels. Consequences are being estimated more meditatively; the question is what globalization and neo-liberalization could really do for millions of workers in a true sense?

If we look back at history and try to depict an authentic picture of that process, we see, during the 1980s and 1990s, economic globalization enhanced by advancements in technology led to the creation of multinational companies. Besides, North American Free Trade Agreement (NAFTA) and World Trade Organization (WTO) agreements have contributed in a robust form of creation of the garment industry in Bangladesh and in many other Asian and African countries through a proposed elimination of trade quotas by 2005 (see Asuyama, et al. 2013; Chorev, 2005). It was a major geo-political decision at that time. However, the massive impression of globalization and neo-liberalization over this period not only surprised us, but also stimulated us for changing income and social-inequalities from the world, but the ultimate result is totally different today (see Munck, 2010; Ruskola, 2014).

Munck (2010, p. 221) further identified that,

"It was agreed that global markets required global rules. The aim should be to enable the benefits of globalisation increasingly to spread to all people by building an effective framework of multilateral rules for a world economy that is being transformed by the globalisation of markets ... the Global Compact should contribute to this process by helping to build social partnerships of business and labour".

It is more explicit that the situation is not as demanded. Fair globalization is a prime agenda and an organization like the ILO and WTO is in a major quandary to ensure better and equal opportunity for all citizens in this globe. However, if we see, again, from the outlook of the great financial falls that begun in autumn 2008 this context seems however profoundly confined and self-restricted indeed. Moreover, some global organizations such as the Financial Times and The Economist openly proclaim and earnestly expressed their deepest concern in regards to end up so-called self-regulating market system and call for 'fair' globalization (see Munck, 2010).

Nevertheless, a question has been posed by many, what changes actually occurred in the market nature? Have we seen any radical changes or was it an illusion? These questions were asked to clarify but were not responded to. Exploitation took a significant place in many places in the world. An industrial accident like the Rana Plaza (24 April 2013 at Rana Plaza, near the capital city of Dhaka, where 1,127 innocent garment workers were killed and about another 3000 garment workers were permanently disabled (see ILO, 2013; Ullah, 2015) illustrates this. The ILO's role over social and human capital moreover has been questioned on a robust scale.

The role of ILO is again interrogated by some leading scholars. Munck (2010, p. 225) note as follows:

"In the late 1980s the ILO played a modest role during the disintegration of the Soviet system through the promotion of a social market model against the free-market fundamentalists. However, in the 1990s as globalisation and labour market flexibility became dominant the ILO began to lose direction. The Decent Work campaign was designed to overcome this crisis and at one level it has become widely accepted, at least at official level. Concerned to present Decent Work as a non-ideological issue, the ILO seems to have lost any sense of vision. As a campaign it is even a step back from the historic ILO 'labour directives' now subsumed under vague rubrics which are part of international law anyway such as the prohibition of child labour. The main problem is that the world of 2009 is not the world of 1919 or even 1969 when the ILO received the Nobel Peace Prize.

As Guy Standing puts it:

'The ILO was set up as a means of legitimizing labourism, a system of employer-employee relations based on the standard employment relationship, and a means of taking labour out of international trade' (Standing 2008: 380). Tripartite labour relations are hardly dominant, the standard employment relationship survives only in small pockets, and labour is quite starkly a commodity on the global labour market".

It is also Utopian in the sense that as it is assumed in the myth of a golden era of social harmony, which even in the so called imperialism, was not even real as many tried to establish this notion in the recent past. The ILO itself is losing market share steadily as globalization grasped the entire global market solely. Research shows that the ILO and other organizations like the WTO, Wold Bank and IMF or even OECD, to some extent are playing a vital role in favour of globalization and free market economy (see Helfer, 2006; Standing, 2008 & Munck, 2010).

More generally, the ILO's Philadelphia declaration in 1944 asserted that labour should not and would not be treated as a commodity in society, but this question is inevitable to some extents and, critics say, how much has been done since the Philadelphia declaration was adopted. Many countries are transforming capital in a liberal process and the global economy reshaping the total business and trends at the moment, therefore exploitations are everywhere, but developing nations are seriously affected by this process. In fact, Karl Marx typically pointed out in "Das Kapital", that the existence of purely competitive markets, which is experiencing the greater scale of freedom of market economy; the greater power of capital through the capital mobilization process, and the greater the scale of exploitation and the ILO was facing tremendous challenges over many issues at this stage of its 90 years of age (Hughes, 2005; Helfer, 2006 & Rodgers, et al. 2009).

What is the free market economy and how it is congenial to the Bangladeshi garment workers?

There has been some academic discussion thus far on the theory of free market economy and Baumol (2002) explicitly pointed out that however time is money. Under capitalism, the extent to which we all are experiencing with a new innovative technology and the spread of new technologies, again, proceeded at a stately pace, and it takes a few decades and centuries in some other economies under capitalism, but, however, during the last few decades or so, again, in developing nations like Bangladesh have already stepped up in the formation of a capitalist society where income inequalities and social status of the citizen is the main concern, many say Bangladesh is a capitalist haven (Baumol, 2002).

Moreover, to clarify the term of free market economy, simplicity is a market economy based on supply and demand in which, again the government has very little or to some extent has no control at all. But, again, Baumol (2002) pointed out that a capitalist economy is defined as free market economy in which it can be easily viewed as a transformation of an innovative machine whose underlying principle comprised the concept of economic growth, primarily it was national and now international (see Baumol, 2002 & Harvey, 2005).

If we again attempt to describe the term of free market economy from an different angles, however, it points out that, free market is an idealized form of a market economy where buyers and sellers are allowed to transact freely (i.e. buy/sell/trade) based on a mutual agreement on price without state intervention in the form of taxes, subsidies or regulation. If so, then again, one of the fundamental questions is how minimum wages are determined by the buyers and sellers? How this free market economic system is helpful for the RMG workers in Bangladesh or is this indeed the extent to which the beneficence is to the consumers and global buyers only? A brief, however, a critical analysis can be invited here as research found that Walmart pulls up over \$400 billion revenues Ullah (2015), which is way bigger than many European countries such as Ireland. So again, "Liberty and Equality through the free market is not assured".

The fundamental argument in this article is to make sure that free market economies minimised the income gaps by producing more jobs in the national and international level. As the process of the free market economy was begun in early 1978, to some extent, again, the ideology of a free market economy has been tremendously criticised for its despicable agenda in the developing nations where millions of proles are working in a shoddy place and risking their life for only US\$1 a day. The developing nations, are perhaps compromising their position by offering abundant cheap labour and undermining the regulation in the workplace as Brown, Dehejia and Robertson (2013) pointed out the most developing nations are suffering from inadequate resources - which are the prime obstacle for many developing nations but a good opportunity for the exploiters who invested money in the developing nations.

Again, research found that in many cases giant international apparel retailers are playing a monopolistic and a hegemonic role in the developing nations where millions of garment and sweat workers are risking their life every day and global retailers blaming each other for showing their responsibilities. Accordingly, the Madelyn Chung report (The Huffington Post Canada - Posted: 02/04/2016) findings demonstrate that:

"As of today, hardly any of H&M's factories in Bangladesh can be called safe - and more than half have failed even to create proper fire exits," it reads. "For a company with H&M's resources and clout - it is the largest buyer of clothes in Bangladesh - this performance is indefensible."

We know H&M is one of the giant apparel retailers in the world like the Walmart. However, it is thus far identified that these companies are paying very minimal wages to their workers and often refused to pay for a factory upgradation. It is indeed the extent to which may not be seen any dramatic or radical changes in the workplace in terms of Occupational Health & Safety of the garment factories not only in Bangladesh but also in other developing countries where garment products are being produced (see Marston, 2007; Miller, 2014). Miller (2014) pointed out that, financial and legal bindings could be the reasons for avoiding responsibilities in signing the agreement with the Bangladeshi governments or individual companies. However, First World countries are attracted to production sites in the Third World because of low regulation, scant wages, less union pressure and huge abundant workers (see Rock, 2010 & Ullah, 2015)..

Another study shows, the garment industry was fully dominated by the United States and Europe until the mid-twentieth century, but the developing nations are now producing over half of the world's textile exports and almost three quarter of the world's apparel exports (Garwood, 2011, p.13). In 2007, the global textile and clothing sectors had a combined value of over USD583 billion and over 29 million women and men work in the garment industry worldwide with its 4 million workers in Bangladesh (Garwood, 2011, p.17; BGMEA, 2013).

Between 1988 and 1992, United States imports to the US market Bonacich and Appelbum (2003, p.142) clothing grew by 50 percent, to USD30.5 billion; in 1992; 92.4 percent of all clothing imports were from developing economies and in Bangladesh alone 23 percent exported. Research shows, prior to the mid-1960s, there were only two EPZs in the world. By 2006, there were 3,500 zones with 66 million workers (Anner, 2011). These data show a significant impact of globalization in the world trade.

However, the central point is, again, as Baumol (2002); Harvey (2005) and Munck (2010) pointed out that capitalism, which is also known as an opposite coin of free market economy should make sure that nations still behind in the balance of wealth and not yet shared the growth benefit, whose relative poverty seems actually increasing rather than decreasing, it would be the prime agenda of so-called capitalism system to make sure that all have the shared economies growth values equality.

Concluding remarks

It is often, however, heard as it is said by many intelligent observers (who were not a critical thinker) that the prosperity and growth, thus far, that has been achieved by the pioneering of so-called free market economies is a wonderful thing for them. However, the process begun initially has extensively undermined the total process as greed seriously taints those who control the markets imperfectly. Again, this is not a new issue at all, but the consequences are pestiferous.

The point is, however, being a citizen of this world, researchers always try to unearth the real facts and give a possible solution, but at the end, it mostly depends on the policy makers at the global and national level, thus, to some extent, the geopolitical agenda drastically stands in favour of capitalization. Moreover, a radical change may not be seen soon or later. Thus, again, as a potential researcher, I see enormous anxieties among academics and researchers as to how we can make a meaningful balance in the world in terms of income and wealth distribution. This is the time to step forward to make a proper balance in the society to erode all type of social imbalances.

Finally, as the Third World (Bangladeshi garment) workers seemed to be the victims of capitalist expansion and who have had little emancipation and resources to strengthen their voice to their exploitation, the point is again, capitalists should consider the workers' contribution as a social force in history.

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Musings

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Flashes of our burning dreams

What prevents us from achieving our dreams or make them come true- why do we keep wanting, wishing, waiting and hoping for a twist that can change and transform our life- is it our internal fear of the unknown or change the norms? Is it our current circumstances which are holding us back, is it our surroundings, and many more reasonings that we do have in our mind to make an excuse to never accomplish. However we keep nonstop hoping, dreaming and longing for that dream we have and shaped inside our mind. It keeps in fact flashing back over and over. It is like craziness that is driving us mad because it is still bothers us and we cannot let go. We keep just grieving inside our soul on that moment that we had lost, yearn on, regretted certain mistakes or we could not attain in the first place, and did not has a good grip on what we wanted really. Most of the time just goes by fast and all we do is just think, talk, feel sorry for ourself and our current status. We only dwell inside our self, staying in the same state at the same pace, and nothing has changed. We just dread the anonymous, the adventure which might take us far away and change our life maybe to the one we always wanted and wished for forever. Those internal calls and fears weaken us. Fear is our worst enemy, where we cannot gamble life. The problem might be us, our constitution and the genetic makeup, and might be ourselves due to deeply rooted rising up, falsely deeply shaped thoughts inside our mind that programmed us to take the easiest clearer feasible stable path. Thus a change cannot come alone by itself. All of which is holding us back effortless, helpless, incapacitating us and we moreover throw our failures on the luck, destiny and fate at times. We should have confidence in ourselves, and believe on them. We are all born with that energy and internal light which needs to be explored and looked at to shine out. Confidence can come in all forms and is influenced from our closer surroundings, environment, our work, and all sometimes in one. We need to change the attitude of we cannot - to we can, and to connect with ourselves and be in serenity and harmony. We need to switch off those horrifying internal fears and boost our confidence and accessibility to the self capability and aptitude. We all have potentials in one way or another that we need to explore, work on and apply positively and effectively, rightly, and we also need to stop complaining and blaming, and we should face things at their face value and get the ever possible rewarding ways to make some of our dreams see the light and come to reality and by that we can say our dream came true and was a lovable reality, journey and existing experience. By which we applaud the real desired transformation.

Philosophy, physics, Einstein's gravitational waves and black holes for the lay man - an essay

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Simulated view of a black hole

Physicists have announced the discovery of gravitational waves, ripples in the fabric of spacetime that were first anticipated by Albert Einstein a century ago.

Meanwhile quantum physics and anti matter have been used by scientists and medical engineers in a number of scientific fields including radiation oncology. Not long ago many questioned the existence of these concepts.

Physicists now say we need philosophers to explain what (astro) physicists and (quantum) physicists have discovered.

Interestingly many of our great current (astro)physicists start down their path looking for the answers to the universe, and often end up 'finding God'/'needing a creator' to explain what cannot necessarily be explained by the known 'laws of nature' or the laws of physics.

Quantum physics is particularly interesting.

At the 'quantum level' - the sub atomic material that makes up an atom, (electrons, protons etc) i.e. 'we' (all atomic matter) can be a 'wave' (like an electric charge) or a 'particle'. A particle state can be fixed in time and space like the chair you sit in and the house you live in. In a 'wave' state quantum material can be found anywhere in space and time, and it needs a 'conscious observer' (life) to fix it in a particle state/somewhere in time and space.

In effect 'conscious life' is building the universe in its quantum particle state.

Our universe is all 'smoke and mirrors'.

The amount of real matter in all the atoms in the universe, if you turn the electricity 'of', - is pretty much non-existent.

We are 'light matter'. The majority of the universe is 'dark matter' and 'dark energy'. It turns out that roughly 68% of the Universe is dark energy. Dark matter makes up about 27%. The rest - everything on Earth, everything ever observed with all of our instruments, all normal matter - adds up to less than 5% of the Universe.

Furthermore to amount to 5% we have had to find the 'missing' light matter (atoms). This has also only recently been found as single atoms floating in space between galaxies and solar systems.

We have neither observed dark matter and evergy and nor do we know what it is or what it is made off - but we know it is there as it is 'the rest of the mathematical equation', - it is what holds the universe that we know, all together.

We are more akin to holograms, creatures of light and with little substance. What we see as 'substance' in our universe: rocks, trees, houses, other creatures, are the same as us. These things seem of density and substance to us as we are made of the same stuff, but also likely have no substance at all compared to dark matter.

We are the light shining in the darkness.

Some scientists are looking for the 'sub-atomic material' in our brains - they think it is what makes consciousness work, a very interesting concept, but they are looking for sub-atomic particles - I think they won't find them because it is likely 'waves' they should be looking for - and 'waves' cannot be seen and certainly cannot be fixed in time and space.

Even more interesting/intriguing are 'black holes' - and they have now been found to be numerous throughout the universe including a giant one in the centre of our own 'Milky way' galaxy.

It was the collision of two black holes that provided the recent evidence for Einstein's 'missing' but predicted gravitational waves. Using the world's most sophisticated detector, the scientists listened for 20 thousandths of a second as two giant black holes, one 35 times the mass of the sun, the other slightly smaller, circled around each other. A pair of detectors, sitting 3000 kilometres apart in Livingston, Louisiana, and Hanford, Washington, used lasers to pick up tiny variations in space-time that could be caused by a passing gravitational wave.

Physicists have also discovered that when matter (things made of atoms) is sucked into a black hole - the matter surely goes in but they say the 'data' (a 'blueprint' for all the matter that has been sucked in, say a couple of planets and stars) remains this side of the black hole. I think that 'data' may be the 'quantum wave' state of all the atoms sucked in.

Why that is the case is still way beyond me but it does seem like a universe building (or destroying) exercise.

Maybe we all have a very important job to do as conscious life/observers - the business of a universe to dream up.

It does seem a little more important than our every day obsession with trivial pursuits, healthy profits and exacting the maximum value from our employees. It also highlights that our planetary and universal nature is also a little more important than extracting the last resources from our over stretched, tired and unhealthy planet.

Perhaps we can take time to reflect on these higher issues and our real place and purpose in the universe as indeed - we are the universe contemplating the universe.

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