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Scope of a Common Trading Platform for Brokerage Firms in Bangladesh Capital Market

Abstract

Financial sector in Bangladesh has become digital friendly over the years, which has reflected on better customer satisfaction and operational efficiency. However, for Capital Market Intermediaries, this has not been reflected, except for some few major players. In this paper we are trying to identify the scope of a common digital platform which can be used for majority brokerage houses and the benefits this can provide. We have also tried to figure out the key considerations for which digital platforms have not been popularized yet and what can be done to popularize this. We believe that, with the support being provided by BSEC, a common platform can be readily introduced and can be introduced better customer satisfaction and operational management.

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1. Introduction

It is often said that a stock market is the reflector of a country's economy. And brokerage houses are the reflectors of the stock market in the country. Being a member of the stock exchanges, brokerage firms provide transactional services to their customer and earn commission from each transaction performed. Before 1998, broker houses were not very active and dealt with paper shares. Then, in 2000, Central Depository Bangladesh Limited (CDBL) was incorporated as a public limited company, which ushered the way of the digital era in Bangladesh capital market. Moving forward, brokerage firms are now moving toward the digital transaction phase. Some of them have already introduced a transactional platform of their

own. Dhaka Stock Exchange, the premier bourse of the country, also has its own platform. Still, the number of participants in digital transactions for investors is much lower than expected. It is often considered that firms with a relatively small number of customers and financial capacity do not want to proceed with the digital trading platform as it is capital-intensive and requires experienced human resources. However, on the plus side, this platform ensures customer satisfaction, ease of transaction and faster settlement, and operational efficiency. Based on the benefits, it is being proposed that a common digital platform where all the brokerage houses would be enlisted should be introduced.

2. Literature Review

This paper tries to examine the scope of implementing brokerage platforms to address the requirements of customers while increasing the ease of use and generating customer satisfaction. It is significant to define the term – brokerage platform, before diving deep into the paper. The key literature for this paper comes from the initiative taken by the Bangladesh Securities & Exchange Commission (BSEC) to hand over the certification of Financial Information Exchange (FIX) for installing Order Management System (OMS) to two of the leading brokerage firms in Bangladesh. The Chairman of Bangladesh Securities and Exchange Commission (BSEC), Prof. Shibli Rubayat UI Islam handed over the FIX Certification to Lanka Bangla Securities and City Brokerage Limited on December 5, 2021. This certification is handed over as the fourth stage of introducing OMS and this is awarded as a confirmation of having adequate knowledge of OMS, by the brokerage firms.

Currently, there are 374 stock brokerage/dealer firms on the 2 Bourses of Bangladesh. As per reports from BSEC, only 35 brokerage firms have applied for the introduction of their own Order Management Software, for the automation of customer trades and settlement. This leaves a huge gap between the customers and brokerage firms who can or want to implement a technological platform.

By offering faster, more efficient trade execution along with higher quality company research and analytics, brokers can offer better customer service and engagement to increase profitability. Adoption of appropriate technology will benefit and encourage not only the demand side, but also the supply side, as more high-quality companies will be interested in entering the capital markets. If we can bridge the gap between these two areas using the technological platform, the overall market condition shall improve, and we shall be

able to add more investors to the market and gain more confidence of the investors, resulting in a better capital market eco-system.

We also believe technology can help make investing in stocks a more mainstream activity for a broader range of people from all sorts of income groups. Integrating online banking accounts is a mainstream feature of the technological platform. In addition, we can also talk about the integration of Mobile Financial Services (MFS), like bKash, Nagad, and others, into the system. This will ensure participation from investors of all income groups.

We also focus on the remarkable growth of China's online trading ecosystem, the largest in the world with 160 million investors. As the DSE's strategic partner, effective close collaboration and technology transfer with Shenzhen and Shanghai Exchanges is critical to rapidly developing and implementing the transformation roadmap. We also discuss the successful case of an online trading app from India, which has been running quite successfully and has changed the investment trading mechanism of the country rapidly.

3. Objectives

The main objective of this paper is to explore the state of e-Trading as perceived by brokers, clients, and e-service providers. The specific objectives are:

- To determine the growth and development status of e-Trading in Bangladesh
- To understand the customer, broker, and e-service provider perception of online trading
- To see the type of technology used by the stock exchange and by the Customers in e-trading
- To identify the main barriers to e-Trading as perceived by the user groups

How It Can Benefit Users

1. Lower Transaction Costs: Typical brokerage rates in Bangladesh are in

the range of 0.25% to 1.5%. In the USA, brokerage costs are about 1%, and in India, this is around 0.20% to 0.65%. In addition to bringing down the costs, electronic transfer of securities speeds up the entire process.

2. **Transparency:** E-broking empowers customers to transact directly on the stock exchange and de-layers the whole process, thereby improving transparency. The user does not need to rely on the broker's "word-of-mouth" or "transaction" slips for confirmation of the price at which his trade was conducted.
3. **Convenience:** Online share trading is available merely at the click of a button, in the comfort of home or office, thus making it much more convenient for the customers to trade anytime. Also, with 'limit-based' orders being allowed, customers can place their orders even during the 'nontrading' hours, which are executed at the earliest trading possibility.
4. **Procedural benefits:** Unlike the earlier scenario, where the customers had to physically go to the broker to complete the formalities of trade, under the e-trading paradigm, these procedures are done away with. The entire cycle of trade (like placing the order, transfer of funds, transfer of securities, etc.) is done electronically, and it speeds up the whole process.
5. **Independency to trade:** If the trading system gets in online more users will feel convenient to trade through portal and those who are in remote areas or for those who are thinking about to get in the marketplace. Which ultimately will increase the trade volume in the market.

How it Benefits Traders

1. **Easier risk management:** Under the online mechanism, the system would first check the status of funds available to the client in his bank account and only then allow the trade to take place. This process, thus, substantially reduces the exposure of the broker to

client-related credit and payment risks.

2. **Greater business potential:** The new paradigm of e-broking, which allows simple, convenient, and transparent transactions, may encourage more participants to trade. It is expected that the introduction of e-broking will expand the market horizons, thus, resulting in better business for brokers in the long term.
3. **Lower staff costs:** Automation of the broking processes results in reduced manpower requirements, flexibility of time, less infrastructure costs etc., offering significant cost savings to the broker.
4. **Reduces Work-load:** If we look at the mobile finance systems (MFS) like bKash, Nagad, Rocket etc. we can clearly see how much in volume it reduces the pressure of work for a bank by giving them freedom and a convenient facility to do transaction without coming and waiting in long ques in bank. So, in the same way, online trading can also reduce the client hassle and work-load of a brokerage house. And more retail clients will be listed in the market day by day if the system provides more customer-friendly trading facility.

4. Current Practices in Bangladesh

Bangladesh has a largely untapped opportunity to leverage technology to transform its capital markets. The Dhaka Stock Exchange (DSE), the country's premier exchange, began operations in 1986. In 1993, the Bangladesh Securities and Exchange Commission (BSEC) was established as the regulator of the country's capital markets through the enactment of the Bangladesh Securities and Exchange Commission Act, 1993. Chittagong Stock Exchange (CSE), the country's second stock exchange, was established in 1995. At the end of April '21, the DSE had a market capitalization of BDT 5,038.69 billion and the CSE had a market capitalization of BDT 3,973.52. Currently, DSE has 382 listed stocks and closed-end mutual funds and CSE has 211. The two exchange-

es have a lot of overlap in listed stocks, and it is possible to buy shares of a company on one exchange and sell them on the other. DSE dominates turnover, with more than 90% of the total trade volume on any given day.

Even though the capital market started functioning from the early 80s, due to the lack of infrastructure, a socioeconomic crisis, government focus, and political instability, activity was limited until the 1990s. The 1996 capital market crash triggered reforms, such as the introduction of electronic trading in 1998, the establishment of Central Depository Bangladesh Limited (CDBL) in 2000, and the formation of the independent Central Depository System (CDS) in 2004. These reforms, coupled with the Grameenphone IPO in 2007, helped build investor confidence, making DSE the second highest-performing exchange in the world. The IPO book-building method, introduced in 2010, represented a major change from prior fixed-price IPOs. In 2013, the DSE introduced the DSE Broad Index (DSEX), the DSE 30 Index (DS30), and the DSEX Shariah Index (DSES) in collaboration with S&P Dow Jones Indices. In 2013, the exchange was demutualized. In 2018, a consortium of the Shenzhen Stock Exchange and Shanghai Stock Exchange became the strategic partners of DSE, with a 25% shareholding and plans for technological upgrades, new product development, and promotion of Bangladeshi indexes in China.

Despite all the changes that have gone through the capital market over the years, the COVID Crisis of 2020 has acted as a catalyst for technological change and transformation. The DSE and CSE were the only equity markets in the world to remain closed from mid-March to June 2020 during the COVID crisis, as a result of the absence of an effective online trading platform. The negative impact on confidence in the market among both foreign and local investors cannot be overstated. Simply put, if a bank closed its doors and

prevented depositors from withdrawing their money for 2.5 months, it would not only risk a run on that bank but also undermine confidence in the whole banking system. The capital markets are no different. Moreover, the absence of any revenues for brokers over the period of the shutdown was a painful reminder of the cost of the delay in adopting new technologies.

The ratio of market capitalization to GDP (at current market price) stood at 13.00 percent at the end of May 2022, which was 13.50 percent at the end of April 2022 and 18.02 percent in the corresponding month of the previous year, as mentioned in the below table.

Table 1: Market Capitalization to GDP Ratio

End of Month	Market Capitalization to GDP ratio
May-2022	13.00
April-2022	13.50
March-2022	13.57
February-2022	13.67
January-2022	14.01
December-2021	13.64
November-2021	13.44
October-2021	14.07
September-2021	14.62
August-2021	14.03
July-2021	13.44
June-2021	18.39
May-2021	18.02

The stock market is not a good representation of the economy, with many companies remaining private. As an example, the ready-made garment industry, which makes up 80% of the country's exports, has almost no presence on the stock exchange. The market has also performed poorly. From 2014 through 2019, the DSEX had a cumulative aggregate geometric

return of 0.08%, in contrast to nominal GDP growth of 12%–14% per year.

There are about 2.55 million Beneficiary Owner's (BO) accounts in Bangladesh. This is usually a uniquely identifiable account for buyers and sellers of instruments, and therefore it is a precondition for trading in the stock market. Active stock trading occurs in only about 2.53 million BO accounts as of June 30, 2021, according to Central Depository Bangladesh Limited (CDBL). However, which implies that the stock market is not a popular investment destination for the vast majority of the Bangladeshi population of 170 million–180 million people. Fixed-income securities—such as fixed deposits and national savings certificates – and land tend to dominate asset allocation.

In terms of turnover, the market is dominated by local investors. Over the years, however, foreign institutional investors have been increasing their participation in daily activity. Compared with a daily market

share of 1%–2%, foreign institutional investors in the last few years contributed around 6%–8% of daily transactions. According to an article by Mr. Protap Kumar Gosh, Khulna University, and Sutap Kumar Ghosh, Islamic University Bangladesh (Retail Investors' Responsibilities in Stock Market Imperfection in Bangladesh: An Empirical Study, Asian Journal of Finance and Accounting – September 2015), most of our retail investors were male, and their age limit was between 25 to 40 years. They found that the education level of 32% of our respondents was higher secondary level and below, and it represented that having this education level, those retail investors might not have the sophisticated stock valuation skills. Service holders and businessmen were the dominant investors in the Bangladeshi stock market. When analyzed the amount of investment of the respondents, they saw that most of the respondents were micro investors having investments below BDT 500,000. A summary of the study is as follows:

Table 2: Summary of a Previous Study on Investor's Background

Demographic Features	Classes	Frequency	Percentage
Gender	Male	133	88.7
	Female	17	11.3
Age	Lowest to 25	18	12.0
	25 to 40	99	66.0
	40 & above	33	22.0
Educational Level	HSC & Below	48	32.0
	Graduate	44	29.3
	Post Graduate	58	38.7
Profession	Service Holder	54	36.0
	Business	74	49.3
	Others	22	14.7
Investment (in BDT)	Below 500,000	96	64.0
	500,000 to 1,000,000	33	22.0
	1,000,000 to 1,500,000	7	4.7
	Above 1,500,000	14	9.3

Since interest rates are low (FDR rates capped at 7%), there should be greater interest for investors to consider stock-market investments. But retail investors need greater reassurance both in the quality of information available about companies, investment advice, transparency, and in improved governance in the capital markets. This is where the technology platform can play a crucial role. At present, the DSE mobile app and its desktop version only has around 77,064 users on December 30, 2021. The OMS platforms of Lanka Bangla Securities and City Brokerage Limited have an unofficial combined user base of 50,000 users, with overlapping users considered.

Transactions of listed securities via the DSE-Mobile app have increased as the number of active users of this digital application has increased by 50.51 percent in the last two years. The number of active users of the DSE mobile app was 51,199 on December 30, 2019. As a result, the number of active users rose 50.51 percent or 25,865 during 2019-2021. Above 13.39 million trades were executed through the DSE-mobile app in the outgoing year of 2021, according to DSE information. During the year 2021, the premier bourse DSE saw a turnover of over Tk 426.81 billion through the DSE mobile app. Investors purchased securities worth Tk 217.82 billion while they sold securities worth above Tk 208.98 billion through the DSE-mobile app in the outgoing year of 2021.

Now the question arises as to why the smaller brokerage firms do not open their own OMS systems even if they understand that this will result in a higher margin for them. There are three major considerations here:

1. The Capex Cost associated with the technological platform implementation
2. Payment of online trading system fee for transaction which is free if manually done for both DSE and CSE
3. Lack of human resources to operate the technical platform and also the associated costs for the resources available.

Considering the benefits of that technological platform, all the capital market intermediaries, including stock brokerage firms, are interested in implementing such a platform. However, given the complexity, algorithm, and technological development requirements, it might not be an effective investment for smaller firms.

Regarding the intention of the regulators, the DSE Board has announced a new working committee to prepare a plan for online trading and technology with a preliminary assessment by the end of June. (see “DSE moves to digitalize the market fully after flak over the long closure”). The strategic investors in the DSE, the China consortium of Shenzhen (SZSE) and Shanghai (SSX) Exchanges, are among the most technologically sophisticated in the world. SZSE has more than 1,000 employees in their technology department, and there is significant potential to learn from China’s successful adaptation of technology and take their support to find the best-customized solution for Bangladesh. Also, there is an increasingly clear consensus among the broker community and indeed all major stakeholders that change is needed urgently for Bangladesh’s capital markets to achieve their long-term growth potential.

Banks and financial institutions like Bank Asia Securities, Lanka Bangla Finance, and EBL Securities are offering online trading facilities through the DSE mobile app or their trading portal like Lanka Bangla Trade Express through OMS, IDLC Internet Trading Platform, i-trade, etc. and their commission fees vary from Tk.0.25 to Tk.0.40 per transaction. On the other hand, the stock market system in Bangladesh has a purchase duration of two to three working days for some categorized stocks, whereas the global pictures show us that the minimum time to purchase could take up to intraday. And the same goes for selling stock too. It takes two to three working days to sell and get deposited the value of a stock.

Although many leading brokerage houses are operating their stock buy and sell through their own OMS, if this system keeps getting popularized and many other small brokerages are tending to open and operate their own OMS, there are chances of getting clients' information and trade confirmations manipulated, which will create inconveniences for those brokers' clients. So, what can be done to avoid such an unpleasant occurrence from even taking place, is to have a central mandatory platform where all the transactions and order confirmation notifications will be generated from. Like DSE's and CSE's own trading platforms, they will centrally monitor all the orders and transactions by which both the brokerage house and client can have notification of their transactions.

5. Practices Around the World

In 2018, a consortium of the Shenzhen Stock Exchange and Shanghai Stock

Exchange became the strategic partners of DSE, with a 25% shareholding. Hence, it is practical to see the kind of practices they implement in their country. As the COVID cases increased, the Government of Bangladesh (GoB), the overall economic condition went downwards, reflected in a DSE index at a 41-month low. Bourses were closed for two months from end-March to May. However, overall panic did not let the market perform well immediately. Right after re-opening the market, DSE turnover was at a 13-year low.

Regarding the market performance, the contrast with China is startling. As the chart below illustrates, in December and January, when coronavirus cases were growing exponentially and 60 million people were on lockdown in Hunan, trading volumes on the Shanghai composite index continued to surge. By July, Chinese stocks were hitting new cyclical highs amid surging trading volumes.

Figure 1: SSEC Weekly Turnover (Volume, in Billions)

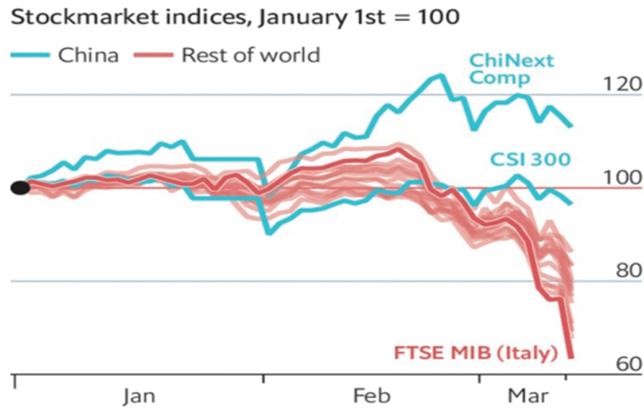


Source: Reuters

And it meant that China's stock market proved more resilient than other countries in February and March, even though China's earlier entry and exit from COVID were also factors. As of March '22, 78 online trading platforms in China offer a range of services, including low trading fees, research tools, and fast deposit and

withdrawal, easy and fast account opening and, last but not least, email and chat support. As a result, it is never difficult for investors to invest in the market and take investment decisions even if there is a COVID outside. They can take decisions based on the right prices and timings.

Figure 2: Stock Market Indices



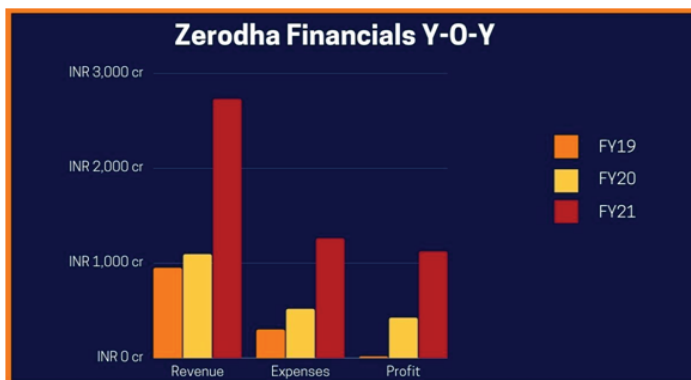
Source: *The Economist*

We can also look at the recent success of an app-based platform called “Zerodha”. Founded in August 2010 by Nithin Kamath, and Nikhil Kamath, Zerodha is an online broking company whose main objective is to provide lower costs to customers and market insights for investment. The company has grown purely on the principle of technology by giving valuable services to its customers. It is India’s number one stockbroker. It is the most popular and extensive online broker that offers services to invest in equities, currency, commodities, IPOs, and direct mutual funds. Zerodha mainly followed the “Low margin and high-volume model” business model persistently. It charges a negligible amount to the dealers for transactions because of which the exchange volume is normally

high. One more factor supporting high-profit revenues for the organization is the lower operational expenses when compared with top dealers due to its online design.

This low-cost common platform worked fantastic for the company. As of 31st March 2022, Zerodha constitutes around 17.42% of the total market share of the active clients registered on the National Stock Exchange. It has over 62.77 lakh active customers, compared to a total of over 3.50 crore active clients of all stockbrokers on the NSE. In the process, the company has also become one of the largest stock-broking platforms in India with a valuation of more than USD 2.0 billion.

Figure 3: Zerodha Financials YOY (Source: Startuptalky.com)



6. Suggestions

Creating digital platforms for capital market intermediaries is a pressing need. Over the period, we have seen how MFS has reshaped the financial services industry as a whole, and we feel this can be done for the capital market industry as well. Based on the ongoing trends worldwide, we can summarize the following steps by identifying several areas where digitization can transform capital markets—from improving the customer experience, lowering commissions, and reducing operational costs, to integrating frontier technologies like AI and partnering with innovative fintech.

1. Smart phones and gadgets should be the key to reaching out to existing investors and potential investors. The new generation of investors are Digital Natives. They have grown up alongside social media platforms like Facebook, Instagram, and WhatsApp. At the present pace of our daily lives, we do not have time to visit the brokerage firm physically or call the trader to know the market price and execute the order. Allowing a mobile-app-based or website-based investment platform can draw new investors while providing benefits to the existing ones. They can also consider investing in mutual funds or fixed income funds if they feel the market is volatile.
2. Digitization is to be used to increase cost-effectiveness and efficiency in operations and to develop additional high-margin products and services. Current market costs are higher, including manual operational costs, which can be significantly decreased if the operation is digitized.
3. Provide more market-centric data and analysis for investors for market insight in an easier manner. Most of our investors are dependent on rumors and hearsay to pick up the right instruments and scripts. They are not aware of the benefits of instruments like Mutual Funds and fixed income instruments. Market insights, in a manner understandable to the general masses, can help change this scenario.
4. Digitized Operating System to be used for enhancing customer experience and personalization. API integration with DSE/CSE shall enable the Brokerage Firms to complete the transactions quickly. Also, this can be integrated with the ERP solution of the firm, which can result in a completely automated solution that can operate with very low manual intervention.
5. Overall security implementation perspective to be considered through using technologies like Blockchain. The security aspect of a digital platform is of utmost importance; hence, implementing the platform through blockchain technology is important. Also, it should be subject to annual system audits to understand and mitigate potential security threats.

However, it is well understood that for most brokerage firms, this will not be a feasible option as the process comes with a cost that might be higher than what they are able or willing to spend. The DSE App was supposed to be the option that addresses this issue. However, as mentioned, firms are still focusing on manual transactions, mainly on the cost issue. Hence, it is suggested that a common platform, both mobile-app-based and desktop versions, be introduced at a cost of less than 50% of the existing market rates with no minimum fund requirement. Also, integration with digital payments banking systems and mobile financial services for fund management is a must to complete the eco-system.

A common, pre-integrated brokerage platform with DSE and CSE seems to be the solution that can cover all the required points. This can be implemented in the

mentioned way:

1. This platform can be operated by a third party that has the technical expertise to build and operate such a platform. It can be a mobile-based app, a desktop app, or both. Users can install the platform and start using it by downloading it.
2. All the interested brokerage firms can get integrated with the platform. After the integration is done, the name of the respective firm shall be available in the platform drop-down menu.

For any e-trading system to be successful, one should provide foolproof security, reliability, and confidentiality of data. The key success factors, and various security models that are adopted by the successful market in e-trading are to be taken into consideration carefully since just a copy of the advanced world might not work properly because indigenous factors play a very instrumental role in the process of successful implementation.

7. Potential Scope of Common/ White-label Trading Portal

As mentioned above, that there are obstacles for relatively smaller companies to implement their own OMS, not all of which are under their control. Now one of the key solutions can be a Common Platform where these firms shall be integrated, and an investor can trade on their respective firm by logging into the platform. Let us give an example of how it will work – there can be one single OMS App, let us just call it SHADHIN, which shall have 100 small brokerage firms under this. Now a user installs this app on his/her smart device, gets security validated and becomes a registered user. Then he/she can log into the app using ID and PW and select his brokerage firm from a dropdown menu. From that point forward, it becomes like a regular OMS platform for any other brokerage firm. But since the platform is commonly used

by 100 brokerage firms together, the cost and infrastructure get allocated.

Another option can be availing a white-label platform from a third-party organization. Now Bangladesh has technologically advanced companies who are capable of building such OMS platforms by themselves. A white-label product refers to products that are manufactured by a third party and sold by other parties, like retailers, with their own branding and logo. White labeling occurs when the manufacturer of an item uses the branding requested by the purchaser, or marketer, instead of its own. The end product appears as though it has been produced by the purchaser. Now the basics of an OMS are, in most cases the same, considering the parameters include Stock Items, their prices, peaks and drops, volume and overall market condition in various categories. Such a platform can be built by a local tech firm who can ensure that all the relevant basic features are included in a common platform. A small-sized brokerage firm can then talk to the tech company, see the in-built feature and decide whether they want to purchase it or not. If they decide to purchase this, the logos and branding of the brokerage firm can be done and delivered, after which the brokerage firm can start using it for their clients. Since the app will be pre-developed, it will cost less than software built from scratch.

8. Regulatory/Policy Guidelines

We are not aware of any clear guidelines under which the above-mentioned solutions are restricted. Rather, the current Commission of BSEC, led by the honorable Professor Shibli Rubayat-Ul-Islam and his team is very supportive of technological developments and initiatives that can benefit brokerage firms and investors. Also, since such initiatives do have the scope of bringing new investors into the market, we believe this should be of confidence from the current BSEC Commission, given all the technical and financial aspects are presented properly.

9. Conclusion

While technology continues to transform capital markets around the world, Bangladesh has largely lagged behind. A strategic roadmap for technology adoption in the capital markets is highly required. We also believe technology can help make investing

in stocks a more mainstream activity for a broader range of people from all sorts of income groups. We hereby submit the proposed solution to this and hope that the Bangladesh capital market reaches a sustainable long term technical and sustainable base.

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