ECONOMIC CORNS OF DEMUTUALIZATION OF EXCHANGES: PREDICTING ROBUST FINANCIAL DRIVERS OF DEMUTUALIZATION USING PROBIT EXTREME BOUNDS ANALYSIS

Abdul Wahid ¹ and Muhammad Zubair Mumtaz ²

Abstract

The aim of this study is to examine the economic corns of demutualization and gauge the stability and soundness of demutualized indices and predict financial drivers of demutualization using Probit Extreme Bounds Analysis. The sample of the study includes 29 exchanges of the World. We find that demutualized exchanges are more attractive in case of hot and stable state markets than full-fledged local mutual exchanges. Conversely, market capitalization is categorized as a robust financial driver influencing exchanges propensity to demutualize. In addition, this study finds that demutualization of exchanges leads towards international alliances, market integration, unfold flourishing and growth avenues which enhance potential synergies between stock market related activities and therefore lead to stock market growth.

Keywords: Demutualization; Financial Drivers; Economic Corns; Probit Extreme Bounds Analysis

JEL Classification: F 310

Introduction

Over the last two decades, a large number of studies have been conducted on the demutualization of exchanges regarding globalization and technology advancement (Akhtar, 2002), market risk comprising self-interest of demutualized and self-listed exchanges (Worthington & Higgs, 2006), improve efficiency after demutualization (Serifsoy, 2007). With regard to demutualization of exchanges, a question arises that how demutualization enhance the financial performance (Tahir & Sial, 2013), stock market growth (Sial, Talib, Ashkanani, & Alam, 2015) and the role of the mutual exchanges became blurred—which is a concept of market ‘disruption’ leading to the demutualization?

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Earlier studies (Akhtar, 2002 & Steil 2002) identified various causes in terms of non-financial drivers of demutualization such as up-gradation of technology (Akhtar, 2002 and Steil, 2002), confidence building of investors-participation in decision making of exchanges (Steil, 2002 and Fleckner, 2005), and alternative trading systems and governance structure of exchanges (Morsy, 2010). In contrast, other researchers indicated different consequences of demutualization with regard to conflict of interest-combination of trading right (self-interest pursuing) and decision making right (as a regulatory body) to exchanges (Ahmed, et al., 2011; Islam & Islam, 2011), self-listing (legal issues) (Macey & O’Hara 2002) and financial benefits i.e. wealth maximization of shareholders-improvement in financial performance (Tahir & Sial 2013), and development in stock market activities (Carpentier, L’Her, & Suret 2010 and Sail et al., 2015). However, still it is a gray area where financial researchers have long been interested in financial derivers of demutualization. The robust financial driver of demutualization is explicitly highlighted by Klingebiel, Claessens, and Schmukler (2002) in the World Bank report. Several researchers argued that migration of order flow (reduction in market capitalization) is a robust financial driver that plays a vital role in exchange’s propensity to demutualize, however, they neither fully agreed on, nor rigorously examined it. According to the World Bank “Powerful trends of internationalization and migration of order flow are putting pressures on stock exchanges around the world. For some exchanges, already more than half of trading and listing has migrated off-shore. Migration makes it difficult for countries to sustain a full-fledged local stock exchange” (Klingebiel, Claessens & Schmukler 2002).

This gap in the literature appeals to develop linkage between mobilizations of financial resources and exchange’s propensity to demutualize which could be a new concept in economic and financial literature. In this backdrop, this study attempts to improve the theoretical and conceptual advancement from the perspective of economic and finance by finding answers to three research questions. First, do investor and companies emphasize to invest or list on the demutualized exchanges? Second, what is the robust financial factor that influence exchange’s propensity to demutualize? Third, how did exchanges react during the financial crisis from 2007 to 2008?

**Criteria of Demutualization**

Alternatively, traditional mutual exchanges were considered as “Club of Brokers” and the image and value of the exchange was recognized by restricting access and operating monopolist in market (Akhtar, 2002). Under these exchanges, member of the exchanges got quasi or monopolistic rights on trading (Ahmed, Butt & Kashif-Ur-Rehman 2011). This restriction eventually impeded the ability of the listed companies to react quickly to different positive and negative sentiments of the market. At the same time, listed companies can easily list their securities around the world for trading (You, Lucey & Shu, 2013) and can attract investors toward their securities effectively and efficiently through controlling their operations located in any corner of the world (Sial, Talib, Ashkanani & Alam 2015). As a result, listed companies migrated from local full-fledged mutual association to interna-
Globalized free market economy generated constant pressures on mutual exchanges to shift their market orientation from local and member based entities to an international level (Sial, Talib, Ashkanani & Alam, 2015) and alliances among exchanges (Aizenman, 2015) to maximize economies of scale and user-friendliness (Akhtar, 2002; Baileya, Karolyi & Salva, 2006 and Morsy & Rwegasira, 2010) and replaced the age-old reliance (Castelle, Millo, Benunza, & Lubin, 2016). Consequently, across the globe stock exchanges have been rethinking and reframing their working models for their existence in an integrated global market. According to the notion of Klingebiel, Claessens, and Schmukler, (2002) “Migration makes it difficult for countries to sustain a full-fledged local stock exchange” and propose that advancement in technology, globalization and mutual governance structure are not potential triggers of delutization but robust driver of demutualization is reduction in capital market.

**Demutualization of Exchanges**

Akhtar (2002) defined demutualization as “change in legal status of the exchange from a mutual association with one vote per member (and possibly consensus-based decision making), into a company limited by shares, with one vote per share (with majority-based decision making)”. It refers to a strategic change in the working constitution and legal framework of exchanges. Sequentially, it posits change of existing broker’s membership rights by converting ownership rights and assigning a certain value per right. Once the monetization of rights of members is completed, the members can opt to convert their right to own or to sell off his rights to nonmembers (Akhtar, 2002). In early 1990, demutualization process started and the pioneer of this paradigm shift observed from an European Stock Exchange for instance, Stockholm Stock Exchange demutualized in 1993 (Tahir & Sial, 2013). Over the time, 11 stock exchanges had been demutualized in 1999 and by early 2002 it reached to twenty seven. Several other exchanges are either considering demutualization or already having stated their intent to do so (Akhtar, 2002). This process continued, and presently it has burgeoned to over 27 demutualized public listed stock exchanges all over the world (World Federation of Exchanges, 2012).

**Aftermath of Demutualization**

In a backdrop to it, demutualized exchanges created optimal matching of their buying and selling orders of customers at lower transaction costs, while providing transparent services considering price transparency, trading secrecy and extended trading hours. These exchanges encouraged global brokers for price-match within their own order-stock and only report the net position as a trade to the exchange (Akhtar, 2002). This paradigm shift has various corns in different perspective from restructuring of organizations involved in enhancement of trading magnitudes e.g. 52% of stock market capitalization is related to demutualized exchanges. In Asia, demutualized stock exchanges now account for 76% of the region's market capitalization (Nikmanesh, 2016). It is not only limited to enhancement of capitalization but also increase trading activities like NASDAQ which accounted for 45% of shares traded (compared to 25.5% in 1999). It also helps the exchanges to grow the capital.
market of the country by integrating it with world exchanges which encourage the company’s concentration towards the foreign market for the risk mitigation through diversified pool of investments (Hussain, Timo Korkeamäki, & Hasan, 2015). Integration with emerging and developed stock markets is beneficial for domestic and local exchanges that increase the domestic prices by enhancing the ability of the domestic stock market to provide the diversification and liquidity.

Hypothesis

We hypothesize our study as:

H1: The reduction in market capitalization of an exchange due to outflow of investment towards international market (Cross-Listing and Repository certificates) indicates a significant influence on an exchange's propensity to demutualize.

H2: The decrease in share trading volume of an exchange exerts a significant influence on an exchange's propensity to demutualize.

H3: The highly volatile index of an exchange exerts a significant influence on an exchange's propensity to demutualize.

H4: Migration of listed companies (Cross-Listing) from domestic exchange to international developed exchanges exert a significant influence on an exchange's propensity to demutualize

Data and Sample

Our dependent variable (decision of demutualization of exchanges) is binary representing the decision of exchanges to demutualize or not. We consider 29 stock exchanges from all over the world which were the member of World Federation of Exchanges (WFE). The sample was selected by using stratified proportionate techniques and within strata we used systematic sampling techniques. Out of 29 stock exchanges, 15 stock exchanges were demutualized and 14 stock exchanges related to mutual association. The data of the selected exchanges comprised during the period from 1990 to 2012 and provided by world federation of exchanges.

The Econometric Methodology

The econometric methodology of this study is divided into three steps by addressing three fundamental research questions. First, we examine the research question, ‘Do investor and companies prioritize to invest on the exchanges-demutualized exchanges?’ where in researchers applied Independent sample t-test. This technique is used to find the difference between the mean score of demutualized and mutual exchanges financial indicators such as listed companies, index, trading volume and market capitalization. Econometric equation of the Independent Sample T-Test is as shown below.

\[
t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{s_{\bar{x}_1 - \bar{x}_2}}
\]

Second, the researchers investigate that “what are the robust financial factors that influences the exchange’s propensity to demutualize?’ To answer this question, this study employed the Probit Extreme Bounds Analysis (PEBA). Initially, EBA method was conceptually constructed by Leamer
exchanges became blurred—which is a concept of market ‘disruption’ leading to the demutualization?

Demutualization; Financial Drivers; Economic Corners; Probit Extreme Bounds Analysis

demutualized exchanges are more attractive in case of hot and stable state markets than full-fledged

The aim of this study is to examine the economic corners of demutualization and gauge the stability and

resources and exchange’s propensity to demutualize which could be a new concept in economic and

"Powerful trends of internationalization and migration of order flow are putting pressures on stock

markets is beneficial for domestic and local exchanges that increase the domestic prices by enhancing

In the third step, the objective of the researchers is to inquire ‘how did exchanges react during financial crisis 2007-08?’ To fulfill this objective, researchers used the seasonality method which is a behavior and movement of time series data in which the data experiences significant changes occurring in that specific period of time due to some extra-ordinary situation. In this study, seasonality refers to the fluctuations in stock indexes of demutualized and mutual exchanges that occurred due to financial crisis in 2007-08 (Fedderke & Marinkov, 2016). For this purpose, researchers used separately OLS for demutualized and mutual exchanges to find the behavior of indexes during the financial crisis. Dependent variable of the study is considered as stock index. Independent variables are divided into three categories i.e. before the financial crisis years (BC1-BC16), during financial years 2007-08 (CRS1-CRS2) and after financial crisis 2009-10 (ACRS1-ACRS2). These independent variables are quantified by 1 for same year and 0 for otherwise (Hussain, Timo Korkeamäki, & Hasan, 2015). Data of these indexes was from 1990 to 2010 (21 years). Econometric equation for this

\[ Y_t = \phi_0 + \phi_1 D_{t \ BC1-BC16} + \phi_2 D_{t \ CRS1-CRS2} + \phi_3 D_{t \ ACRS1-ACRS2} + \mu_t \]
approach is as below:

In this model, we have only qualitative Repressor-different categories of years, assigning the value of 1 if the observation belongs to that year and 0 if it belongs to any other years. Where $Y_{t}$=average annual index of demutualized and mutual exchanges, $D_{t}$=1 if the observation relating to same year, and $D_{t}$= 0 otherwise (any year other than that year).

**Corns of Demutualization**

Table 1 indicates that there is no significant difference in the mean score for Index of mutual (7331.40 points) and demutualized exchanges (6678.30 points) with mean difference 653.101 points conditions; t-value =0.477 which is insignificant. (p>.05). It infers that there is no significant difference between Indexes of mutual exchanges and demutualized exchanges. Similarly, there is a significant difference between the mean score for market capitalization of mutual (243415.50 US$) and demutualized exchanges (1322071.32US$) with mean difference -1078655.812, t=-6.994 which indicate significant difference at 99% confidence level (p<.001). This explains that demutualized exchanges have more volume/magnitude than mutual exchanges. Likewise, there is a significant difference in the mean score for number of listed companies of mutual (537.80) and demutualized exchanges (1140.56 listed companies) with mean difference -602.758, t=-7.473 which indicates a significant difference at 99% confidence level (p<.001). This shows that more companies which are listed on demutualized exchanges due to access to diversified pool of investments, international alliances and flexible working atmosphere. The results regarding trading volume explains that (active participatory shares) mean score for trading volume of mutual (345562.13 US$) and demutualized exchanges (1898705.48 US$) with mean difference -1553143.355, t value =-5.513 referring a significant difference (p<.001). In short, the differences between mutual and demutualized exchanges in term of trading magnitude are very high which inferred that demutualized markets are more hot and active in trading. This result supports our first research question about the economic corns of demutualization.

It is also found that demutualized exchanges raised fund by offering publicly like Pakistan Stock exchange (PSX) sold its 40% shares to Chinese consortium (International The News, 2017) to finance their activities and projects may also have significant role in grooming or boosting of exchange’s working and market efficiency. After the involvement of strategic partner, decision of exchanges is influenced by international partner, in order to preserve the right of strategic partner and market as well.
Table 1

Result of Independent sample t-Test

<table>
<thead>
<tr>
<th></th>
<th>Mutual Association</th>
<th>Demutualized Exchanges</th>
<th>Independent T-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td>Mean difference</td>
</tr>
<tr>
<td>Index</td>
<td>7331</td>
<td>6678</td>
<td>653</td>
</tr>
<tr>
<td>Market Capitalization</td>
<td>243415</td>
<td>1322071</td>
<td>-1078655</td>
</tr>
<tr>
<td>No. of Listed Companies</td>
<td>537</td>
<td>1140</td>
<td>-602</td>
</tr>
<tr>
<td>Trading Magnitude</td>
<td>345562</td>
<td>1898705</td>
<td>-1553143</td>
</tr>
</tbody>
</table>

** indicates the significant difference at 99% confidence (p<0.01)

Robust Financial Derivers of Demutualization

Probit Extreme Bounds Analysis is used to find the robust financial drivers of demutualization. There is only one variable of interest and four vectors of Regressor X such as listed companies (L), index (I), trading volume (T) and market capitalization (C). To make different combination of equation, we used factorial mathematical technique to develop all possible equations for one variable of interest (demutualization) as shown in table 2 in term of model 1 to 4. For robust financial drivers, we adopt three methods i.e. Δ Pseudo R2, Change in the sign of variable of interest and the co-efficient and significance level. The result of Table 2 indicates that market capitalization is categorized as robust financial drivers of demutualization by keeping in view three indicators of selection i.e. Δ Pseudo R2, Change in the sign of variable of interest and co-efficient and significance level. Market capitalization secured 100% validity in term of significant level (all combinations are significant at 99% confidence level), consistency in sign (maintain +Ve in all possible combination) and highest Pseudo R2(0.1047). Similarly, marginal effect of market capitalization is also significant and it has 27% influence in exchange’s propensity to demutualize. Second Robust financial driver is listing magnitude, consistency in sign (maintain +Ve in all possible combination) and highest Pseudo R2 (0.1047). Other variables such as index is excluded due to insignificant results (all combinations are insignificant at 95% confidence level). Similarly, trading volume is excluded due to inconsistency in sign. We conclude that market capitalization is a robust financial driver which influences the exchange’s propensity to demutualize. This result is also consistent with prior literature World Bank report “Powerful trends of internationalization and migration of order flow (Cross-listing) are putting pressures on stock exchanges around the world. For some exchanges, already more than half of trading and listing has migrated off-shore. Migration makes it difficult for countries to sustain a full-fledged local stock exchange” (Klingebiel, Claessens, & Schmukler, 2002).
Table 2

Result of Probit Extreme Bounds Analysis and Marginal effects

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable of Interest</th>
<th>Combination</th>
<th>( \text{Adj-PR}^2 )</th>
<th>Sign</th>
<th>( P )-Value</th>
<th>Validity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Index</td>
<td>Y=I+C+L</td>
<td>0.1045</td>
<td>+Ve</td>
<td>0.060</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y=I+C+T</td>
<td>0.1033</td>
<td>+Ve</td>
<td>0.978</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y=I+L+T</td>
<td>0.0709</td>
<td>+Ve</td>
<td>0.604</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>Capitalization</td>
<td>Y=C+I+L</td>
<td>0.1045</td>
<td>+Ve</td>
<td>0.000</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y=C+I+T</td>
<td>0.1033</td>
<td>+Ve</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y=C+L+T</td>
<td>0.1047</td>
<td>+Ve</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>Listing Trend</td>
<td>Y=L+I+C</td>
<td>0.1045</td>
<td>+Ve</td>
<td>0.290</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y=L+I+T</td>
<td>0.0789</td>
<td>+Ve</td>
<td>0.000</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y=L+C+T</td>
<td>0.1047</td>
<td>+Ve</td>
<td>0.280</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>Trading Volume</td>
<td>Y=T+I+C</td>
<td>0.1033</td>
<td>-Ve</td>
<td>0.670</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y=T+I+L</td>
<td>0.0789</td>
<td>+Ve</td>
<td>0.017</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Y=T+C+L</td>
<td>0.1047</td>
<td>-Ve</td>
<td>0.619</td>
<td></td>
</tr>
</tbody>
</table>

\[ B \] \text{ (Mean) } \beta X \quad \text{Marginal Effects}

<table>
<thead>
<tr>
<th>Variable</th>
<th>( B )</th>
<th>X (Mean)</th>
<th>( \beta X )</th>
<th>Marginal Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.285948</td>
<td>1</td>
<td>-0.285948</td>
<td></td>
</tr>
<tr>
<td>Market Capitalization</td>
<td>5.36E-07</td>
<td>798456.1</td>
<td>0.42797247</td>
<td>1.2762E-07**</td>
</tr>
<tr>
<td>No. of Listed Companies</td>
<td>9.10E-05</td>
<td>845.1478</td>
<td>0.07690845</td>
<td>2.16668E-05</td>
</tr>
<tr>
<td>Index</td>
<td>2.53E-07</td>
<td>6988.641</td>
<td>0.001768126</td>
<td>6.02384E-08</td>
</tr>
<tr>
<td>Trading Magnitude</td>
<td>-1.56E-08</td>
<td>1127509</td>
<td>-0.01758914</td>
<td>-3.7143E-09</td>
</tr>
</tbody>
</table>

\[ P=\exp(-1/2*Z^2)/\sqrt{2*3.14}, \quad Z= (\text{Sum of BX}) \quad \text{Marginal Effects} = \beta P(1-P) \]

**Indicate effects of Regressor at 99% significant level

Financial Crisis and Response of Demutualized Indices

Financial crisis adversely affect any stock exchange of the World. It is, therefore, important to examine the behavior and stability of demutualized and mutual indexes. We consider financial crisis occurred during the period from 2007 and 2008 using OLS method with a qualitative Regressor (i.e. dummy). Table 3 shows the results of OLS and indicates that demutualized exchanges are more stable and comprehensive. The change in \( \beta \) coefficient is recorded for mutual exchanges in first crisis
The aim of this study is to examine the economic costs of demutualization and gauge the stability and questions. First, do investor and companies emphasize to invest or list on the demutualized exchange, however, they neither fully agreed on, nor rigorously examined it. According to the World Bank report. Several researchers argued that migration of order flow (reduction in market capitalization) is a robust financial driver that plays a vital role in exchange’s propensity to demutualize. (Ahmed, et al., 2011; Islam & Islam, 2011), self-listing (legal driver of demutualization is explicitly highlighted by Klingebiel, Claessens, and Schmukler (2002) in Fleckner, 2005), and alternative trading systems and governance structure of exchanges (Morsy, 2010). In contrast, other researchers indicated different consequences of demutualization with regard to ‘Remutualization’ (Michie & Llewellyn, 2010). As a result, researchers emphasized on traditional restructuring of organizations involved in enhancement of trading magnitudes e.g. 52% of stock selling orders of customers at lower transaction costs, while providing transparent services consider.

Aftermath of Demutualization

The econometric methodology of this study is divided into three steps by addressing three dependent variables i.e. number of listed companies, market index and trading volume. Independent variables such as index (I), trading volume (T) and market capitalization (C). To make various combination of equation, we adopt three methods i.e. Δ Pseudo R2, Change in the sign of variable of interest and the co-efficient magnitude, consistency in sign (maintain +Ve in all possible combination) and highest Pseudo R2 out the robust determinants. It is a unique contribution of the present study wherein we employ EBA method to find the robust financial drivers of demutualization. (World Federation of Exchanges. 2012, January 10). Wherever, it was used in earlier studies, it was executed only by using OLS to find the robust determinants. It is a unique contribution of the present study wherein we employ EBA (demutualization). Wherever, it was used in earlier studies, it was executed only by using OLS to find the robust determinants. It is a unique contribution of the present study wherein we employ EBA (demutualization). Wherever, it was used in earlier studies, it was executed only by using OLS to find the robust determinants. It is a unique contribution of the present study wherein we employ EBA (demutualization). Wherever, it was used in earlier studies, it was executed only by using OLS to find the robust determinants.

Table 3

Comparison between Mutual and Demutualized Exchanges

<table>
<thead>
<tr>
<th>Years</th>
<th>Mutual Exchanges</th>
<th>Demutualized Exchanges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>BC1</td>
<td>2191.744</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC2</td>
<td>1899.563</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC3</td>
<td>2745.667</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC4</td>
<td>2343.938</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC5</td>
<td>2536.946</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC6</td>
<td>2965.399</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC7</td>
<td>3854.422</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC8</td>
<td>3424.615</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC9</td>
<td>5169.254</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC10</td>
<td>4323.82</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC11</td>
<td>4266.821</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC12</td>
<td>4525.658</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC13</td>
<td>7316.789</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC14</td>
<td>8998.436</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC15</td>
<td>11813.25**</td>
<td>4898.511</td>
</tr>
<tr>
<td>BC16</td>
<td>15388.61**</td>
<td>4898.511</td>
</tr>
<tr>
<td>CR1</td>
<td>18111.19**</td>
<td>4898.511</td>
</tr>
<tr>
<td>CR2</td>
<td>9897.134*</td>
<td>4898.511</td>
</tr>
<tr>
<td>ACR1</td>
<td>17573.72**</td>
<td>4898.511</td>
</tr>
<tr>
<td>ACR2</td>
<td>23647.49**</td>
<td>4898.511</td>
</tr>
</tbody>
</table>

*and ** indicates the significant effect at 95% (p<.05) and 99% confidence (p<.01) respectively.
Conclusion

This paper investigates the change in pattern of the business activities and legal status of the exchange between 1993 and 2012 and seeks to determine the robust financial driver after the demutualization of exchanges identifying potential differences in technical efficiency and market performance attributing to this change in pattern. The results of the study show that the demutualization of exchange’s strategies are driven by the motive of efficiency-enhancement i.e. improvement in market capitalization. We identified that market performance in terms of market capitalization, share trading magnitude and listing trend of profit-oriented-demutualized exchanges was better as compared to mutual exchanges. We hypothesized that the sources for improving performances lie in the diverging ownership structures of demutualized exchanges i.e. 40% institutional shareholding which results in getting objectives of profit orientation and market growth. In case of publicly listed firm, the emphasis to rely on self-generated revenues and resources from their diversified business activities. We find that the demutualization of exchanges is more efficient and growth opportunities are more as compared to full-fledged local mutual exchanges. This finding suggests that improvement in performance is occurred due to synergies of different ownership structure, profit motives and international alliance once exchanges are mutualized.

This study addresses an important research area emphasizing whether demutualization of exchanges is more persistency and stabilize in stock index of respective exchanges. On the one side, overall market efficiency and performance of demutualized exchanges seems to be actually higher than mutual exchanges. However, it still remains to be analyzed how these exchanges can further enhance their market performance and growth by integrating their activities with international forum and involving more diversified strategic partners in their governance structure.

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