



THE INSTITUTE OF
CHARTERED
ACCOUNTANTS
OF BANGLADESH

THE BANGLADESH ACCOUNTANT

July - September 2022

QUARTERLY JOURNAL OF THE INSTITUTE OF CHARTERED ACCOUNTANTS OF BANGLADESH

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ISSN 1993-3649



THE INSTITUTE OF
**CHARTERED
 ACCOUNTANTS**
 OF BANGLADESH

Published by the
 Editorial Board of the Council

**The Institute of Chartered
 Accountants of Bangladesh
 (ICAB)**

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Design & Print

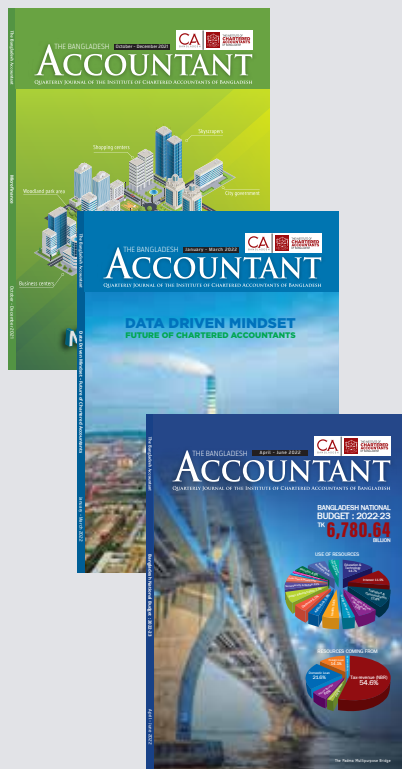
Dominant Printing & Packaging
 M 01794 550916
 E alamgir.dominant@gmail.com

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ICAB publications include, inter alia, a quarterly journal titled 'The Bangladesh Accountant' and ICAB's mouthpiece ICAB Monthly News Bulletin.

In the quarterly journal, articles of ICAB Members, Members from other Accountancy bodies, Academics and Business Leaders from home and abroad are published.

The monthly news bulletin publishes different ICAB events of the month. This bulletin acts as an information hub for the Members to keep up to date about ICAB and its activities in addition to these publications, ICAB also publishes books, monographs, booklets and Students' Study Manuals regularly.



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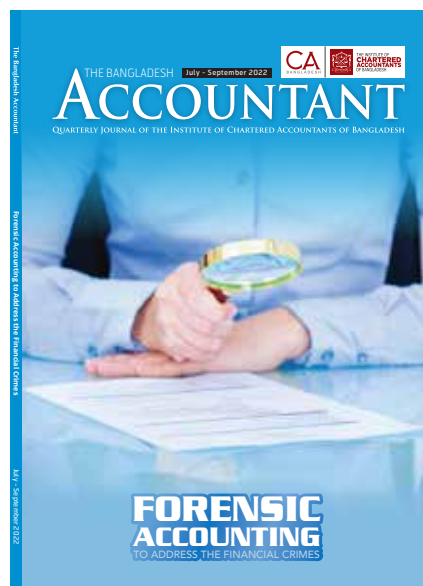
P7

Contents

July - September 2022

P4 Editorial

P5 President's Desk



P7 Prospects and Practices of Forensic Accounting to Address the Financial Crimes: Insight from an Emerging Economy

**Mahade Hasan
Md. Asraful Alam
Rokeya Begum**

P18 Evolution of Coding System: Lynchpin of Successful PFM in Bangladesh

**Mahmudul Hasan Khusru FCA
Dr. Salah Uddin Rajib
Dr. Mahfuzul Hoque**

P30 The Impact of Cyber Security Breach on Stock Value

**Sadia Malia Trisha
Momotaz Begum ACA**

P39 UMP to Bring Discipline in Insurance Sector

Raihan M Chowdhury



Digital Highlights

www.icab.org.bd

P44 Sought-After Analyses of Bangladesh Bank Monetary Policy and Its Impact on Inflation, Unemployment and Foreign Exchange Reserves
M Jalal Hussain FCA

P50 Corporate Governance and Financial Performance of Commercial Banks: Bangladesh Perspective
Md. Ahasanuzzaman

P64 How Bangladesh Economy Fares Amid Russia-Ukraine War?
M Aminul Islam

P72 ICAB's Roundtable Conference on 8th Five-Year Plan

News & Events

Circular & Notice

News Bulletin

Journal



Editorial

“Professional chartered accountants are no longer just conventional accountants or auditors. Today their roles are very diverse. Apart from contributing to the business decision-making process at strategic level, they also handle important responsibilities such as internal governance of the organizations and compliance with the regulatory issues.”



Gopal Chandra Ghosh FCA

Chairman - Editorial Board and
Council Member - ICAB

The July-September issue of The Bangladesh Accountant has covered a wide array of contemporary topics. We very much welcome the writers for their intellectual pursuits of the exercise of knowledge and wisdom.

Professional chartered accountants are no longer just conventional accountants or auditors. Today their roles are very diverse. Apart from contributing to the business decision-making process at strategic level, they also handle important responsibilities such as internal governance of the organizations and compliance with the regulatory issues.

In professional practice, there is still misconception regarding the role of Chartered Accountants as auditors and the role of management. Management prepares financial statements and auditors audit and report on its fairness. Auditors work following International Standards on Auditing (ISA) and Audit Practices. They measure the risk of the organization through sampling. As sampling is done, 100% may not be possible to notice the frauds by the auditor. Let's continuously promote this awareness and common understanding among the stakeholders.

As the purpose of external traditional audit is not fraud detection in financial transactions, the necessity of a new kind of auditing services was triggered to detect and prevent financial fraud, which is forensic audit. Due to some recent financial scams, the necessity of the forensic audit is being felt more pervasively in the country. Our esteemed readers will find more intrigued details of the forensic audit along with other thought-provoking articles in this issue.



The auditing profession is bracing itself with IT for rendering the services to the clients. Auditors must understand, if a business wants to be agile, it must be able to pivot quickly to adapt and change. In turn, it needs technology that supports that agility. Cloud-based accounting platforms are allowing modern audit practices to be more agile than ever before. With the cloud-based automations, auditors are better able to conduct the audit more effectively, identify the future issues, spot potential bottlenecks, and help their clients make more informed business decisions. It's the time for accountants to lead the process.

This publication may have errors and omissions, we urge the readers to put forward their opinions and suggestions without any hesitation. If we have to grow, we have to grow with knowledge and wisdom. To achieve the objectives of this publication, we need your continuous cooperation and attachment with this journal.

Best regards,

President's Desk

“This time our economy demands capable leaders who have the flexibility and adaptability to grasp how finance can improve or help the wider business operations. Our Chartered Accountants are agile to the evolving economic changes and transformation.”



**Md. Shahadat
Hossain** FCA
President-ICAB

Time is becoming more complex at this moment. Chartered Accountants have to play a very significant role to lead the business and the economy in the right direction. Apart from the economic setbacks, our members have been getting to grips with the shift to digital transition accelerated by the pandemic and against the backdrop of a call for up-skilling.

This time our economy demands capable leaders who have the flexibility and adaptability to grasp how finance can improve or help the wider business operations. Our Chartered Accountants are agile to the evolving economic changes and transformation.

By the government with private supports 100 economic zones are in the process of establishment across the country and most of them are already functional. Due to the growth of industrialization, and the smooth inflow of remittance, Bangladesh economy is performing very well despite the global economic recession. Such performance should not be going bust quickly. Many business leaders are saying that resilience and agility are now required more than five years ago.

A management accountant typically works with data, as well as making the day-to-day financial decisions. However, looking beyond the numbers to see the big picture is crucial to recognise and manage risk and opportunity.

I think a Chartered Accountant is not a mere job profile, instead, it is a great responsibility that can be effective



for a particular company as well as for the nation. Usually, a qualified Chartered Accountant not only takes care of the accounts of a particular business or an organization, but he also performs a significant job by carrying out responsibilities in building a nation. His professional advice matters a lot for everyone concerned. Their role in accounts, internal audit, credit risk department, planning division, Company Secretarial Services are very commendable.

I hope, this issue of the journal has dealt with more theoretical and analytical data & updates of current professional and economic issues.

I extend my heartfelt thanks to the Chairman, the Co-chairman, Editorial Board and everyone associated with this publication for bringing out this issue successfully.

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Prospects and Practices of Forensic Accounting to Address the Financial Crimes: Insight from an Emerging Economy

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Abstract

The history of prolonged high-profile financial crimes in Bangladesh happening in last two decades raised a question about the ability of the regulators and accounting professionals in combating and preventing these crimes from happening. The purpose of this study is to identify the prospects & effectiveness of forensic accounting in addressing financial crimes in an emerging economy (Bangladesh). This study used survey research design and collected samples counted as one hundred and forty-three (143) respondents from three different groups namely accounting professionals, academicians and top corporate officials. The survey response was collected using five-point Likert Scale and analysed using t-test model. Internal consistency of the questionnaire was checked using Cronbach's coefficient alpha. Though there is no formalized institution for forensic accounting certifications in Bangladesh, this study found a significant agreeableness among the respondents about the prospects of forensic accounting practice. T-test result revealed that women perceived higher effectiveness for forensic accounting compared to men and respondents with more experience perceived greater prospects and effectiveness for forensic accounting in Bangladesh. To best of the author's knowledge, this study is first to show difference in perception of prospects and effectiveness of forensic accounting by gender and experience, where experience of

respondents is measured by age, year of experience and opportunity to work with a forensic accountant

Keywords

Forensic Accounting, Financial crimes, Corporate scandals, Emerging economy

Introduction

The accounting profession has become more charismatic and innovative because of globalization and the advancement of information technology. On the other hand, the increasing number of financial crimes and lack of suitable frameworks to address those crimes has forced the government and financial institutions at the wits end (Akinbowale, Klingelhofer, & Zerihun, 2020). Traditionally, auditors have specific roles, looking at numerical information, ensuring compliance with the accounting standards, and providing an independent opinion on financial statements. The reasonable assurance provided by auditors in opposed to the enormous number of financial crimes and fraudulent activities facing by modern world is not enough to prevent the fraudsters; it is one of the big reasons for corporate scandals. Auditors find deliberate financial misstatement which cannot ensure an enhanced degree of accuracy. Moreover, auditors' position cannot support sniffing out financial frauds. The consequences of these become worst by destroying the confidence of investors. Hence, forensic accounting becomes an attractive career opportunity for accountants.

Prospects and Practices of Forensic Accounting to Address the Financial Crimes: Insight from an Emerging Economy

As forensic accounting is a specialized field of accounting a forensic accountant should have a blend of financial skills and investigative skills where financial skills include accounting and auditing skills (Degboro & Olofinsola, 2007). By proving legal review, forensic accounting helps to offer highest level of assurance (Apostolou, John M, & Sally A, 2000). Since, traditional external audit is significantly different from forensic accounting; it plays a vital role in detecting fraud that has significant influence in transparent financial reporting (Ehioghien & O. O. K., 2016). There are many companies in developed countries, like Enron Corp, WorldCom Inc, and Kmart Corp, conducted fraud in past few years as business sector has been globalized. However, fraud cases can be detected when massive funds have been disappeared (Koh, Arokiasamy, & Suat, 2009). To remove the expectation gap between auditing profession and user of financial statements (Shaikh & Talha, 2003) forensic accounting can play a significant role as it uncovers fraud that can be presented in the court.

Corporates of Bangladesh are not using forensic accounting widely (Karim, Rashid, & Islam, 2017). Again, some professionals do not have clear idea on forensic accounting. There is no separate professional body for forensic accounting. Consequence of the situation is, lack of willingness to establish a statutory guideline to prevent frequently occurred corporate scandals. Currently the corporate organizations of Bangladesh are in need for

some proactive functions by accounting people which are not being met by the traditional auditors (Dey & Chowdhury, 2016).

Though Bangladesh has a well-structured stock exchange and well constituted securities and exchange commission (SEC), many financial scams have been occurring for last two decades, which indicates this is not enough. International Accounting Standards (IAS's) and Generally Accepted Accounting Principles (GAAP's) may have some loopholes to motivate an organization to use different creative accounting techniques to portray a positive picture of the financial statements. Creative accounting may have support with accounting standards but it ended up making huge scandals. Lack of forensic accounting experts to provide quality forensic analysis is a major setback to fight against financial crimes (Akinbowale, Klingelhofer, & Zerihun, 2020). In this study, we attempt to examine the prospects and identify the practices of forensic accounting in Bangladesh that will mitigate corporate financial crimes and understand the perception of prospects and effectiveness of forensic accounting vary by gender and experience.

Literature Review

Forensic accounting works in investigative accounting and litigation support where investigative accounting deals not only with the numerical figures of the business but also with the environment (Ahmed & Ali, 2019). So, forensic accounting become one of the

most efficient as well as effective way to eliminate and stop corporate financial fraud as it helps to detect fraud (Koh, Arokiasamy, & Suat, 2009). Forensic accountants perform different tasks, which includes assessing the financial considerations of a lawsuit, generating a damage report, testifying as an expert witness, and assisting in the preparation of deposition questions by anticipating the opposition's next move (Fenton Jr & Isaacs, 2012).

In order to combat financial fraud and corruption, forensic accounting must be made a mandatory instrument for different types of businesses to promote corporate governance (Jugurnath, Bissessur, Ramjattan, Soondrum, & Seedoyal, 2017). Government intervention also required to develop and practice of forensic accounting in a country. Fraudsters always try to conceal the crime evidence and forensic accountant detect these proofs with their skeptic eye (Ahmed & Ali, 2019). They also recommend that organizations that are genuinely sincere to avoid fraud related scandals should hire forensic accountant to identify the financial frauds beforehand. To deal with sharp fraudsters, forensic accountant with high professional skills can find the proper evidence to prove the fraud case and can serve as an expert witness in litigation support (Hamdan, 2018). (Ahmed & Ali, 2019) added, as a special branch of accounting, forensic accounting is getting more spotlight due to the loss of huge financial resources caused by increasing number of financial crimes in recent times.

Some Recent Corporate Scandals in Bangladesh

Padma Bank (former Farmers Bank) Scandal (2022)

According to (Abdullah, 2020) Mahbubul Haque Chisty, former chairman of the audit committee of Farmers Bank, gave hundred and hundred crores of taka by doing tricks to his brother named Majedul Haque Chisty. Establish many fake companies, like Weltex Group, Shababa Apparel, which only exist in papers, not in reality; the owner of these companies, named Majedul Haque Chisty, received a loan from Padma Bank, former Farmers Bank. The size of that loan was 46 crore taka which turned into 115 crore taka. He made 29 loan sanctions for his brother, which went beyond the law of the Bangladesh Bank. Embezzlement of only Mahbubul Haque Chisty collapsed Farmers Bank, which was a profitable organization.

After this scandal Farmers Bank turns into Padma Bank. To accelerate investment in Padma Bank, Bangladesh Bank gives them different unethical opportunities. The most eye-catching opportunity is that Bangladesh Bank permits Padma Bank to conceal information regarding loss in financial statements to attract foreign investors, named DelMorgan & Co., where the amount of investment is 70 crore dollar. By concealing the loss of the bank, management tries to make healthy financial statements. Padma Bank will transfer loss, more than Tk. 900 crore to the Intangible Asset.

Evaly, Dhamaka Shopping, Alisha Mart Scandal (2021)

The most promising sector, the e-commerce sector, has been flourished much in a pandemic situation as online purchases skyrocketed in the situation. But the industry rapidly lost trust after the allegation of embezzlement and fraud. These companies do fraud with their customer as they made a bubble by making a big amount of liability; especially, Evaly. The number of assets and liabilities was unequal in financial statements.

Evaly has started its business in 2018. They give unbelievable discounts to their customers on all types of products which becomes high lucrative for expensive products. This discount becomes an attraction process to the customers that helps to make fraud. Evaly explains that it does bulk purchases. So, it can sale at a large discount. In real, Evaly does not do anything like this. It collects funds from customers by receiving advance payments. By using such advance payment, it makes the shipment of earlier customers. So, it cannot maintain any regulation of shipment. Again, Evaly becomes unable to maintain a good relationship with its supplier as it does not pay its creditors on time. When it comes to light of government, it becomes more aggressive in its business policies.

Prashant Kumar Haldar's Scandal (2020)

This individual set up numerous businesses, some under false names, purchased large amounts of stock on the stock market, and transferred funds

from institutions he had robbed under the premise of loans. PK Halder is the true owner, despite the fact that all of the shares were purchased in the names of others, and he acquired control of four companies: International Leasing, People's Leasing and Financial Services, SAF Finance and Investment Limited, and Bangladesh Industrial Finance Company (BIFC). His businesses were owned by his relatives. PK Halder performed his stock market dealings through his own brokerage firm. 42 phony bank accounts were created by PK Halder, and 16 billion was put in Halder's and his company's bank accounts (Sakib, 2020). The Anti-Corruption Commission (ACC) filed a case against PK Halder on 8 January on charges of amassing assets worth Taka 2.75 billion. On 21st January, 2020 the High Court ordered to the authorities concerned to confiscate the bank accounts and passports of 20 persons including Prashanta Kumar Halder, who fled abroad with around Taka 35 billion.

National Bank Scam

Hasan Telecom received a trading license on October 28, 2018 and sought for a 400 crore loan from the National Bank on November 1st. With its application, the company included a forged work order for 477.96 crore. On November 11, 2018, they opened a current bank account with the bank. They paid 5.53 crore for a 190.2 decimal of land from Sikder Real Estate, but the bank appraised it at 231.92 crore, which is 42 times the amount. Hasan telecom received a 275 crore loan from the government on November 27, 2018. The bank thereafter granted a total loan of 335 crores. According to the

Anti-Corruption Commission investigation, a portion of the money was given to various members of the bank's board of directors, as well as to several companies with whom they are affiliated. The loan was granted by the board of directors' executive committee without sufficient vetting. Hasan Telecom went from securing a trade license to getting a work order to getting a Tk335 crore bank loan in just one month. The mortgaged land was purchased from a company owned by National Bank's chairman.

Janata Bank Loan Scam

A loan scam committed by the state-owned Janata Bank was exposed in August 2018. According to a Bangladesh Bank investigation, the bank gave Anon Tex and Crescent Group more than Tk10,000 crore without following the central bank's single borrower exposure limit criterion. Crescent Group manufactured exports to phony abroad organizations owned by Bangladeshis, according to the Bangladesh Bank's inquiry. Despite the fact that it sold items to Hong Kong, the bill was sent to the United States, and the exporter allegedly brought money back from the United States and Dubai.

Farmers Bank Scandal (2017)

According to Bangladesh Bank, the bank was implicated in the siphoning out of more than Taka 3,500 crore. NPLs currently account for 58 percent of the bank's total outstanding loans. Farmers Bank's former Audit Committee chairman, chairman's son, senior vice-president, and first vice-president were detained on

April 10th, 2018 by the Anti-Corruption Commission (ACC) in connection with the misappropriation of 160 crore and irregularities in loan issuance.

Basic Bank (2015)

Basic Bank is accused of making loans without requiring collateral, falsifying paperwork, and utilizing fictional names and businesses. According to a Bangladesh Bank audit, BASIC Bank was defrauded of Tk. 5,000 crore through loan fraud. For embezzlement, two Deputy Managing Directors and a former Deputy General Manager were sentenced to prison. In 2015, the Anti-Corruption Commission filed 56 cases against 156 people for embezzling 20 billion taka. During former BASIC Bank chairman Sheikh Abdul Hye Bachchu's four-year term, the Anti-Corruption Commission (ACC) found no evidence of his involvement in the BASIC Bank loan scheme (Tribune, 2019). Due to continuous losses, the bank decided to reduce employee salaries.

Bismillah Group (2013)

Bismillah Group is accused of defrauding Janata Bank of 5.27 billion Taka. They defrauded Prime Bank Limited of 3.26 billion Taka and Jamuna Bank of 1.54 billion Taka. They also robbed Shah Jalal Islami Bank Limited of 1.04 billion Taka and Premier Bank of 625.3 million Taka. This was accomplished over a three-year period. Insiders in the banks assisted them. They used their companies outside of Bangladesh to make bogus sales contracts. Then, for phantom exports, open a letter

of credit. The Bangladesh Anti-Corruption Commission has charged the Bismillah group's Chairperson and Managing Director in 12 cases. The commission also filed lawsuits against 53 bank officials from the five banks. In 2018, the Managing Director and Chairman were sentenced to ten years in prison and fined Tk. 30 crore 67 lakh. As per news (Reporter, 2020), the High Court ordered the arrest of seven fugitive accused, including Bismillah Group Managing Director and its Chairman within seven days and their production before the court in a graft case filed by the Anti-Corruption Commission (ACC).

Hallmark-Sonali Bank Loan Scam (2012)

Bank Hallmark-Sonali between 2010 and 2012, Bangladesh's largest state-owned commercial bank, Sonali Bank, perpetrated a loan scam by granting a loan of BD Taka 3400 crore using forged documents. When one branch of Sonali Bank made illegal loans totalling \$454 million, including almost \$344 million to Hallmark Group, it was called a lending scam. Tanvir Mahmud, Hallmark's managing director, conspired with a branch manager to provide bogus corporations with fraudulent letters of credit. Tushar Ahmed, the managing director of Hallmark, Jasmine Islam, Mir Mahidur Rahman, the general manager of Sonali Bank's main branch, and two suspended deputy general managers, Sheikh Altaf Hossain and M Safiuddin Ahmed, are all in jail (Islam & B. Hossain, 2019). In a case of fraud, a Dhaka court sentenced Hallmark Group Chairman Jasmine Islam to

prison. In a case of embezzling Tk85.87 crore from Janata Bank through a fraudulent letter of credit, a Dhaka court sentenced Hallmark Group Chairman Jasmine Islam to prison. The Appellate Division of the Supreme Court had cancelled Jasmine Islam's bail granted by the High Court on June 16, 2020.

Jubok (2011)

This is a big cooperative society that also initiated illicit banking. Thus, it was shut down by the government in 2011. Judicial processes are now underway against Jubok's promoters for their unlawful activities.

Stock Market Debacle (2011)

By the end of 2011 Bangladesh's stock market had been flourishing which had fallen below the bottom line. The estimated loss was 20,000 crores taka, and the number of investors who were affected by the crash was at 20 lacs.

Destiny Ltd. (2000)

Deistiny Multi-Purpose Cooperative Society is accused of openly operating as a bank without any authorization or license provided by the Bangladesh government; the company is accused of selling non-existent trees to unsuspecting people for a large profit. By selling phony shares in their so-called plantation enterprises in Bangladesh, Destiny 2000 Ltd has already collected money similar to US \$ 7 billion (almost Tk. 50 thousand Crores) from the general public and Destiny promoters are continuing to unlawfully move millions of dollars to various countries across the world through China's secret channels (Dey & Chowdhury, 2016).

Stock Market Crash (1996)

On December 26, 1996, The Securities and Exchange Commission (SEC) established an Enquiry Committee to look into stock market irregularities from July to November 1996. The Enquiry Committee submitted a report on March 27, 1997, naming a number of corporations and some of the country's largest brokers as being involved in market manipulation. According to the report, the chief metropolitan magistrate court issued arrest warrants for 32 people in seven brokerage firms and eight publicly traded corporations on April 2, 1997. The SEC also filed 15 share-scam lawsuits with the Supreme Court of Bangladesh's High Court Division. The defendants, along with nine others, were granted anticipatory bail by the High Court on April 6, 1997. Since then, government authorities at the SEC have been unable to comment on the cases' status (Dey & Chowdhury, 2016).

Problem Statement

With the history of prolonged corporate financial scandals, corruptions especially in financial sectors became the most significant problem in achieving sustainable development in Bangladesh. Corruption occurs not only in corporate offices but also in government offices and existing regulations and government bodies are failed to address those. However, the explained situation required practice of forensic accounting at sufficient level and it has considerable research attention with wide prospect. It is high time to establish a forensic accounting guidelines and commencement

of forensic accounting practice according the guidelines. These are the reasons to conduct the study and the following questions will be used to explore ideas:

1. What are the practices & prospects of FA in Bangladesh?
2. Does the perception of prospects and effectiveness of FA vary by gender and experience?

Methodology

This study used structured survey questionnaire to collect sufficient amount of primary data. The data was collected using five-point Likert Scale questionnaire. This research design is also similar to the prior forensic accounting related studies [(Dada, Owolabi, & Okwu, 2013); (Modugu & Anyaduba, 2013); (Okoye & Gbegi, 2013); (Popoola, Che-Ahmad, & Samsudin, 2015); (Amahalu, 2017) and (Dada & Jimoh, 2020)]. According to (Saunders, Lewis, & Thornhill, 2003), a minimum number of thirty (30) as sample can provide a useful rule of thumb for statistical analysis. However, the total sample counted as one hundred and forty-three (143) respondents. We aimed three different groups to collect our primary data namely accounting professionals with professional degree like CA, CFA, ACCA, CMA, etc; academicians from accounting or finance background; and top corporate officials. Simple random sampling techniques was used to collect the data. Out of 143 respondents a total number of 24 (17%) respondents were female and 119 (83%) respondents were male. The table below shows the sample details-

Prospects and Practices of Forensic Accounting to Address the Financial Crimes: Insight from an Emerging Economy

Respondent Groups	Sample Size	Percentages (%)
Accounting Professionals (CA, CMA, CFA, ACCA, etc.)	70	49
Academics	34	24
Top Corporate Officials	39	27
Total	143	100

Survey responses collected using five-point Likert scale were analysed using t-test model of Stata software version 14 developed by Stata Corp. The internal consistency of questionnaire items was checked using Cronbach's coefficient alpha (Cronbach, 1951).

Results

Descriptive Statistics

Particulars	SA	A	N	D	SD	Total	Mean	St. Dev.	Min	Max
Forensic Accounting can be used to detect and prevent misappropriated assets/funds.	60	53	11	11	8	143	1.98	1.15	1	5
Forensic Accounting can be used to detect and prevent fraudulent financial reporting & money laundering.	68	41	17	10	7	143	1.93	1.15	1	5
Forensic Accounting can be used as a fraud detecting tool.	49	59	15	14	6	143	2.08	1.10	1	5
To design an effective internal control system Forensic Accounting can be used.	34	61	27	13	8	143	2.30	1.10	1	5
Along with the Accountants & Auditors, Forensic Accountant can ensure more credible financial reporting.	40	45	35	14	9	143	2.35	1.17	1	5
Forensic Accounting can improve the quality of internal & external audit in Bangladesh.	35	59	26	16	7	143	2.31	1.10	1	5

Table 1: Descriptive statistics for question set one

Table 1 summarise the survey results of the question set one which examines the prospects of forensic accounting in Bangladesh. It also provides the descriptive statistics of each survey item calculated from the response given by one hundred and forty-three (143) respondents for question set one. The range is a minimum number of 0 which means strongly agree and maximum number of 5 which means strongly disagree. As we can see most of the respondents (42%) strongly agreed about the prospects of using forensic accounting to detect and prevent misappropriation of assets with the mean value of 1.98 and standard deviation value of 1.15. They also strongly agreed (48%)

about the prospects of using forensic accounting to detect and prevent fraudulent financial reporting & money laundering with the mean value of 1.93 and standard deviation value of 1.15. Then most of the respondents (41%) agreed about the prospects of using forensic accounting as a fraud detecting tool with the mean value of 2.08 and standard deviation value of 1.10. Then again, respondents mostly (43%) agreed about the prospects of using forensic accounting to design an effective internal control system with the mean value of 2.30 and standard deviation value of 1.10. After that, respondents mostly (31%) agreed that along with accountants and auditors, forensic accountant can

improve credible financial reporting with the mean score of 2.35 and standard deviation value of 1.17. Lastly, majority of the respondents (41%) agreed that forensic accounting can improve overall quality of internal and external audit in Bangladesh with the mean score of 2.31 and standard deviation value of 1.10. I observed the highest mean score of 2.35 and lowest score 1.93 from the question set one. One the other hand the standard deviation is ranged from 1.10 to 1.17. Finally, the means score of the respondents about the six items of question set one shows strong agreement about the prospects of forensic accounting in Bangladesh among them.

Particulars	SA	A	N	D	SD	Total	Mean	St. Dev.	Min	Max
Forensic Accounting is solely enough to detect and prevent financial crimes in Bangladesh.	6	22	38	49	28	143	3.50	1.09	1	5
Forensic Accountant can ensure stability in corporate organization using his/her ability of combating fraudulent activities.	24	63	33	21	2	143	2.40	0.98	1	5
Forensic Accounting can lessen the probability of committing financial crimes in Bangladesh.	24	79	22	14	4	143	2.27	0.95	1	5
Forensic Accounting improves financial reporting quality.	33	64	27	16	3	143	2.25	1.00	1	5
Forensic Accounting can improve investors' degree of confidence on corporate financial reporting.	33	62	24	15	9	143	2.34	1.13	1	5

Table 2: Descriptive statistics for question set two

Table 2: Descriptive statistics for question set two

Table 2 summarise the survey results of the question set two which examines the responses regarding the effectiveness of forensic accounting in addressing financial crimes. The table also provides the descriptive statistics result of each survey item calculated from the response given by one hundred and forty-three (143) respondents for question set two. The minimum response value 1 means strongly agree and maximum response value of 5 means strongly disagree with the statement. Calculated from the response given, majority (34%) of the respondents disagreed about having forensic accounting is solely enough to detect and prevent financial crimes in Bangladesh with a mean score of 3.5 and standard deviation score of 1.09. On the other hand, most of the respondents (44%) agreed about the effectiveness of having forensic accountant to ensure stability in corporate organization with a mean score of 2.4 and standard deviation

score of 0.98. Then respondents mostly (55%) agreed about the effectiveness of forensic accounting in minimizing financial crimes in Bangladesh with a mean score of 2.27 and standard deviation score of 0.95. Then again, respondents mostly (45%) agreed about the effectiveness of forensic accounting in improving reporting quality with a mean score of 2.25 and standard deviation score of 1.00. Lastly, majority of the respondents (43%) agreed about the effectiveness of forensic accounting in improving investors' degree of confidence on corporate financial reporting with a mean score of 2.34 and standard deviation score of 1.13. I observed the highest mean score of 3.50 and lowest score 2.25 from the question set one. On the other hand the standard deviation is ranged from 0.95 to 1.13. Finally, the means score of the respondents about the four items out of five from question set two shows agreement about the effectiveness of forensic accounting in addressing financial crimes.

T-test/ Mean analysis

Whether the prospects and practices of forensic accounting vary depending on the gender and work experience of the respondents.

Our t-test analysis indicates that there is no statistical difference in the perception of prospects of Forensic Accounting between male and female. In case of the effectiveness of Forensic Accounting in addressing financial crimes, the mean score of female respondents is significantly lower than the mean score of male respondents (at 10% level). This suggest that females perceived higher effectiveness of Forensic Accounting in addressing financial crimes compared to their male counterparts.

This study examines the perception of prospects and effectiveness of Forensic Accounting based on experience which measured by opportunity, year of experience and age of the respondents. To

Prospects and Practices of Forensic Accounting to Address the Financial Crimes: Insight from an Emerging Economy

Panel A Gender	Female (n = 24) Mean	Male (n = 119) Mean	Difference <i>t</i> -stat
Prospect of forensic accounting	0.418	0.434	-0.443
Effectiveness of forensic accounting in addressing financial crimes	0.470	0.518	-1.530*
Panel B Experience			
Opportunity to work with a forensic accountant	Yes (n = 47)	No (n = 96)	
Prospect of forensic accounting	0.406	0.444	-2.222**
Effectiveness of forensic accounting in addressing financial crimes	0.492	0.518	-1.501*
Work experience			
	Above 3 years (n = 127)	Below 3 years (n = 16)	
Prospect of forensic accounting	0.426	0.475	-2.978***
Effectiveness of forensic accounting in addressing financial crimes	0.506	0.535	-2.410***
Age			
	Above 35 years (n = 43)	Below 35 years (n = 100)	
Prospect of forensic accounting	0.397	0.447	-2.137**
Effectiveness of forensic accounting in addressing financial crimes	0.485	0.520	-2.035**

Table 3: T-test/ Mean analysis

Notes: The significance of coefficients is based on robust standard errors; ***, ** and * which indicate coefficients are significant at the 1%, 5% and 10% level, respectively (White, 1980).

assess the prospects of Forensic Accounting in Bangladesh, our t-test analysis indicates that the mean score of the respondents who had opportunity to work with a Forensic Accountant is significantly lower than the mean score of those who did not (at 5% level). This suggest that respondent who worked with a Forensic Accountant perceived higher prospects for

Forensic Accounting compared to others who did not. In case of the effectiveness of Forensic Accounting in addressing financial crimes, the mean score of the respondents who had opportunity to work with a Forensic Accountant is significantly lower than the mean score of those who did not (at 10% level). This indicates respondent who worked with a

Forensic Accountant perceived higher effectiveness of Forensic Accounting in addressing financial crimes compared to others who did not.

Moreover, to assess the perception regarding prospects of Forensic Accounting, our t-test result indicates that the mean score of the respondents who had more than three (3)

years of work experience is significantly lower than the mean score of those who had less than three (3) years of work experience (at 1% level). This indicates respondent who has greater work experience recognize higher prospects for Forensic Accounting in Bangladesh. On the other hand, to assess the effectiveness of Forensic Accounting in addressing financial crimes we found the mean score of the respondents who had more than three (3) years of work experience is significantly lower than the mean score of those who had less than three (3) years of work experience (at 1% level). This suggests respondent who has greater work experience perceived higher effectiveness of Forensic Accounting in addressing financial crimes.

Finally, to assess the perception regarding prospects of Forensic Accounting, our t-test result indicates that the mean score of the respondents whose age is more than thirty-five (35) years is significantly lower than the mean score of the respondents whose age is less than thirty-five (35) years (at 5% level). This suggest that senior respondents (more than 35 years of age) perceived higher prospects for Forensic Accounting compared to the younger respondents (less than 35 years of age). In case of the effectiveness of Forensic Accounting in addressing financial crimes, the mean score of the respondents whose age is more than thirty-five (35) years is significantly lower than the mean score of the respondents whose age is less than thirty-five (35) years (at 5% level). This indicates senior respondents (more than 35 years of age)

perceived effectiveness of Forensic Accounting in addressing financial crimes compared to the younger respondents (less than 35 years of age).

Cronbach Alpha test

Item Name	Number of Items	Cronbach Alpha Result
Prospects of Forensic Accounting	06	0.891
Effectiveness of Forensic Accounting	05	0.725
Total (prospect & effectiveness)	11	0.902

Table 2 Cronbach Alpha Scale Reliability Coefficient

Cronbach's alpha (Cronbach, 1951) checks internal consistency and reliability among a set of items selected as a group. Result closer to 1 means greater stability and internal consistency (Creswell, 2002). As suggested by (Sekaran & Bougie, 2016), (Creswell, 2002) and (Pallant, 2001), Cronbach Alpha result less than .60 considered as very poor and unacceptable. Alpha value exceeding .60 but less than .80 considered as moderate and acceptable. Finally, Alpha result exceeding .80 considered as very good and acceptable as well. Table 2 provides the Cronbach Alpha test result for the items selected to examine the prospects and effectiveness of forensic accounting in Bangladesh. Cronbach Alpha result is .891 for items selected to assess the prospects of Forensic Accounting and the value is .725 for the items selected to assess the effectiveness of Forensic Accounting in Bangladesh

which means high internal consistency and stability within the group. The overall Cronbach Alpha value of .902 concludes the items can used for this study and have good internal consistency.

Conclusion

In this study we used survey research design to investigate the prospects & effectiveness of forensic accounting in addressing financial crimes in Bangladesh. This research found significant agreement between the respondents about the prospects of forensic accounting in Bangladesh. Consistent with this finding, though there is no formalized institution for forensic accounting certifications, many organizations already used the service of forensic accountant to address the financial crimes like- Hallmark & Sonali Bank scam, Bangladesh Bank Scam, etc in Bangladesh. This study also revealed strong agreement among the respondents about the potentiality of using forensic accounting in detecting and preventing of misappropriation of assets, fraudulent financial reporting and money laundering. Respondents also agreed about the effectiveness of forensic accounting in financial crimes in Bangladesh. Our t-test analysis suggests that there is a significant difference in perception of prospects and effectiveness of forensic accounting by gender and experience. Here the experience is measured in terms of opportunity, year of experience and age of the respondents. This study revealed female respondents perceived higher effectiveness of forensic accounting in addressing

Prospects and Practices of Forensic Accounting to Address the Financial Crimes: Insight from an Emerging Economy

financial crimes compared to their male counterparts. This research also found that experienced respondents perceived higher prospects and effectiveness of forensic accounting in addressing financial crimes compared to inexperienced respondents.

The findings of this study have significant implications for the users, investors and regulators of financial information. The result revealed the current status of forensic accounting practice in Bangladesh which will help the users and regulators to rethink by making them aware of their role. For regulators, this study is potentially informative for creating and modifying new standards to prevent and control financial crimes in Bangladesh. The findings also have relevance for different sex and experienced groups who can push the government in developing their interest in launching forensic accounting certifications and companies to use more forensic accounting service in combating financial crimes in Bangladesh. The regulators could also rethink using forensic accounting service to monitor and control the quality of accounting information.

This study is not free from some limitations. The sample was limited to one hundred and forty-three (143) which could be extended by any future research. We considered the difference in perception among different sex and experienced groups. Further research can be conducted by including some other factors to examine their perception regarding the practice and effectiveness of

forensic accounting in combating financial crimes. Despite these limitations, this study revealed the current status of forensic accounting practice and its prospects in combating financial crimes in Bangladesh.

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Evolution of Coding System: Lynchpin of Successful PFM in Bangladesh

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Abstract

The recent reformation initiatives in Public Financial Management (PFM) are based on the coding systems of accounts. The fact is that Public Sector Accounting (PSA) originated in the coding systems. A well-planned and well-designed coding systems take care of present management requirements and future needs. In the year 1938, the first manual coding system was used for Public Sector Accounting in the territory of Bangladesh. Since then, there have been several reviews on the coding structure, particularly in 1983, 1988 and 1989. Initially, manual code classification was for four digits. However, in 1998 code classification system drastically changed whereby 13 digits have been incorporated in contemplating ingraining the same codes into an automated system. Integrated Financial Management Information System (IFMIS) locally called iBAS++ automation in PFM has been introduced in 2006. The latest version of 56 digits code classifications was released in 2018. This study concentrated on the evolution process of the coding system about the PFM reform in Bangladesh. Therefore, the study used document analysis. It is worth mentioning here that there are some practical challenges faced during the implementation of the new Budget and Accounting Classification System (BACS)

which need further study. This paper concludes that to ensure the benefit of coding to have flawless comprehensive reporting and other management reports a planned implementation approach with necessary upgradation in codes is inevitable.

Keywords

History; PFM; BACS, Coding; Reporting, IPSAS, IFMIS, iBAS++.

Background of the Study

Bangladesh inherited the Public Financial Management (PFM) system modelled according to the need of the colonial administration in the Indian Sub-Continent. However, since the birth of the Republic, the PFM system evolved to cater to the development need of the country, essentially retaining the features of a system focused on controlling inputs with an emphasis on following administrative orders. A myriad of financial rules and regulations, codes and manuals, government orders, and circulars including detailed processes and procedures are laid down to administer the PFM.

A series of public financial reform programs were undertaken from 1990 onwards, which undoubtedly improved the management of public resources but fell short of expectations. Under these



circumstances, PFM reform becomes inevitable agenda for the government, which is a key component for improving governance and accountability in Bangladesh. These reforms can be viewed under the concept of New Public Management (NPM). The concept of NPM was introduced by Hood (1980) to modernize public sector accounting and financial management.

In developing countries series of reformations in PFM and accounting have been experienced with the association of donor agencies (Grindle, 2004; Adhikari et al., 2013). In Bangladesh, reform initiatives in PFM and accounting have been seen as an effort of donors as well (Rajib et al., 2019). However, it has been agreed that the reform initiatives have created some

infrastructure in PFM, particularly on accounting and its reporting (Rajib et al., 2017). If we look back at the recommendations of CORBEC, pre-dominantly they emphasized automation, accounting, budgeting, information systems, budgetary control, human resource development in finance domine and bring about professionalism among themselves. The introduction of code was a mechanism to bind the various tools of PFM together. The existence of code in the current reformation which is a driver of automation is bold as well. Therefore, the debate may arise on whether the evaluation of code can be seen as a tool of institutional legitimacy or strategic legitimacy. This study is aimed to evaluate the coding system critically in the context of Bangladesh.

This paper is organized as follows. First, it discusses the previous research on the development of government accounting and its relationship with information technology.

Second, it selects the research methods. Third, data analysis and discussion are presented and finally, a conclusion is drawn.

Literature Review

As part of PFM reform, the New Public Management (NPM) theoretical framework incorporates various economic ideas, including public choice, agency, and transaction cost. Accounting and reporting systems have been recommended as a strategy for good governance promotion and public interest protection (Hopper et al. 2009; Neu 2006). The architecture of financial procedures should promote financial change in underdeveloped countries. The automation plan must be established after the financial procedures have been designed. At the planning stage, it is necessary to decide which process components will be integrated, which ones will be automated, and which ones will be both automated and keep manual (Stephen Peterson, 2006). Researchers have agreed that the development and better governance can be ensured by the dissemination of ICT, (Heeks, 2002; Lechman, 2015).

Evolution of Coding System: Lynchpin of Successful PFM in Bangladesh



A well-designed IFMIS, according to Diamond and Khemani (2005), should keep a historical database of budget and expenditure plans, as well as transaction data, at the highest level of structured finance, and offer a common platform and user interface for stakeholders in different agencies responsible for financial management to have access into the information database.

While automation can improve system efficiency, Simson et al. (2011) point out that it can also be disruptive and demanding because it frequently necessitates major process changes and new human resource skills. Large-scale automation reform proponents assert that it simplifies procedures and lessens the potential for corruption. Opponents of widespread

automation reform highlight the high costs of automation, the high probability of project failure for many automation initiatives, and the possibility of corruption migrating from procurement officers to those in charge of the new automation system.

According to Hendricks (2012), IFMIS helps management ensure accountability for the allocation and use of public resources while also boosting the efficacy and efficiency of government spending programmes. Management may be able to exercise better control over expenditure, increase transparency and accountability within the budget cycle, and record financial activities using an automated financial system.

From the very beginning of the PSA reformation, the

development of accounting classification and code development gets a priority. The involvement of international organizations like the World Bank and the Department for International Development (DFID) of the UK are found in code development for PSA in Bangladesh since 1990. Bangladesh develops systematic accounting classification and accounting codes named Budget and Accounting Coding System (BACS) in 1996 with the support of the United Kingdom Department for International Development (DFID) (Hoque et al., 2016). The government implemented new BACS in the advanced version of iBAS called iBAS++ in 2018.

Formerly, 13 digits coding structure was distributed containing 4 levels i.e., legal (1) digit, ministry/division/department (4) digits, operational (4) digits and economic (4) digits. Apart from the 1-digit legal code, economic codes (4) digits deal with all the revenues and expenses of the Bangladesh government. In contrast, organizational unit-wise classification pertained to eight (8) digits code that consists of ministry/division/department (2 digits), function code (2 digits) and operation code (4 digits).

Consistent with the different reformation of PSA coding of accounting is revised and updated. The new coding of



accounting is developed consisting with the other reformation, especially the latest initiative “Strengthening Public Expenditure Management Program (SPEMP)”. In SPEMP, the government’s accounting system is aimed to auto- mate fully through the iBAS (Integrated Budget and Accounting Systems) (Rajib and Hoque; 2016b, Hoque et al, 2016; Rajib et al. 2017). The coding system is tried to develop with the iBAS, a computer software through which the account offices of the country are connected.

Research Methodology

This study adopts the qualitative research method. To understand the coding evolution in Bangladesh, a number of documents have been analyzed. The documents relating to this research have

been collected from the Ministry of Finance (MoF), Office of the Comptroller and Auditor General of Bangladesh (OC&AG), Office of the Controller General of Accounts (CGA), various donor agencies like World Bank, International Monetary Fund (IMF) and others. Financial Statements, Laws, Regulations, Ordinance and others have been analyzed. Some documents relating to the reformation of PSA in Bangladesh like Code development (4 digits, 13 digits & 56 digits Budget and Accounting Coding System (BACS)), statements (e.g., CORBEC Commission), current programme/projects (e.g., SPEMP, MoF, 2017a, b, c, d, e, f) and published audited financial documents (Sadia, 2017a, b) have been analyzed critically.

The evaluations on PSA by the international institutions working in Bangladesh,

particularly the World Bank, International Monetary Fund (IMF) and Asian Development Bank (ADB) have been thoroughly considered. Bangladesh Report on the Observance of Standards and Codes (ROSC) (2003; 2007a, b; 2009; 2015), Bangladesh: Engagement of the World Bank on Governance and Anti-Corruption (2011), Bangladesh-Public Sector Accounting and Auditing: A Comparison to International Standard (2015) by the World Bank and other related documents have been reviewed. The proof of this paper is primarily backed by the study of the text.

Empirical Analysis

Initiation and Changes in Coding

As has been mentioned, a number of documents have been analyzed systematically to understand the scenario. The coding has firstly been used in present Bangladesh since 1938. There have been several reviews on the coding structure in 1983, 1988 and 1989. Manual coding classification was for four digits. Thereafter drastically change in classifications incorporating 13 digits in 1998 in contemplating to ingrain into an auto- mated system. In 2006, IFMIS automation in PFM called iBAS has been introduced. Finally, the latest version of 56 digits code classifications was released in 2018.

Evolution of Coding System: Lynchpin of Successful PFM in Bangladesh

The evolution of the coding system showed in the following table:

Table 1. Evolution of Coding Systems

SL	Year	Code
1	1938	4 digit manual code classification
2	1998	13 digit code classification
3	2006	Introduction of iBAS to fit into 13-digit classification
4	2018	56-digit code classification in iBAS++

Compatibility of Coding Systems

We have analyzed the coding systems' evaluations with various features, e.g., legal requirements, prospects, accounting basis and others. Table 2 presents the code compliance with legal/statutory requirements.

Table 2. Compliance with Legal/Statutory Requirements:

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
i	Compliance of Legal/Statutory Requirement	This was very high-level manual coding system. It was very difficult to meet compliances with correctness of information.	Partially compliant. Due to the structural limitation legal and statutory requirements could not be met.	Compliant with legal and statutory requirement

We further analyze the future orientation in the coding systems over the evolutions. Table 3 presents a comparative feature of coding supporting PFM reform and business requirements.

Table 3. Supporting PFM Reform and Business Requirement

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
i	Accounting basis considered for classification (cash/ accrual)	There is no evident that any planned accounting basis was considered. However, it was no more than Cash.	It was predominantly cash basis but not planned to get desired result.	Cash basis accounting considered. Thoughts has been given to improve into accrual basis in future.
ii	Support PFM reform	This coding system did not support enough for expected PFM reform.	There was primary effort towards PFM reform, but coding system could not implement because of improper classifications.	It seems that the classification of coding with different segments and compatibility of the coding in iBAS++ may produce desired result to support PFM reform

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
iii	Support Whole of Government Accounts (WGA)	Did not even consider WGA aspect.	This classification is not capable of reporting on WGA.	The Classification Chart expected to be capable of reporting WGA, such as producing reports for different level of governments and other government organizations.
iv	Whether meet overall business requirement of the government?	While preparing the coding Classification overall government requirements were not considered that leads to change the coding.	This classification has become inadequate due to its inability to report the government's spending programs by location, financial source and function. Even it does not support automated monitoring of cash flows, funds and expenditure control throughout the government.	It was reported that the new BACS will cater to the need of the overall business requirement of the government.

Our analysis finds that over the year coding systems has been revised to ensure the integration of accounting and budgeting systems. Table 4 presents a comparison of coding systems regarding the accounting basis and its integration to the budget.

Table 4. Accounting Basis and Integration with Budget

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
i	Integration capability among the segments/modules for various reporting	Coding Classification was very basic and manual. Features are completely missing.	Code classifications contain lot of restrictions. Due to the restrictive nature of coding, segments are not mutually exclusive resulting the jeopardization of various reporting objectives through integration.	Code segments are mutually exclusive. System is capable to integrate among the segments/module for meeting divergent internal and external reporting requirements.
ii	Budget integration with accounting data	It was completely missing.	Input based budget was followed. iBAS could not completely rolled out with this code classifications. As such, budget information was not integrated with accounting data.	According to the BACS manual, budget is being prepared from iBAS++ and budget and accounting code classification is integrated.

From the available documents, it is found that the basic feature of coding systems has been improved in the latest coding systems. Table 5 presents a comparative analysis.

Evolution of Coding System:
Lynchpin of Successful PFM in Bangladesh

Table 5. Basic Features of Coding Systems

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
i	Comprehensiveness	Nothing was there.	A COA should be comprehensive and capable enough to capture all the relevant Information not only for budget but also accounting domain. Comprehensiveness of the code classification was absent here.	Code classifications are fairly comprehensive. BACS prepared with thoughtful analysis which is expected to capture both budget and accounting information by using automation system called iBAS++.
ii	Mutual Exclusivity	Did not even give thoughts to have the code classifications mutually exclusive.	One of the major difficulties of this coding system was that the code was not mutually exclusive. Each segment of the coding contains other segments' legacy code.	Segment coding classifications are mutually exclusive which is an important criterion of coding for avoiding confusion in transaction recording and reporting thereon.
iii	Hierarchy	Very simple manual hierarchical structure like 2 digits as major and 2 digits as minor used.	Hierarchical coding structure approach provides flexibility to accommodate future changes without requiring fundamental change to the underlying structure.	It is revealed from the BACS Manuals that while developing the code classifications hierarchical approach was undertaken. This will help to generate different level of MIS for different users to facilitate decision making process.
iv	Redundancy	There was single coding with manual capturing of data which was prone to produce enormous information with redundancy of voluminous data.	As each segment was independent from others which was unnecessarily created repetition of works in many folds in data inputs and erroneous data production resulting lot of Data redundancy.	As each segment is mutually exclusive and not completely independent. Data relationship can be made from one segment to others. It helps to minimize the volume of data capture and also avoid similar data inputs in different segments. In turn it will reduce data entry error and redundancy of data at large.

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
v	Adequate granularity	Granularity was missing.	Due to problem in designing structure of codes, combination provision of data from segments/subsegments for controlling and reporting purpose was not there.	Adequate granularity considered at designing level of COA as necessary combination of data from different segments/subsegments can be done for control and reporting purpose.
vi	Scalability & future reporting requirement	Completely missing as it was manual and confined in 4 digits codes.	Due to wrong structuring of coding classification, it was not flexible enough for capturing addition data and to accommodate change for future business and reporting requirement.	While designing the coding classification named BACS for iBAS++ system, scalability and flexibility was considered to cater to the need of future for functional and reporting purpose.
vii	Capable of capturing all information for management, internal control and audit purpose.	This coding system was not capable to produce this information.	As this coding system had structural difficulties to capture all information, it was failed to ensure internal control and audit matters.	BACS is to be capable to capture all information required for management, internal control and audit purpose from automated system.
viii	Applicability of code classification constantly across the government.	Not available	Code classification was not constantly applied across the government and its agencies. That is way, 745 codes out of 1,590 codes at even "economic level" were redundant.	Code classification was designed in a way so that can be applied constantly across the government.
ix	Whether codes are unified and user friendly?	It was manually unified, simple and user friendly but not purposeful.	Codes were unified. Having made the independence of each segment, repetition of coding triggered to input same data in different segments which created mass for the users.	Codes are unified, it would avoid duplication of data input in different segments. Data from one segment can be used by other segments. It would reduce unnecessary data input, also reduce error in source data resulting accurate reporting.
x	Capable to plan, execution and monitoring budget and report thereon	Nothing was there as such.	This classification codes were not capable to do budget distribution, fund release including re-appropriation and overall budget management due to its complexity.	It is reported that iBAS++ can prepare, execute and monitor budget and various reporting thereon through this BACS.

From the very beginning, coding has been developed to integrate accounting systems. From the available documents, we have analyzed the strength of coding in reporting, accountability and transparency. Table 6 presents the analysis.

Evolution of Coding System:
Lynchpin of Successful PFM in Bangladesh

Table 6. Reporting, Accountability and Transparency in Coding Systems

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
i	IMF guided GFSM 2014 reporting capability	Do	Due to lack in design structure and inadequate information from the system, iBAS could not produce GFSM 2014 guided reporting.	Designing structural difficulties faced in earlier version of coding system and IT platform were addressed in BACS and iBAS++ to be compatible with GFSM 2014 reporting requirements.
ii	UN guided COFOG reporting capability	Not capable	This reporting requirement was not possible from the coding system.	A separate COFOG reporting segment was provided in new BACS.
iii	What are the re - ports generated from the coding?	Very high -Level Manual Report	System could not produce report. Manually manage to produce report.	Yet to frame out reports from the iBAS++ System
iv	Is it supporting for pathways to IPSAS Accrual?	No	No	Yes, Necessary preparation is there in code designing? But it depended on successful implementation of cash basis IPSAS first.
v	Published reports produced from the system to the partners and people at large for Transparency?	Not available	Coding system did not produce any such report to publish as required by the partners and people at large.	As the coding system considered the reporting matters for the stakeholders and iBAS++ is also redesigned, it is expected that the required reports from this system can be published. By far, it is not produced timely manner, in fact 3-4 years lagging of reports publications.
vi	How accountability for the users/managers/ heads of the concerns through coding ensure? Is there tracking of transaction through audit trail/authority limit/legal responsibility of the concerned persons	Manual coding which was not capable to drill that much through the coding itself in respect of accountability.	Even though, there were many flaws in the system in designing level, coding had audit trail, but it was not evident whether transaction/action can be tracked in iBAS in different coding level and ap - proving limits can be given in the system itself.	Coding system thoughtfully designed to have audit trail, users' access can be administered, Head of the concerns' performance can be extracted, steps of the process can be defined, re- viewed, monitored and audited. These are all for better accountability.

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
vii	Whether code is capable to produce management information for different LM and manager of different agencies	Not capable	Not fully capable	Fully capable
viii	Access and Authorization control of the system	Not available	Yes, it was existed	Yes, available
ix	Evaluation capability of performance of heads of difference agencies through reporting from the system	Not available	Not available	Yes, available
x	Institutional influence	Government by itself made the coding.	Growing expectation from citizen, development partners influenced for better budget and accounting in nutshell better PFM. Stakeholders felt that COA is the foundation of the entire process.	Top policy makers of the Government institution patronized the PFM agenda along with the development partners to come into the new BACS and iBAS++ system.

Finally, we have technological compatibility in the coding systems. Table 7 presents the technological compatibility of coding systems.

Table 7. Technological compatibility of coding systems

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
i	Codes are compatible to the system	Not applicable	Not fully compatible to IT framework and system was also complex and rigid.	Codes were redesigned and iBAS++ system revamped accordingly.
ii	Criticalities of retrieving data/information from the system/book	Retrieving of data/information from manual system is out of imagination in this technological arena.	Retrieving capabilities were there but the data were full of garbage as the capturing was not right through proper coding classification	It is expected that BACS will be an enabler to capture accurate information for usage of retrieve data/information. Data can be retrieved from automation platform named iBAS++ just like figure click.
iii	How data are being preserved	Manually in physical ledgers	In iBAS system and dedicated server. Even though, data preservations were not well planned.	In iBAS++ system and dedicated server located in C&AG office.

Evolution of Coding System: Lynchpin of Successful PFM in Bangladesh

SL#	Attributes/ Particular	4 digits manual code classifications in 1938	13 digits code classification in 1998 and fed into iBAS in 2006	56 digits code classifications in 2018 for iBAS++
iv	Data Migration	Data migration is not possible as previously no structural data available.	13 digits digital code did not map up with earlier 4-digit manual code. Hence, data migration was not happened resulting loss of comparative analysis with previous years to assess the performance.	Data migration is one of the cornerstones for the success of new code classifications, but poor-quality/garbage data produced by the earlier coding system which was resulted low migration or no migration of previous data for historical/ trend analysis.

Discussion

The coding system is DNA of the complex value chain of accounting, and it deals with a number of practical matters. Without proper code distribution and designing, transactions cannot be captured and necessary reporting and data analysis for decision-making can also not be possible. The well-designed coding system is also a pre-condition for automation of public sector accounting and budgeting. Hence, the success of iBAS++ is also dependent on the coding system. Therefore, the success of the iBAS++ through the usage of BACS has to be monitored for a long time to draw conclusions as well as to make it more compatible with the environment of Bangladesh.

However, it should be noted that ICT does not guarantee success or development. It is agreed that information technology itself

cannot ensure transparency and accountability unless the IT focus on outcome in terms of reporting. Reporting in conformity with the IPSAS is only possible if the proper coding is ingrained in the system.

Conclusions

The BACS, when fully implemented in iBAS++, can now provide the government of Bangladesh with a strategic tool to link policy, planning, budget and accountability for results as part of a comprehensive performance management/monitoring and evaluation system. This will be achieved through the deepening of the organization code to the departmental unit and local offices responsible for service delivery; the elaborated program/project segment to activity level for various fund sources and fund agreements with the ability to track

Reimbursable Project Aid (RPA) and Direct Project Aid (DPA);

with geographic codes down to the Upazila level and later to union level and the derived segments for the 5YPs/SDG.

Because BACS has a common classification structure, it allows all governmental agencies to share data for aggregating within the system, including budgetary and extra-budgetary entities. This would make it easier to compile comprehensive reports that covered the entire government.

It is clearly evident from the above studies that the government continues trying to provide reports for the stakeholder, particularly citizens of the country and development partners (through GFS and COFOG reporting formats) and codes which is the lynchpin of reporting was designed to fit into iBAS++ system.

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The Impact of Cyber Security Breach on Stock Value

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Abstract

Share price is one of the primary indicators of a company's value measurement and performance analysis, which may be seriously affected by any bad news about the company's control and governance. An event like a cyber security breach announcement is one of them. In this study, the impact of cyber security breach on subsequent stock price movements. For this purpose, we took the company's share price before and after the 15 and 30 days of the event and analyzed the data using the statistical tool ANOVA. We found that the cyber security breach announcement had a clear impact on the alteration in the stock price in the analyzed period. Stakeholders are well informed about the real risk of a cyber security breach, which contributed to the fluctuation in the stock market. Thus, taking effective measures to regain or hold stakeholders' confidence in the company is essential.

Keywords

Cyber security breach, Stock price movement

Introduction

The world, from humans to animals and the poor to the rich, is experiencing a propitious life due to unprecedented advancements in science and technology. Everything turned into a matter of a single click of

a button on digital devices, held by almost everyone in every corner of the globe. Everything from food to medicine to luxury items arrives at the door instantaneously just after being demanded. Digitalization has made our life and activities much more flexible than could be pondered a few years ago. This ease of life is undoubtedly a fortune and unparalleled with any other time of human civilization since its commencement.

On the other hand, a paradox has always prevailed during this aeon of inexorable digital progression surrounding the breach of security of private life to business matters. From laypeople to billionaire magnets, whoever relies on digital technology, is faced with equal threats of this breach. Crimes centred on digitization are ballooning and unnerving the business community especially. For instance, during the last few decades, we have seen burgeoning cyber-security breaches in banking and other financial institutions. Investors are losing their money, and businesses are facing imponderable risks. There is no way to foreshadow these risks, but strong security measures can still significantly forestall these risks. A collaborative effort from regulators, security experts, management and central governments is necessary to minimize this risk to a tolerable degree, though not possible to eliminate.



To curb this mammoth risk, the security measure of the banking industry should be buttressed by ensuring a triple or quadruple security barrier. Hackers are intelligent, ferret for the opportunity, and are meritorious. In order to protect the money of businesses and desist these high nexus groups of security hackers, ensuring a puissant but distinctive security management systems backed by contingency plans is crucial.

For almost two decades, various types of research have been conducted to analyze the impact of cyber security breaches in financial institutions. Most of the research has been carried out centrally to investigate stock market responses to the news of security breaches in particular firms (Campbell et al., 2003; Cavusoglu et al., 2004; Yayla, A. A., & Hu, Q., 2011; Edward A. Morse., 2011; Das, S., Mukhopadhyay, A., & Anand, M., 2012). Also, to understand the effect of data breaches on the market values of firms (Havov

and D.Arcy, 2003; Goel, S., & Shawky, H. A., 2009; MC Arcuri, M Brogi, G Gandolf-ITASEC, 2017; Choong, 2017), investors attitudes towards such kind of announcements (Cavusoglu et al., 2004; Andoh-Baidoo et al., 2010), changes of the stock price in those types of events (Cashell, 2004; Spanos, G., & Angelis, L., 2016; Schatz, D., & Bashroush, R. 2016, Smith, Jones, Johnson, & Smith, 2019; Tweneboah-Kodua, 2018, 2020), the impact of data breaches on firms' financial performance (Ko, M., Dorantes C., 2006; Kannan, K., 2007), and to find out the impact of such event on shareholders' wealth and value (Ratzlaff, K.M., & McCullough, K.A., 2010; Smith, Smith and Smith, 2011). In this study, we examine the impact of cyber security breach on the stock price of particular financial institutions by observing stock price changes before and after the security breach incidents.

This article mainly focuses on the impact of a cyber security breach on financial performance

and stock price volatility in the banking sector of Bangladesh. In other words, it explores the consequences and aftermaths of cyber security attacks on the stock price and performance. So far, as per the best knowledge of this author, this is the first of its kind research being undertaken in Bangladesh. Thus it is original, genuine and pledges to contribute to the filling of existing literature gaps.

Literature Review

Several studies have been conducted to understand the changes in the stock price due to such events. Studies have shown that some targeted firms suffered losses of stock price at varying degrees on the day after the attack (Cashell, 2004 Arcuri et al, 2017). Rosatiet al. (2017) conducted found that data breach announcements had a positive short-term effect on both bid-ask spreads as well as trading volume while the effect was only evidenced on the event date. Smithet al. (2019) considered the observation of the market price of the firm's stock before the news report was published and several days after the event. Comparing the changes in stock price with the changes in DJT (Dow Jones Industrial) average shows that security breach announcements negatively affect the firm's stock price. In addition, a significant decline in the firm's market value was seen when

The Impact of Cyber Security Breach on Stock Value



data breach events happened (Choong, 2017). On average, the announcement of a corporate security breach negatively affected approximately 1% of the firm's market value during the surrounding event days (Goel, S., & Shawky, H. A., 2009). In addition, another recent study claimed a significant difference between the 'pre' and the 'post' breach disclosures, and the financial sector exhibited more abnormal volatility and return than firms in another sector (Tweneboah-Kodua, 2020).

An intensive study to find out the impact of such events on shareholders' wealth was conducted by Ratzlaff & McCullough in 2010. They found that the overall effect of data breach incidences on shareholder wealth was negative and statistically significant. Also, Security breach announcements had a significant negative impact on shareholder value, and the costs

of cyberattacks are not only limited to stolen assets but also lost business and company reputation (Smith, Smith and Smith, 2011). Extending a previous study by Andoh-Baidoo et al. (2010), another one was conducted to identify the new relationship between independent variables. The examination came up with the results that after 2000, the investors viewed breaches more negatively than prior breaches, meaning that investors were getting more attentive to those events than before. Also market punished the firm's stock price with a negative abnormal return as investors had negative views toward the data breach events (Choong, 2017). Some studies have also clarified that significant negative abnormal market returns were seen following the incidence of cyber security breach announcements (Garg et al., 2003; Cavusoglu et al., 2004; Havov and D.Arcy, 2003; Edward A. Morse, 2011). The results were more intense

for IT-based companies. Garg et al. (2003) examined security breaches incidence of 22 events and found that negative abnormal market returns were seen among all categories of firms which experienced IT security breach incidences. Cavusoglu et al. (2004), found significant negative abnormal returns and that abnormal returns were larger for Internet and small firms than for other traditional and large firms.

On the other hand, some studies also found no statistical evidence or correlation that could be supportive of the negative stock market reaction hypothesis considering all firms together (Campbell et al., 2003). A well-known study by Kannan K. (2007), namely "Market reactions to Information Security Breach Announcements: An Empirical Analysis" carried out to find the impact of data breach announcements on the financial performance of the firms. The authors claimed that they did not find significant negative abnormal returns. To examine the validity of that results, another study analyzed data across different characteristics to know the impact of each characteristic and further analysis supports the previous results with the same conclusion. When time series analysis was used to identify the impact of those events on e-commerce businesses, there was no clear impact on the structure of web traffic for the



set of businesses studied (Davis et al 2009). To examine the impact of breach announcements on a firm's stock values, another recent study was conducted by Tweneboah-Kodua (2018) using Cross-section, and industry-level analysis where cross-section analysis came up with the results that the market did not significantly react to such announcements for all the events and sector level analysis showed no significant cumulative firm reaction for both short and long event window.

Research Design

Source of Data

Most data are obtained from the cyber threat report published by BGD e-GOV CIRT and several news portals. The study is mainly conducted based on secondary data on the stock market day's closing price at DSE (Dhaka Stock Exchange).

Here, stock prices are compared and analyzed before and after the cyber security breach announcements.

Nature of the Study

This study is analytical since this study is trying to explore the cause-and-effect relationship among variables. The quantitative approach is used in this study to estimate and measure the variables. In another sense, this study is empirical research because of its dependence on secondary data and other empirical works.

Population and Samples

In this study, the population is ten DSE-listed financial institutions. Among them, 9 are commercial banks, and 1 is Bangladesh's leading integrated financial services provider. Moreover, Purposely Dutch Bangla Bank Limited, Prime Bank Limited, NCC Bank, Trust Bank, Bank Asia, Standard Bank, Islami Bank, Brac Bank, and

LankaBangla Finance are selected as samples.

Selection of the Study Period

The research study has been conducted for different periods. As our main study is about how cyber-attack incidence can affect companies' share prices, share prices of different periods are compared for our analytical purpose.

Statistical Tools

In this study, the delineate the impact of cyber security breach on stock price movement, we use ANOVA to check whether the subsequent price movements were significantly more or less than before the breach. Particularly, we use t-test and data were analyzed using a statistical tool in Microsoft Excel.

Hypothesis Development

Here, we will compare the company's share price before and after 15 days of cyber security breach announcements in one study and 30 days of cyber-attack in another study.

In this study, our hypotheses are,

H_0 : cyber security breach announcements have no significant impact on a company's stock price.

H_1 : cyber security breach announcements significantly impact a company's stock price.

The Impact of Cyber Security Breach on Stock Value

Results and Discussions

T-test analysis of the company's share price before and after 15 days of Cyber security breach announcements

Financial Institutions	t Stat	P(T<=t) onetail
Brac	12.30629273	0.00
DBBL	4.34640607	0.00
DBBL	2.824470385	0.006
Prime	0.635978312	0.265
NCC	4.552339814	0.000
Islami	3.591259318	0.0013
Standard	8.947897231	0.00
Trust	4.686765157	0.000
LankaBangla	2.483148382	0.009
Bank Asia	5.292410178	0.00

From the above graph, we can see a straight black bold line which expresses the value of $5.00E-02$ or 0.05. At the 5% significance level, if the p-value less than 0.05 (typically ≤ 0.05) is statistically significant and provides strong evidence against the null hypothesis, there is less than a 5% probability that the null hypothesis is correct. The alternative hypothesis is accepted. If the results are higher than 0.015, which is not statistically significant, we accept the null hypothesis and reject the alternative hypothesis.

If we start with 1st Bank in the table, which is Brac Bank, we can see that the p-value of the Bank is 0.00 which is far small

than the value of 0.05. As we know, 0.05 is our acceptance level of the null hypothesis. As the value is less than 0.05, we accept the alternative hypothesis, which is evident that there is a significant relationship between cyber security breach announcements and the company's share price drop. Moreover, we can claim that the announcement of the cyber security breach has a significant effect on Brac Bank's stock price. In the case of DBBL or Dutch Bangla Bank Limited, we already know that in 2019, DBBL suffered from a cyber data security breach 2 times in that year. If we examine both cases of cyber-attack, we can see that in both cases, the p-value of DBBL is 0.000101367 and 0.006405457, which is less

than 0.05. In both cases, we reject the null hypothesis and accept the alternative one. So, we can say that the cyber security breach announcement has a significant impact on DBBL's stock price in both events. However, when we move to the next one, Prime Bank, the graph shows that the trend crosses the straight line, which means that the p-value is more than 0.05. The p-value of Prime Bank is 0.2658, which is more than 0.05. That is evident that the null hypothesis is accepted. So, we can say that the security breach announcement has no significant impact on Prime Bank's stock price. Now move to the NCC bank, whose p-value is almost 0. From the p-value of NCC Bank, we easily conclude that announcement of a cyber security breach has a significant impact on the company's stock price because the p-value is less than our significant level. So, we accept the alternative hypothesis. The p-value of Islami Bank is 0.0013, which is also less than our significance level. That means we must reject our null hypothesis, which expresses that the cyber security breach announcement significantly impacts Islami Bank's stock price. Standard Bank also shows the same results as most companies. Its p-value is less than 0.05, which is $1.01772E-09$. So, by rejecting the null hypothesis, we can say that data breach news also affects the Bank's stock price. In the same way, we can claim that Trust Bank was also affected by the

event of a cyber security breach as we reject our null hypothesis because its' p-value, which is 3.26443E-05 is far less than our level of significance. LankaBangla Finance, one of Bangladesh's leading financial service providers, is the only single financial institution other than Bank in our study. If we see the p-value of LankaBangla Finance which is 0.009640758, it is also less than 0.05. So, like others, we have to reject our null hypothesis and say that the data breach incident significantly impacts the company's share price. The last Bank in our study is Bank Asia; it also follows the same trend as others because the value of p, in this case, is 1.13253E-05, meaning the p-value is less than our significance level. So, by

accepting the alternative hypothesis, we can say that the cyber security breach announcement has a significant impact on Bank Asia's stock price.

Now, if we conclude the overall result in a single sentence, we can say that there has a high chance that when news like cyber security breach announcements spread, it causes a significant impact on a company's share price because, in our study, we see that 9 companies out of 10 company show a significant decline in stock price subsequent to the security breach. As in the case of null hypothesis rejection, 9 companies rejected the null hypothesis and accepted the alternative one.

As mentioned earlier, At the 5% significance level, if the p-value is less than 0.05 (typically ≤ 0.05) is statistically significant. It indicates strong evidence against the null hypothesis, as there is less than a 5% probability of the null hypothesis is correct (and the results are random). Therefore, we reject the null hypothesis and accept the alternative hypothesis.

If we start with 1st Bank in the table, which is NCC Bank, we can see that the p-value of the Bank is almost 0. As we know, 0.05 is our acceptance level of the null hypothesis. By rejecting the null hypothesis as per the results shown, we claim that there is a significant relationship between cyber security breach announcements and the company's share price, and those events significantly affect NCC Bank's stock price. In the case of Prime Bank Limited, we already know that in 2019, Prime suffered from a cyber-attack. In our study, the p-value of Prime Bank is 0.0114 which is less than 0.05. That means we have to reject the null hypothesis and accept the alternative one. So, we can say that news of the data breach has significantly impacted Prime Bank's stock price. In the case of DBBL or Dutch Bangla Bank Limited, we already know that in 2019, DBBL suffered from a cyber-attack 2 times that year. If we examine both cases of cyber-attack, we can see that in both cases, the p-value of DBBL is 0.00 and

T-test analysis of company's share price before and after 30 days Cyber security breach announcements

Financial Institutions	t Stat	P(T<=t) one-tail
NCC	6.378279257	0.00
Prime B	-2.347139466	0.0114
DBBL	8.00265384	0.00
DBBL	6.026563052	0.00
Islami	3.308693598	0.0008
Brac	13.59842825	0.00
Bank	4.210884525	0.00
LankaBangla	2.530749286	0.007
Trust	-1.63019526	0.056
Standard	2.336628121	0.012

Figure: T-test analysis of company's share price

The Impact of Cyber Security Breach on Stock Value



0.00. In both cases, we reject the null hypothesis and accept the alternative one. So, we can say that the announcement of the data security breach incident significantly impacts DBBL's stock price in both events. The p-value of Islami Bank is 0.0008 which is also less than our significance level. That means we have to reject our null hypothesis, which expresses that the cyber security breach announcement significantly impacts Islami Bank's stock price. Now move to the Brac Bank, whose p-value is 0.00. From the p-value of Brac Bank, we easily conclude that announcement of a data security breach significantly impacts the company's stock price because the p-value is less than our significant level. So, we accept the alternative hypothesis. Bank Asia also shows similar results to most companies. Its p-value is less than 0.05, which is also 0.00. So, by rejecting the null hypothesis,

we can say that the cyber security breach announcement also affects the Bank's stock price. LankaBangla Finance, one of Bangladesh's leading financial service providers, is the only single financial institution other than Bank in our study. If we see the p-value of LankaBangla Finance, which is 0.0070, it is also less than 0.05. So, like others, we have to reject our null hypothesis and say that data breach incident significantly impacts the company's share price. However, when we move to the next one, which is Trust Bank, the graph shows that the trend crosses the straight line, which preliminary means that the p-value is more than 0.05. The p-value of Prime Bank is 0.05643, which is just a little more than 0.05. As it is still more than our level of significance, it is evident that the null hypothesis is accepted. So, we can say that the data security breach announcement has no significant impact on Trust Bank's stock price.

The last Bank in our study is Standard Bank, it also follows the same trend as others because the value of p, in this case, is 0.012151529, which means the p-value is less than our level of significance. So, by accepting the alternative hypothesis, we can say that news related to the data security breach significantly impacts Standard Bank's stock price.

Now, if we summarize the overall result, we can say that there has a high chance that when news like a cyber security breach spreads, it causes a significant impact on a company's share price because similar to the previous examination, we see that 9 companies from the sampling 10 company show the similar kinds of result. As in the case of rejection of null hypothesis like the earlier one, 9 companies accept the null hypothesis and the alternative one.

Conclusion

The stock price is one of the important indicators for ascertaining a company's overall performance and performance direction. Any kind of increase or decrease can imply a serious issue inside the companies. Therefore, the company always tries to maintain a stable growth rate for its stock price. Any kind of data security breach announcement can hamper maintaining that stable rate because these incidents-related

news raises questions about the company's ability to secure themselves, maintain confidentiality about themselves and their customers and stakeholders, and also the reliability of the company. As our results suggested in both cases, we see that majority of the samples show that cyber security breach announcements have a clear impact on stock price changes because interested stakeholders understand the impact of such events and to safeguard their stake, they try to mitigate their loss and take a different measure which affects the market price of that company. For those kinds of reason, sometimes company tries to hide those kinds of news from interested parties, as they may think it will hurt the company. Even sometimes, they claim that they undergo such events but avert any kind of financial loss to show that they can safeguard themselves from any kind of adverse situation, which creates a positive vibe for the customers and stakeholders. It is not always true for all time. Though they occasionally face financial loss and information links, they deny admitting they underwent such circumstances. However, hiding sometimes cannot help them in practical ways. Hiding news of such kinds can mislead a company's operation. They will not be aware that they must improve their security for a better future. So, they are responsible for

checking their security system when they get news or face those events. As the financial sector is one of the primary indicators of economic prospects, its development mostly depends on its security system. For this purpose, a strong security system can ensure a stable growth rate in this sector. Since it is one of the financial sector's main threats, it is necessary to take various steps to safeguard this sector. Even sometimes, the government takes necessary steps to ensure the sustainability of the financial sector. Thus, when cyber-attack-related news are published, every interested party should take a few steps to tackle the problem efficiently. Through this, everyone can get a secure future. Though this study provides sufficient evidence for the claim that cyber security breach announcements have a significant impact on a company's stock price, the small sample size still questions the study's validity. As we considered a short period for our analysis, it is unable to provide overall impact in the longer period such as when news spread it experienced some downfall in stock price for a little while but after much time elapses it does not face any financial loss as people tend to forget those announcements. They panicked, but they had a strong faith in the company.

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The Impact of Cyber Security Breach on Stock Value

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UMP to Bring Discipline in Insurance Sector

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Despite a series of measures jointly taken by Insurance Development and Regulatory Authority (IDRA) and various insurance companies, the insurance sector is yet to reach its true potential and is prone to various issues including lack of accountability, inadequate automation, poor information technology infrastructure, limited communications amongst insurers, authorities and consumers and hassles in receiving claims payment.

In addition, lack of transparency among the parties, limited digitization, and instances of non-disclosure of the actual premium collected by some insurers have created opportunities to embezzle public funds and have deprived the Government of huge revenue earnings.

However, a ray of hope is gleaming in the horizon due to a much-needed digital initiative taken by IDRA. This multifaceted initiative colloquially called The Unified Messaging Platform (UMP) is on its way to accomplish the mission to introduce storage of electronic data and a passage for free flow of information - the primary compliance factor of the National Insurance Policy-2014. The UMP platform has already been made available for use by all the insurance companies. The initiative has already made its mark by ensuring transparency through

digitization of policy information, increasing customer confidence, empowering authorities to enforce regulations and preserving accurate information on various aspects of the industry. This platform has become a backbone by collecting and saving information on each and every policy in the market, and its benefits are being reflected at all levels.

Launching a central software platform with so many features and making it accessible to 81+ organizations was, by no means, an easy task. During the initial phase of the project in early 2019, IDRA moderated a series of meetings to exchange ideas and views with Bangladesh Insurance Association (BIA) and Bangladesh Insurance Forum (BIF) that culminated in a unanimous decision to start the digital services at a quarterly rate of Tk. 3.50 per policy and a fee of Tk. 0.40 per SMS. No sooner had IDRA hit the ground running a bucket full surprises made things harder than thought: not all insurance companies had the internal technical setup to interact with a complex platform like UMP, there was hardly any industry-wide uniform standard to store and exchange data, each insurer stores information in its own way, a few companies did not even use any digital storage, and industry lacks expert IT resources. Owing to these constraints, it became

UMP to Bring Discipline in Insurance Sector



apparent that it would be very difficult to bring all these data under a uniform format and save them into a central location, in other words a data warehouse that would support subsequent services.

In spite of all the hurdles, IDRA eventually managed to beat all the odds by creating the centerpiece of the UMP platform aptly called The Central Policy Data Repository, a first of its kind in Bangladesh, that stores detailed information of each and every insurance policy in the market. Banking on the data stored in the central data warehouse, the UMP platform now provides services that include e-Receipt, SMS/eMail Alert, e-KYC, Policy Holder Portal, a Mobile App, Business Intelligence (BI) Tools, Agent Licensing Online (ALO) etc. Besides, the implementation of digital services called Surveyor Management System, Policy Tracking System are nearing completion.

The quarterly fee for UMP appears to be negligible compared to the large initial investment, recurring operating expenses and the enormous human effort that has gone into making this platform. The cost components of UMP include, but are not limited to, overhead of technical and management resources, installation and maintenance of hardware and network, procurement of security encryption keys, development of 81 separate database software for 81 insurers, inclusion of Artificial Intelligence, Business Intelligence software development, implementation of QR Code embedded premium payment e-receipt system, cost of software to transmit SMS through 4 mobile operators, and data storage along with maintenance of the data center.

The salient features of the digital services that have been implemented through the UMP platform are:

Digital Policy Repository: Until the UMP project, IDRA and other authorities had no means of knowing details of each policy in circulation, and they had to make policy decisions with limited data received for the insurers. However, it is imperative to know correct and detailed information for authorities to formulate strategies for the insurance sector. The digital policy repository has bridged that gap by collecting up-to-date and detailed data on each and every policy sold by every insurer. The detailed data of 22,072,375 insurance policies have been stored and updated weekly in the Digital Policy repository till date. Now, authorities are capable of getting the latest information on the whole industry with a click of a button, something that was unthinkable even two years back.

E-receipt: The e-receipt is an electronic money receipt that contains information on premium payment and it contains a QR code to stop counterfeit and scrupulous practices. An e-receipt is prepared from data that IDRA collects through the UMP platform from insurers when the latter receive premium payments. The data is saved centrally in the e-receipt system, a component of UMP, for perpetuity. Customers can view, download, and print an e-receipt through portal and mobile apps, two key components of the UMP project.



E-receipt is expected to reduce customer harassment and increase government revenue as information on every premium receipt are now being made available to IDRA. So far, a total of 20,235,600 e-receipts have been created and saved from data sent by 81 insurance companies.

e-KYC: Know Your Customer aims to correctly identify a policyholder and other individuals related to policy. Until the UMP project, Identity fraud used to be a major challenge for every insurance company. As part of the UMP project, IDRA has established direct connectivity with the Bangladesh Election Commission so that insurance companies can verify the identity of their customers. Now vital information such as name, address, date of birth, parents etc. can be verified against the data saved in national identity cards (NID). This central e-KYC service is a

milestone of the UMP project and allows every insurer to carry out the e-KYC process with ease. It is expected that identity fraud during claim settlement and other customer acquisition will drastically reduce as the usage of this e-KYC system increases.

Policy Holder Portal and Policy Holder Mobile App: Policy Holder Portal is a web based portal geared towards policyholders so that they can view, download, and print their policy statements from any place any time. They can also view, download, and print the premium e-receipts through this portal. Gone are the days when policyholders had to subject themselves to the agents for up-to-date information on thriller policies and payments. Policy Holder Mobile App, known as "Bima Info" is a mobile app that provides identical services as does the portal. So far, 6+ lakh policyholders have installed the app and the

number is growing rapidly. This portal and the App are poised to increase customer trust and confidence in the sector.

Agent License Online (ALO) Module: Prior to UMP, agent registration and renewal used to be a time consuming and cumbersome process. Since the launch of The Agent License Online (ALO) Module, an offering within the UMP project, things have improved significantly. Now all the functions including applying, reviewing, issuing and renewing can be performed electronically through a web portal. Information on every agent is being stored in a central location, and made available to every insurer; this will help improve professional ethics amongst the agents. Besides, the time it takes to get a new agent license and the delay in renewals will be reduced. To date, 69,367 agents have been digitally registered.

Business Intelligence Tools: A feature rich Business Intelligence Tools, a computer software that provides data in various forms and shapes for analysis, reports and research, have been implemented as part of the UMP offerings. Concerned authorities and the insurers have been given access to the system so that they can gain insights by viewing, analyzing, and monitoring up-to-date data at any given time. They can as well prepare dynamic reports including

UMP to Bring Discipline in Insurance Sector



charts, graphs etc. Finally the industry is approaching a stage where one day the authorities may start the process to revisit and update the age old mortality and actuary tables to reflect the current market scenarios. Through this system, industry can make informed decisions at various stages including that of introducing sustainable plans and projections.

SMS/email Notification: In order to increase customer confidence and to instill transparency in the industry, IDRA itself sends SMS to the policyholders in regards to their policies and premium payments. These SMS are automatically generated by the UMP platform using smart technologies such as Artificial Intelligence. So far, a total of 24,495,062 SMS have

been sent to 22,433,072 policyholders of 81 insurance companies.

In addition, UMP has resulted in financial savings to the insurance companies. While the banks and other financial institutions take a yearly fee of anywhere between Taka 200 and Taka 250 per customer for SMS alone the insurers are being charged a yearly fee of only Taka 14 per customer policy for UMP services that include a whole lot more than SMS.

The e-Receipt service has provided the insurance companies an opportunity to save Taka 15-20 for each policy receipt that they used to spend on sending paper receipts through courier companies. Since policyholders are equipped to view up-to-date

information about their policies and premium receipts through 'Policyholder Portal' and 'Policyholder Mobile App', an increased transparency is already being felt in the market. The insurers are not only making substantial savings thanks to e-receipt service, but the increased transparency is also helping them get new customers.

With the introduction of a central 'Electronic KYC', insurers no longer need to purchase e-KYC software and establish connection to the Election Commission NID database on their own, a joint feat that would have otherwise cost in excess of Taka 40 crore assuming a lump sum expense of Taka 50 lac for each insurer. This has made it possible for insurance companies to save huge sums of money.

With the advent of UMP, various activities that used to be carried out manually have gradually been brought under digital services that resulted in saving for the insurers and the authorities alike. The fees charged for UMP digital services are a fraction of what is charged for similar services at other financial institutions.

The benefits that the government, regulatory authorities, insurance companies and policy holders may reap through the UMP platform are summarized herein:



- Central control by IDRA
- Digital storage of policy data of insurance companies
- Provide policy related SMS and e-mail to the customer on behalf of IDRA
- Establish transparency and customer confidence as well as protect the interests of policyholders
- Reduce various issue including customer harassment
- Reduce irregular and lapsed policies
- Build capacity to research, review and adopt visionary plans
- Collect the accurate revenue
- Stop embezzlement of money through fake agents

- Timely settlement of insurance claims as all required data is kept with IDRA
- Savings postal costs for insurance company policy receipts through e-receipt

However, in light of discussions with the authorities it has been found that some insurance companies do not regularly provide complete information on policy which makes it difficult to reach the ultimate goals including an accurate repository of policy information, analysis of market trend, and reporting of the sector as a whole. IDRA sends SMS to the policyholders through UMP SMS Platform as soon as insurers send data to IDRA through the UMP platform. Owing to the fact that some insurers send incomplete information or fail to send data on time have caused policyholders to receive delayed or no SMS that adversely affects

customer trust. Despite receiving cost saving benefits through UMP some insurers do not make the quarterly service fee agreed by all parties; this has made it difficult for the vendor to recover the large one-time investment and the operational expenses. If this trend continues the vendor company may incur severe financial losses in meeting implementation and operating cost of the UMP.

Although late, this initiative of digitization is accelerating the development and growth of this industry. Since corruption in the insurance industry is rife, digitization is detrimental to the interests of some vested quarters. In this case, as the controlling authority, the IDRA should take a strict position in a sincere way.

Source

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Sought-After Analyses of Bangladesh Bank Monetary Policy and Its Impact on Inflation, Unemployment and Foreign Exchange Reserves

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Introduction

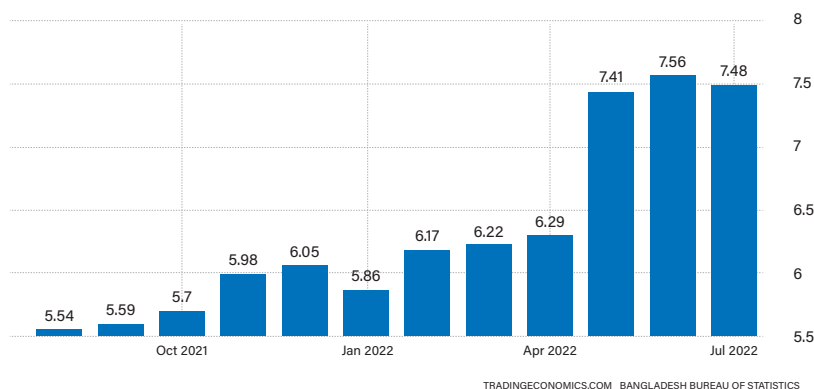
Every country has a monetary policy apotheosized, structured and implemented by its central bank. Monetary policy has some common objectives to accomplish, viz., controlling and restraining inflation, controlling interest rates, guiding the banks and financial institutions, advising the government by showing the economic conditions such as economic growth (GDP growth), unemployment rates, and poverty rates and on and on. Inflation targeting (IT) has become the leading monetary policy direction for developed, developing and emerging countries. Emerging countries are increasingly pressured to follow IT as part of their International Monetary Fund led stabilization packages and the routine procedures of the international financial organizations. Bangladesh Bank (BB), the central bank of Bangladesh, announced recently its monetary policy statement (MPS) for the period from July 2022 to June 2023 (FY 2022-23) elaborating its monetary policies and acquiesced some statistical data on economic growth, inflation rate, etc. From the analysis of the July-June 23 and previous MPS of BB it's revealed that BB gave its utmost priority to Inflation Targeting (IT) and other increasingly important economic issues like unemployment reduction, poverty alleviation and stock

market investments. BB has started issuing MPS once in a year, instead of twice in a year in previous years.

BB's Inflation Targeting

BB has been pursuing the contractionary monetary policy for a long period of time to control and contain inflation. The country is having an inflation rate of 7.56 % as in June 2022. Continuous follow up of "contractionary" monetary policy by BB fails to control and keep the inflation level at optimum level and the country is having the backlash of contractionary monetary policy. It's worth mentioning that the inflation rate of Bangladesh is high and not at optimum level in comparison with the developing and emerging economies. The chart shows the crystal picture of inflation in Bangladesh in comparison with the other economies. Countries like China, Vietnam, Indonesia and Thailand have less inflation rates than Bangladesh. Bangladesh has less inflation rate (7.4%) than that of UK (9.1%), USA (8.6%) and Canada (7.7%). These developed countries have had very high per capita income and peoples purchasing power of those countries are much higher. And we have nothing to be thrilled for having lower inflation rate in comparison.

Monetary policy's success depends on the Fiscal Policy of a country. The Monetary Policy Statement (MPS) for FY



2022-23 of BB has outlined the constraints that have come across as strong barriers on the way of Inflation Targeting. "The inflation outlook might confront some uncertainties in FY 23 because of increasing price pressures from supply-demand imbalances in the pace of rising demand, the unfavorable prognosis of the Russia-Ukraine war, and elevated global commodity prices. Moreover, upward adjustment of administered energy prices has created some pressures on the non-food commodity prices partly due to increased production and transportation costs in the domestic economy,

Besides, inflation expectations might heighten owing to the rising fuel and edible oil price hike" (Source MPS FY 2022-23 of BB).

BB has been undertaking various measures to contain inflation but the Government's recent abnormal price-hike of energy costs (costs of diesel, petrol and octane) that caused price hike in most of the commodities and will end up with higher inflation rate. Economists and financial experts suggest that the Monetary Policy and Fiscal Policy should not conflict with each other and if it happens, it

creates economic hardships and miseries for the low- and limited-income group of a country.

BB raised the policy rate, which is also known as the repo rate, by 50 basis points to 5.50% from 5% – a record hike in recent history – in the MPS FY 2022-23. This is the second time BB raised the policy rate in the span of a month. Earlier, on 29 May this year, BB increased the repo rate from 4.75% to 5% after almost two years. In July 2020, BB reduced the policy rate by 50 basis points from 5.25% to 4.75% to ease money flow amid the pandemic crisis. The surge in the rate will make money expensive for banks as they borrow money from the Bangladesh Bank on the repo and will counter inflation. "We have taken a cautious policy stance with a tightening bias to contain inflation and exchange rate pressure," said Bangladesh Bank Governor Fazle Kabir while announcing MPS FY 2022-23.

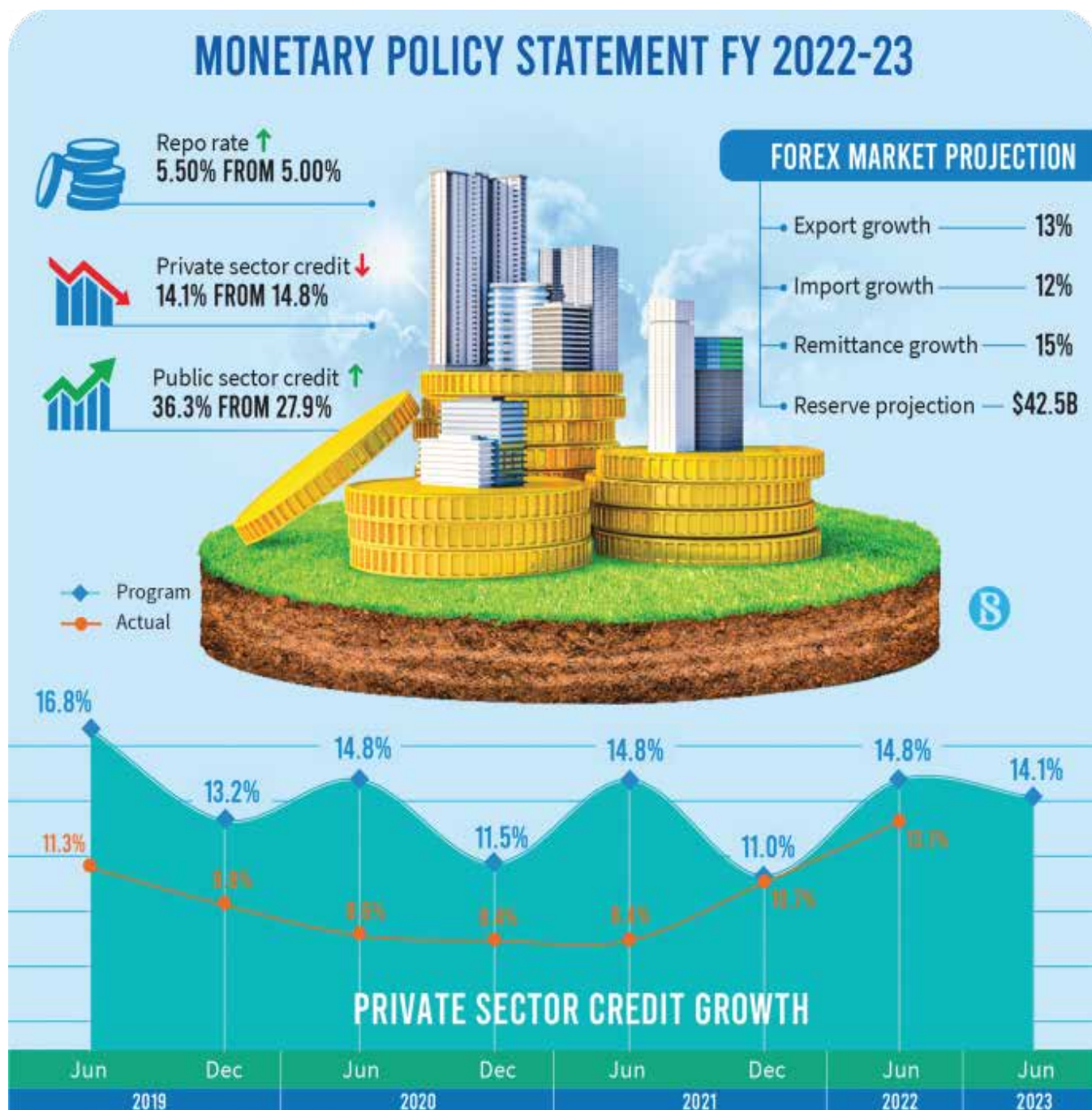
Economists and financial experts say that typical monetary steps like increasing "repo rate" can't inutile inflation, lending rate has to be increased to leash inflation. Managing Director of a Commercial Bank told, "It is conflicting that the central bank has raised the policy rate but has not done the same to lending rates of banks" (Source: The Business Standard).

BB's Cross-country Comparison of Point-to-Point Inflation (May 2022)

Country	Rate of Inflation %	Country	Rate of Inflation %
Pakistan	13.5	Bangladesh	7.4
Brazil	11.7	Thailand	7.1
UK	9.1	India	7.0
USA	8.6	Indonesia	3.6
Canada	7.7	Vietnam	2.9
		China	2.1

(Source MPS FY 2022-23 of BB)

**Sought-After Analyses of Bangladesh Bank
Monetary Policy and Its Impact on
Inflation, Unemployment and Foreign Exchange Reserves**



Source: Infographic: TBS



Monetary Policy for Reduction of Unemployment

Unemployment is a very high-strung economic factor which deserves to be focused in the Fiscal Policy and Monetary Policy of every economy, developed and developing alike. Most of the MPS of the modern central banks proffer a clear picture of unemployment at home and at global level and there are policy guidelines to improve the employment rate by creating new jobs. They provide the data and statistics on unemployment situation. But Bangladesh MPS is maintaining reticence about the very exigent economic factor in the FY 2022-23 MPS and the previous ones. But other central banks, for example, Bank of England governor Mar Carney shifts policy to target unemployment as well as inflation. The Bank of

England has overhauled its policy strategy, saying it plans to keep interest rates at a record low until unemployment falls to a certain per cent. Unemployment Rate in Bangladesh is expected to reach 5.40 percent by the end of 2022, according to Trading Economics global macro models and analysts' expectations. In the long-term, the Bangladesh Unemployment Rate is projected to trend around 4.70 percent in 2023, according to the econometric models.

General people don't understand and sometimes become puzzled about the basis of showing unemployment rate of 5.4% (2022) whereas we can see millions of unemployed people are moving around for jobs. We rightly expect that the MPS of BB should give the people of Bangladesh a clear

picture of unemployment data and policy guidelines and support to cut-down unemployment rate by creating new jobs like other modern central banks do.

BB's Monetary Policy FY 2022-23 for Investment and Employment Generation is limited to giving low-interest loans to Commercial Banks for their customers that didn't bring any remarkable results in investment and employment generation. Some countries, for example, Australia, Japan and Canada have been paying "wages subsidy" to companies for hiring new staff. NIKKEI Asia reported that Japan had subsidized 100% salaries at small companies for boosting employment. Australian Government offered financial support up to a maximum \$10,000 as wage subsidy for hiring a new staff. BB may introduce these types of wage subsidies that will definitely help create employment opportunities.

"The Senate on Wednesday passed legislation that includes \$52 billion in grants and incentives for US semiconductor manufacturing, an industry that has steadily lost ground to foreign competitors in recent years." (Source: Bloomberg Asia Edition, July 27, 2022). This legislation will lower costs, create well-paying jobs, strengthen supply chain and counter foreign competitors, as per White House Briefing, August 09, 2022. This is how

Sought-After Analyses of Bangladesh Bank Monetary Policy and Its Impact on Inflation, Unemployment and Foreign Exchange Reserves

world's number one economy bolsters its investment and creates well-paying jobs for thousands of people and should be a good lesson to follow by the developing and emerging countries in their fiscal and monetary policies.

BB's Foreign Exchange Reserves Management

Foreign exchange reserves are vital to fulfill international trade obligations - payment of import bills and foreign debts, intervening exchange rates, providing confidence in the financial market and so on. Protection of foreign exchange

reserves has become an urgent matter considering the current context of Bangladesh's economy. As per BB's MPS for FY 2022-23, foreign exchange reserves of BB stood at USD 41.9 billion as on 28 June 2022 compared to with USD 46.4 billion at the end of June 2021. As the foreign exchange reserves are decreasing due to world-wide price hike and uneven economic factors, BB has undertaken some measures to save foreign currency and to stabilize exchange rates. BB has put some restrictions on import of luxury goods, fruits, non-cereal foods, canned and processed food, etc.

Some economists and financial experts expressed their views as appeared in the local dailies that import restrictions by increasing L/C margin is not enough to reduce import items. Import of some luxury and non-essential items, products and services that are produced and available in the country should be banned till the economic situation improves. As we can see that the local market is flooded with foreign made goods that could be produced by local manufacturers. Restrictions or banning of these products shall save and resuscitate foreign exchange in one hand and on the other hand, shall create more employment opportunities in the local manufacturing companies. There won't be no shortage of these products since many manufacturers are available in the country to meet the demand.

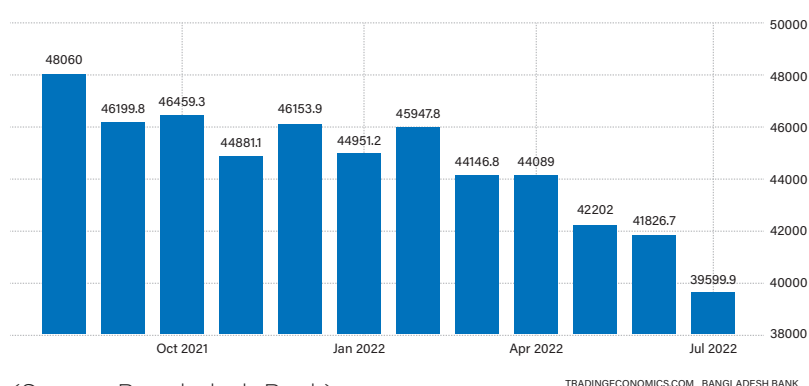
To improve the foreign exchange reserves, BB may introduce some export incentives/subsidies in addition to the existing ones for garments and man-power exports (please check if subsidy is given on manpower export or inward remittance) through its MPS. Bangladesh has been earning huge foreign exchange by exporting leather, leather-goods, footwear, jute-products, home textiles, terry towels, farm products, frozen and live fish, furniture, bicycle, pharmaceuticals, cement and cotton yarn. Export

Foreign Currency Reserves June/July 2022

Country	Reserves in Billion USD	Country	Reserves in Billion USD
Bangladesh	41.9	Philippines	100.9
India	570.12	Russia	584.12
Indonesia	136.41	South Korea	438.28
Malaysia	112.82	Thailand	222.29
Pakistan	17.43	Vietnam	105.44

(Source: Trading Economics)

Foreign Exchange Reserves in Bangladesh decreased to 39599.90 USD Million in July from 41826.70 USD Million in June of 2022.



(Source: Bangladesh Bank)



incentives/subsidies to the exporters of the mentioned items in any form in local currency, may burgeon the export earnings and help minify deficit balance of payments of BB.

In order to increase export earnings, Bangladesh needs to explore non-cotton (artificial) garment items in the international market. At present there's a huge global market of USD 700 billion for non-cotton (artificial) garment items. Any government incentive/subsidy through BB to the exporters in this arena, may thrive the andante foreign exchange earnings of the country to a great extent.

Conclusion

In the first six months of 2022, economies across the globe recorded the highest levels of inflation seen in decades, and economists are predicting that inflationary pressure might not be temporary but lengthy. The sought-after analyses of the inflation trend in Bangladesh shows that in August 2021 inflation rate was 5.54% and the rate jumped to 7.48% in July 2022. The foreign exchange reserve was USD 48.06 billion in August 2021 and it decreased to USD 39.60 billion in July 2022. In innumerable cases, the present reflects the past. The fiscal and monetary policies

couldn't contain inflation and failed to stabilize foreign currency reserves during the period from August 2021 to July 2022 due to adverse internal and external causes.

Maintaining inflation rate within the optimum level and stabilizing foreign exchange reserves have become the colossal task of BB and would be the great challenge for the next Fiscal Year. It's suggested that fiscal policy of the government and monetary policy of BB should improve private-public sector industries growth for employment generation, improve export earnings and encourage production of import-substitute products to stabilize foreign currency reserves. Energy (gas and oil) price and usage need to be managed competently to squelch inflation. Banning luxury, non-essential and locally available items for few months instead of only increasing Letter of Credit margin and import duties to save foreign exchange, would act as a strong catalyst.

Corporate Governance and Financial Performance of Commercial Banks: Bangladesh Perspective

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Abstract

Corporate governance leads to improved performance of business enterprises as emphasized by different researchers. Objective of this study is to focus the existing practices of corporate governance along with their impact, limitations & causes thereon. Sample of the study comprises ten commercial banks (2 state owned and 8 Private commercial bank) selected on convenience in data collection. Seven hypotheses are tested focusing two dependent variables like ROA, & ROE, and seven independent variables (major components of corporate governance activities). Significant correlation is found between corporate governance activities and financial performance of sample banks. Prudent efforts of management authorities, monitoring and supervision of default loan, prevention of misuse funds, compliance of regulatory guidelines prescribed by Bangladesh bank (BB) and Bangladesh Securities exchange Commission (BSEC) will play significant roles in further development of corporate governance practices.

Keywords

Corporate governance, Board size, Board Independence, Board Meeting, Audit committee, Risk Management committee, Executive Committee, Bank Performance.

Introduction

Corporate governance is a hot topic these days, as the world has experienced major financial crises over the last two decades. In 2008, the economic meltdown occurred in United States which resulted in bankruptcy of many financial institutions all over the world (Kowalewski, 2016). This unrest in financial market urges regulators to introduce stricter regulations and a complete review of corporate governance framework implemented in financial institutions. Banking Industry in Bangladesh also faced some scams in last few years including loan crisis by Hallmark and Bismillah Groups. Personal interests of directors at the time of sanctioning loan, unprofessional attitude of bankers to analyze loan risks, weak framework of governance are mainly responsible for such crisis. Besides, Non-performing loan (NPL) to Total Loan ratio is increasing in banking industry at an alarming rate that indicates less sustainability of this industry (Bangladesh Bank [BB], 2021). Several researches have been conducted on Corporate Governance and different comparisons have been made between institutions that practices good governance and institutions with weak corporate governance practices. Most of the researchers found that institutions that practice good corporate governance lead to improved performance



in the long run and high profitability (Rehman & Mangla, 2017). In Bangladesh, the subject of good governance has received less attention than in other emerging countries. Indeed, Bangladesh has been lagging behind neighboring countries due to the absence of CG practices in the majority of enterprises and organizations. One reason for the lack of CG is that the majority of businesses are family-oriented, with the Board of Directors actively involved in management (Ahmed & Yusuf, 2005). Reaz and Arun (2006) examined the governance standards of Bangladeshi banks and discovered that bank owners held significant shares and abused the bank's funds. Additionally, they allege that owners have a disproportionate influence on the banks' auditing and disclosure policies. It says that politics and family control

are the main reasons for poor loan recovery governance in Bangladesh. According to a recent study by Hoque, Islam, and Ahmed (2013), a significant number of banks do not meet the Central Bank and Bangladesh Securities and Exchange Commissions' (BSEC) mandatory requirements for board size, appointment of independent directors on the board, and holding audit committee meetings, implying a significant gap in corporate governance practice in the banking sector.

Statement of the Problem

Efficient corporate governance practices are deemed to be the contributing factors behind good financial performance of banks. Acknowledging this, regulatory framework based on guidelines and code of

corporate governance issued by Bangladesh Bank and BSEC are required to be followed by banks for better governance. The necessity of corporate governance practices originated from several financial crises of last few decades. Everyone can remember the economic melt-down of the financial sector of the USA in 2008. Absence of Proper corporate governance practice was one of contributing factors to that financial crisis. Financial institutions around the globe and their regulators have been seeking a solution that helps the modern financial services business to be risk adjustable and sustainable (Rahman, Rahman & Azad, 2015). The corporate governance code instructs companies on how to improve. The commercial banks in Bangladesh have shortcomings in this regard. They need an efficient and effective system of corporate governance in place to avoid the occurrences of risks. Numerous issues have plagued the Bangladeshi banking sector, including declining profitability, rising non-performing loans, increased loan loss provisions, eroded credit discipline, a low recovery rate, inferior asset quality, poor governance, excessive interference from the government and bank-owners, and a weak regulatory and supervisory role, among others (Haque et al., 2007). As the regulators, both Bangladesh Bank and BSEC have implemented a good number of

measures to improve corporate governance in banks. However, regulations may not be sufficient to ensure excellent corporate governance in banks. Absence of effective corporate governance might have an adverse impact on financial performance. It is necessary to investigate the relationship between corporate governance and financial performance so that the problems mentioned above can be reduced to a tolerable limit as it will not be possible to eradicate the same totally.

Objectives of the Study

The general objective of the study is to examine the relationships among corporate governance, and financial performance of commercial banks in Bangladesh. The specific objectives of the study are:

- (i) To analyze the corporate governance practices of commercial banks in Bangladesh.
- (ii) To assess the impact of corporate governance on the financial performance of sample banks.
- (iii) To identify the variations in practices of corporate governance of sample banks.
- (iv) To identify the causes of ineffective corporate governance of the sample banks.

- (iv) To provide suggestions for developing the practices.

Theoretical Discussions, Review of Relevant Literature and Development of Hypotheses

Relevant reviews of different studies on corporate governance are given below to develop the hypothesis thereon.

Corporate Governance - an Overview

Corporate governance is the process by which management directs and controls a company in the best interests of all stakeholders, ensuring greater openness and more accurate and timely financial reporting (BEI, 2004). It is essentially a control system that is used to ensure that corporate resources are utilized efficiently. It is an organizational control device that combines internal and external control mechanisms in order to achieve the most efficient use of business resources (Chowdhury, 2012). According to empirical studies, companies that follow strong governance procedures produce superior results (Gugler, 2001). The main goal of corporate governance should be to protect the interests of stakeholders in line with the public interest on a long-term basis. The Bangladesh Securities and Exchange Commission (BSEC) and the Bangladesh Bank have taken a

number of supervisory actions that are in line with both local and international rules.

Board Size and Bank Performance

Board size refers to the number of directors in the board. An ideal board has executive and non-executive directors. Lipton and Lorsch (1992) favored eight to nine board members, but Leblanc and Gillies (2003) said eight to eleven. According to BEI (2004) guidelines, internationally effective corporate boards have 7 to 15 directors, and according to BSEC (2018), the number of board members should be between 5 and 20. A well-functioning board should have broad knowledge and experience. Too many directors might cause inefficient communication and free riding (Pathan, Skully & Wickramanayake, 2007). Board effectiveness should be prioritized before size.

Despite the fact that board size is an essential component of good corporate governance, there is a lack of agreement among academics regarding the relationship between board size and bank performance. Some academics assert that there is a positive association between board size and bank performance (Rahman & Islam, 2018; Hoque et al, 2013). Others, however, are of the opinion that there is inverse relationship between board size and bank



success (Alam & Akhter, 2017). Based on the literature review above the hypothesis developed as under:

H₁: There is a significant association between board size and bank performance.

Independent Board Member and Bank Performance

Independent directors are board members who have no affiliation with the company outside of their board membership (Banking Regulation & Policy Department [BRPD], 2013). Alam & Akhter (2017) found that number of independent directors was inversely related to bank performance. However, Rahman & Islam (2018) showed that the number of independent directors had a significant positive impact on ROE and EPS.

This research examines the relationship between the independent board of directors and bank performance as assessed by ROA, ROE, and EPS. This study explores the following hypothesis in light of the previous discussion:

H₂: There is a significant association between board independence and bank performance.

Board Meeting Frequency and Performance

A board meeting is the number of board meetings held each year. The Bangladesh Security Exchange Code of Corporate Governance requires the board to hold four sessions each year, with a maximum of four months between each meeting. The success of the board depends on the frequency of its meetings, as this can improve

the firm's performance by providing the board with more opportunities to monitor and analyze management's performance (Hsu & Petchsakulwong, 2010). This is consistent with the findings of Evans et al. (2002), who found that the frequency of the board meeting can identify the challenges related to falling firm performance. So, boards should think about holding more meetings if the situation calls for more control and oversight (Khanchel, 2007).

Given the above discussion, it seems plausible to propose the following hypothesis:

H₃: There is a significant relationship between the number of board meetings and bank performance.

Audit Committee Size and Bank Performance

The audit committee is one of the board of directors' committees. Furthermore, this committee plays a critical function in managing and monitoring internal controls and hazards. The audit committee's major responsibility is to monitor financial performance and assure compliance with rules, policies, processes, and laws, as well as the accuracy of financial reporting. Previous research has found that a company's audit committee is an important issue that reduces agency difficulties and encourages managers to

improve firm performance (Klein, 1998; Kren & Kerr, 1997). According to the results of another study, there is a Negative link between the audit committee and how well the company does (Alam & Akhter, 2017).

The BSEC code of corporate governance suggests that an audit committee with a minimum of three board members be established in every organization (BSEC, 2018). As a result, the following hypothesis is proposed and put forward as an outcome of the study:

H₄: There is a relationship between audit committee size and bank performance.

Audit Committee Meeting Frequency and Bank Performance

The frequency of audit committee meetings is seen as a significant indicator of their monitoring efficacy (Lin, Li, & Yang, 2006). Some researcher observed that the audit committee maintains internal control and provides shareholders with accurate information. Consequently, the audit committee bolsters the internal auditing function and controls management's business risk assessment (Hsu, 2007).

Recent academic literature confirms that audit committee activity, as assessed by meeting frequency, provides various

benefits to a company's shareholders (Hoque et al, 2013). These advantages include increased oversight of the firm's financial reporting process and more openness, which allows shareholders to anticipate earnings more regularly and effectively (Laksmna, 2008).

Several scholars have explored the relationship between audit committee meetings and corporate performance, but the conclusions are inconclusive. Many researchers found a favorable association between these two factors in developed and developing countries, while others found a negative relationship (Darko & Uzonwanne, 2016). Some scholars saw no link between the variables (Al-Matari, Al-Swidi & Fadzil, 2014). This study presents the following hypothesis in response:

H₅: There is a relationship between the frequency of audit committee meetings and bank performance.

Risk Management Committee and Firm Performance

The risk management committee will consist of a maximum of five members (BRPD, 2013). The risk management committee should hold at least 4 meetings in a year and it can sit any time as it may deems fit. Members of the committee will be nominated by the board of directors from among themselves. A board's size may influence the presence

of a risk management committee. The establishment of risk management committee would lead better corporate performance. Therefore, the following research hypotheses are developed:

H₆: The size of the risk management committee has a significant impact on the bank's financial performance.

H₇: There is a significant relationship between the Risk management committee meeting and bank performance.

Financial Performance

Good corporate governance protects shareholders' interests, ensuring sound corporate performance (OECD, 2004). Investors and lenders will be more likely to invest in organizations with effective governance since they will have reduced costs of capital (Coombes and Watson 2000). Other stakeholders, like employees and suppliers, will want to do business with such organizations since their relationships will be more lucrative, fair, and long-lasting. The current study has used ROA, ROE, and EPS to quantify firm performance. ROA, ROE are short term and long term performance indicators respectively for most investors (Brealey and Myers, 2000). EPS helps stakeholders estimate profitability by revealing per-share net income (Weygant



et al, 2010). The study measures banks' financial performance through ROA and ROE.

Conceptual Framework

The major goal of this research is to demonstrate the impact of corporate governance on bank performance in Bangladesh. In this study, the independent variables are Board Size (BODSZ), Board Independence (BIND), Board Meeting (BM), Audit Committee Size (ACSZ), Audit Committee Meeting (ACM), Risk Management Committee Size (RMCSZ), and Risk Management Committee Meeting (RMCM), while the dependent variables are Return on Asset (ROA), and Return on Equity (ROE).

Methodology of the Study

The quantitative approach is used in this study. The bank's performance is evaluated and assessed using secondary data

acquired from the sample companies' annual reports.

Sample and data collection procedure

Bangladesh has 61 scheduled banks that operate entirely under the jurisdiction and supervision of Bangladesh Bank that constitute the population. The current study is conducted on two state-owned commercial banks and eight private conventional commercial banks listed on the Dhaka stock exchange, thus the sample size is Ten. The 10 banks are Sonali Bank Ltd. (SBL), Agrani Bank Ltd.(ABL), IFIC Bank Ltd.(IFIC), National Bank Ltd.(NBL), Eastern Bank Ltd.(EBL), Dhaka Bank Limited(DBL), Dutch-Bangla Bank Ltd.(DBBL), Bank Asia Ltd.(BAL), Mercantile Bank Ltd.(MBL), BRAC Bank Ltd.(BBL). For the purpose of this study, the years from 2014 to 2020 were analyzed for a span of seven years. The annual reports of certain banks are

evaluated after obtaining them from their respective websites.

Technical Analysis

Descriptive statistics like mean values, standard deviation are used to assess the corporate governance practices of the sample banks. And in the later part of the chapter, multiple correlation & multiple regression models are used to examine the relationship of financial performance indicators and the corporate governance variables along with ANOVA, regression coefficient etc.

Multiple Regression Model

The following model is used to examine the relationship between corporate governance and bank performance:

$$Y_i = \beta_0 + \beta_1 f_1(X_{i1}) + \beta_2 f_2(X_{i2}) + \dots + \beta_k f_k(X_{ik}) + \epsilon$$

where:

Y= dependent variable.

X₁,....., X_k: variables that are independent (explanatory).

β_0 , , β_k : regression model coefficients (parameters).

f₁,f_k: functions (transformations) of independent variables, such that the relationship between Y and each f(X) is assumed to be linear.

ϵ : random error



Descriptive Statistic

Table 1 displays descriptive statistics for the variables utilized in the model. The descriptive statistics generated using SPSS version 22 included mean, standard deviation, minimum, and maximum. The average values of return on assets and return on equity have favorable effects on the performance of a bank and indicate an upward tendency. These figures are 0.87 percent and 10.69 percent, respectively. The average number of directors on a board was 11.26 (i.e., 11 people), and the standard deviation was 3.32 (i.e., 3 people). It follows the standard format established by the Bangladesh Bank. The mean ratio of the board independence was 0.26, and the standard deviation was 0.093. This indicated that the average ratio of board independence in most samples was located between 0.17 and 0.35. All banks adhere to the regulations governing the particular number of independent bank directors. The table shows that the entire sample banks' average meeting frequency was 26.24 (i.e., 26), which was more than the regulatory requirement. The average number of people on the audit committee, and risk management committee was three to five. All banks follow the rules set by the Bangladesh Bank for making the Directors Committee. Table-1 shows that the average frequency of audit committee meetings (ACM)

(i) Banks' performance (BP) is the dependent variable and is measured by the following two ratios:

- Return on assets (ROA). It is calculated by the net profit of the bank divided by the total assets.
- Return on equity (ROE). It is calculated by the net profit of the bank divided by the shareholder's total equity.

(ii) The independent variables that are considered to measure the Bangladeshi bank's performance are shown below:

- BODSZ: The number of directors on bank boards.
- BIND: Proportion of independent directors on the board.
- BM: The total number of board meetings.

- ACSZ: The number of Audit Committee members.
- ACM: The number of audit committee meetings
- RMCSZ: The number of members of the risk management committee
- RMCM: The number of risk management committee meetings.

Multiple correlation coefficient (R) and coefficient of determination (R²) were also used to show the extent of correlation and variation, respectively. Collinearity statistics are also shown to detect the existence of multicollinearity.

Major Findings and Observations

These are arranged in accordance with the hypothesis's sequence.

Table 1: Descriptive Statistics of Variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
BODSZ (number)	70	6.00	18.00	11.26	3.32
BIND (ratio)	70	0.09	0.50	0.26	.093
BM (number)	70	7.00	61.00	26.21	13.58
ACSZ (number)	70	3.00	7.00	3.87	0.98
ACM (number)	70	3.00	37.00	10.56	5.16
RMCSZ (number)	70	2.00	7.00	4.06	1.11
RMCM (number)	70	1.00	12.00	5.30	2.02
ROA (percentage)	70	(1.12)	2.02	0.87	0.53
ROE (percentage)	70	(19.06)	22.16	10.69	6.20

Source: The authors obtained the results (SPSS output).

Correlation Analysis

The Pearson correlation analysis is used to determine the relationship between performance indicators and corporate governance components.

Table-2: Correlation between performance indicators and corporate governance components.

		BODSZ	BIND	BM	ACSZ	ACM	RMCSZ	RMCM
ROA	Correlation	-.113	.629**	-.594**	-.212	-.133	-.461**	-.278*
	Sig. (2-tailed)	.354	.000	.000	.079	.273	.000	.020
	N	70	70	70	70	70	70	70
ROE	Correlation	-.121	.571**	-.525**	-.164	-.029	-.324**	-.188
	Sig. (2-tailed)	.317	.000	.000	.175	.814	.006	.120
	N	70	70	70	70	70	70	70

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source: The authors obtained the results (SPSS output).

throughout the study period was 10.56, with a range of 3 to 37 times, and that the standard deviation was 5.16. The average number of risk management committee meetings per year was 5.30, with a range of 1 to 12, and a coefficient of variation of 2.02. These results suggest that the number of times each bank's risk management committee meets is very different.

According to multiple correlation analyses, there are positive or negative links between financial performance indicators and corporate governance elements. There is a strong positive relationship (+0.629) between ROA and board independence. On the other hand, there is a strong negative correlation between the ROA and the frequency of board meetings (-0.594). Other

aspects of corporate governance had weak positive or negative correlations with ROA (less than 0.5). As a result, board independence may assist in the strengthening of ROA to some extent. On the other hand, board meetings can have a negative impact on the bank's performance.

The analysis revealed that there was a mixed correlation

between ROE and various corporate governance practices. A moderate positive correlation exists between ROE and board independence, i.e., (+.571). As a result, the independence of the board may help improve ROE in some ways. On the other hand, board meetings can affect a company's performance. The correlation between ROE and board meetings is negative (-0.525). Other parts of corporate governance have small effects on ROE (less than 0.5) that are either positive or negative.

Multiple Regression Analysis

The results of the study's multiple regression analysis are reported in tables 3 and 4. Before making a judgment, the Multicollinearity test is also performed. Multicollinearity refers to a situation when two or more independent variables are

highly correlated with each other. A more precise test to detect multicollinearity is to use the Variance Inflation Factor (VIF). A VIF greater than 10 is considered unsatisfactory as regards multicollinearity. (Lind, Marchal, and Wathen, 2012). The value of VIF is shown in Tables 3 and 4. All the VIF values are less than the upper limit of 10. This means that the independent variables used in the models are not strongly linked, so there is no problem with multicollinearity in this study.

Inter-relation between ROA and selected independent variables.

In Table 3, in the regression analysis, the dependent variable in the regression is ROA. The regression results indicate that the model's explanatory variables explain the dependent variable with R-square and

adjusted R-square values of 52% and 46.6%, respectively. The value indicates that 52% of the variation of ROA is accounted for by the set of independent variables chosen for the model. From the ANOVA output, it is observed that the significance of F is 0, which is less than 0.05. So, at a 5% level of significance, it is concluded that all the independent variables as a whole have an effect on ROA.

Table 3 demonstrates that board independence and audit committee size positively correlate with ROA, whereas the size of the risk management committee negatively correlates with ROA. Return on assets is unrelated to the size of the board, the number of board meetings, the number of audit committee meetings, and the number of risk management committee meetings.

Table-3: Inter-relation between ROA and selected independent variables.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.621	.357		1.741	.087		
BODSZ	.015	.018	.092	.799	.427	.587	1.704
BIND	2.034	.543	.509	3.745	.000	.419	2.387
BM	-.007	.006	-.185	-1.209	.231	.330	3.031
ACSZ	.137	.064	.254	2.127	.037	.542	1.844
ACM	-.003	.010	-.026	-.253	.801	.757	1.320
RMCSZ	-.157	.058	-.334	-2.707	.009	.508	1.967
RMCM	.003	.029	.013	.115	.909	.635	1.574
R=.721 ^a ; R Square =.520; Adjusted R Square=.466; F (7, 62) =9.597, p<.001.							
* Dependent Variable: ROA							

Source: The authors obtained the results (SPSS output).

Table-4: Inter-relation Between ROE and Selected Independent Variables

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	6.025	4.714		1.278	.206		
BODSZ	.038	.240	.020	.158	.875	.587	1.704
BIND	21.184	7.173	.449	2.953	.004	.419	2.387
BM	-.123	.078	-.269	-1.571	.121	.330	3.031
ACSZ	1.240	.849	.195	1.461	.149	.542	1.844
ACM	.097	.136	.081	.713	.479	.757	1.320
RMCSZ	-.807	.768	-.145	-1.051	.297	.508	1.967
RMCM	.146	.378	.048	.385	.702	.635	1.574

R=.632; R Square =.399; Adjusted R Square=.331; F (7, 62) =5.885, p<.001.
 * Dependent Variable: ROE

Source: The authors obtained the results (SPSS output).

Inter-relation between ROE and selected independent variables

Table 4 shows that the multiple correlation coefficient, R, is 0.632. It indicates that the correlation between ROE and the selected independent variables is strongly positive. The coefficient of determination, R², is 0.399, which indicates that 39.9% of the variation of ROE is accounted for by the set of independent variables chosen for the model. From the ANOVA output, it is observed that the F value is 5.885, with a p value = 0.000 significant at 0.05. So, at a 5% level of significance, it is concluded that all the independent variables as a whole have an effect on ROE. It has been seen that the independence of the board has a positive relationship with ROE, while other independent variables have no effect on ROE.

Results of Hypothesis Testing

Hypothesis 1 (significant association between board size and bank performance): For ROA and ROE, the correlation coefficients are -.113 and -.121, respectively. It also indicates that board size and ROA and ROE have a negative relationship. These two performance measures (ROA and ROE) have significant values of P =.354 and .317, respectively, which are more than .05. The null hypothesis is widely accepted. It can be concluded that board size has no impact on ROA or ROE. The result of regression analysis also shows the same result.

For the second hypothesis (the relationship between board independence and bank performance), the correlation coefficients between board

independence and ROA and ROE are .629 and .571, respectively, with P values of .000 in both situations. This leads to more authority in the boardroom, which increases performance. As a result, H2 is acceptable. So, it's possible to say that board independence and the performance of a bank are linked. The outcome is consistent with the regression results presented in Tables 3 and 4. Therefore, our findings suggest that independent directors are better monitors than other directors because they have a reputation to maintain.

Third, the hypothesis that there is a relationship between the number of board meetings and bank performance: The negative values of the correlation coefficient with ROA (-.594) and with ROE (-.525) indicate a negative link between board



meeting frequency and bank performance (as assessed by ROA and ROE), and the significance value of P in both cases is.000. This indicates a negative correlation between board meetings and bank performance. On the other hand, if we consider the regression results presented in tables 4 and 5, board meetings had no effect on business performance. Therefore, the judgment is inconclusive.

Regarding the fourth (there is a link between the size of an audit committee and the performance of a bank), The negative values of ROA (-.212) and ROE (-.164) indicate a negative relationship between the number of audit committee members and bank performance (as measured by ROA and ROE) and the p values are (ROA =.079, ROE =.175) greater than.05. The regression

result regarding the relationship between committee size and ROE is presented in Table 4, which also indicates that the p value is greater than.05. It suggests there is no significant relationship between audit committee members and bank performance. On the other hand, considering ROA, the p value of the audit committee size is less than.05, indicating that there is a correlation between audit committee size and ROA. The result is an inconclusive decision.

For hypothesis 5 (there is a relationship between the frequency of audit committee meetings and bank performance), The negative values of the correlation coefficient with ROA (-.133) and with ROE (-.029) imply a negative relationship between board meeting frequency and bank performance (as

measured by ROA and ROE), consistent with the significance value of P (ROA =.273, ROE =.814). It implies that audit committee meetings and bank performance are unrelated. The result conforms to the regression results reported in Tables 3 and 5. Therefore, the null hypothesis is deemed acceptable.

For Hypothesis 6: (The size of the risk management committee has a significant effect on the financial performance of the bank.): The negative values of the correlation coefficient with ROA (-.461) and with ROE (-.324) indicate a negative association between the size of the risk management committee and bank performance (as measured by ROA and ROE), which is consistent with the significance level P (ROA =.000, ROE =.006). The regression result regarding the relationship between risk management committee size and ROA is presented in Table 4, which also indicates that the p value is less than.05. It suggests there is significant relationship between risk management committee members and bank performance. On the other hand, considering ROE, the p value of the risk management committee size is less than.05, indicating that there is a no relationship between risk management committee size and ROE. The result is an inconclusive decision.



For seventh hypothesis: There is a significant relationship between the risk management committee meeting and bank performance. The negative correlation coefficients with ROA (-.278) and ROE (-.188) show a negative association between risk management committee meeting frequency and bank performance (as assessed by ROA and ROE), which is supported by the P value (ROA =.020, ROE =.120). As a result, on the ROA, the hypothesis is deemed acceptable. The meetings of the risk management committee and the ROA are implied to be linked. On the other hand, risk management committee meetings have nothing to do with return on equity. Alternatively, based on the regression results reported in tables 4 and 5, board meetings had no effect on business performance. The conclusion is therefore inconclusive.

Conclusions

To measure the impact of corporate governance on financial performance, three pertinent characteristics of the board of directors, i.e., the number of independent board members, the size of the board, and board meetings; two aspects of the audit committee, i.e., the number of audit committee members and the audit committee meeting; and two aspects of the risk management committee, i.e., the number of risk management committee members and the risk management committee meeting, are considered. Based on overall analysis and interpretation of statistical outcomes in testing the relevant hypotheses, it could be concluded that only board independence has a favorable effect on financial performance, while board meetings have a negative effect. Other variables

have no measurable impact on performance. The ANOVA statistics show that the corporate governance practices of the sample banks are not all the same.

Recommendations

In practice, there is enough room to develop corporate governance practices based on the following mechanism. (i) Ensuring that Bangladesh Bank has good control over how well it follows the rules; (ii) Transparency in corporate governance activities and limiting the amount of bad loans; (iii) Taking preventive measures to control the high cost of funds; (iv) Strengthening the ethical code of conduct at each level of management; (v) Provide training and advice to different levels of management personnel; (vi) Evaluate financial performance on a regular basis to find out what works and what doesn't; (vii) It is best to avoid making decisions based on political considerations; and, (viii) Market opportunities and problems need to be explained so that existing financial controls can be used to deal with market threats and problems.

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How Bangladesh Economy Fares Amid Russia-Ukraine War?

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Abstract

The roots of the Russia-Ukraine conflict, the worst in recent months, date back to February 2014 as Russia annexed Crimea and Donbas regions which were parts of Ukraine, the second-largest country after Russia in Eastern Europe. The latest Russian invasion of Ukraine on 24 February 2022 has given birth to a new global crisis. The crisis has many devastating effects, with the economic crisis being the most underlying challenge for the entire world. The global economy has entered into a new terrain of uncertainty through this war. Being a developing country, Bangladesh is no longer an exception to this bedlam. Bangladesh is already feeling the heat of the Russia-Ukraine war on many fronts. It cultivates good economic and bilateral relations with both Russia and Ukraine. Due to the recent

Russia-Ukraine crisis, Bangladesh is facing challenges to maintain balanced relations with the warring factions. The Russian aggression has certainly aggravated the economic crisis in Bangladesh. The recent price hike of fuel and freight charges increased the prices of daily essential commodities. As a result, inflation is going further upwards and the resultant devaluation of money. It might have a long-term pernicious impact on economic growth as well as overall development of the country. At this juncture, this article makes an endeavour to highlight the mitigating measures for economic impacts of the Russia-Ukraine crisis on Bangladesh. Initially, the impacts of this conflict on the global economy are narrated. Thereafter, it unfolds the offshoots of the global effects on Bangladesh economy. Finally, a suggestive roadmap is put forward to address future challenges.





Keywords

Russia-Ukraine war, Bangladesh, food crisis, fuel crisis, price hike, global trade

Introduction

Interstate war is a common supranational phenomenon that is prevalent through ages. War causes untold suffering to people and damage to properties in the states directly involved, and also threatens to create a potential flashpoint in small states. The ongoing Russia-Ukraine war is a textbook example of the nations in conflict. On 24 February 2022, Russia launched a full-scale invasion of Ukraine with an estimated 200,000 troops, similar to the total military might of its rival. This asymmetric war,

coupled with media management, cyberspace dominance and other elements, has shaped the path for a hybrid environment. Developing countries lack cyberspace dominance, national integration and the doctrinal novelty for a changed battlefield scenario. Moreover, food security and the balance of commodities are the paramount concern of developing countries. The current Russia-Ukraine war is a case in point here. This dispute poses a potential threat to neighbouring nations. Developing countries fall prey to casualties of war as they become a testing ground of the superpowers. Bangladesh being the rising developing nation is also under similar threat. Therefore, it is imperative to analyse the impacts of the

ongoing war and take necessary precautions for the future. Against this backdrop, this article gives an overview of this war, critically analyses its impact on the world economy and finally suggests ways to counter such threats in the future. In doing so, it discusses the plausible emancipation of the Bangladesh economy from such effects.

Statement of the Problems: This article sheds light on the backcloth of the ongoing war between Russia, which wants to emerge and show its military as well as nuclear might as a neo-global hegemon, and its next-door, next-to-big neighbour Ukraine, which is ruthless and dogged in determination to stop Russia from parading its strength and superpower avatar. The war has made the world restive amid food and fuel supply shortages, snag-hit export-import, disrupted flow of goods and services, hyperinflation and food insecurity, among other problems. These adverse economic issues need an immediate remedy to rid Europe and the rest of the world of their impacts.

Objectives of the Analysis: Against the backdrop of the Russia-Ukraine war, this article aims to hammer home the significance of their conflict of interest and importance of stopping this mindless mayhem and establishing peace for their own good and the greater good

How Bangladesh Economy Fares Amid Russia-Ukraine War?



of the entire world as it suffers a chain effect, including but not limited to fuel and energy supply setback, disrupted supply chain of goods, price hike of essentials and, most importantly, the impact on food security and the resultant potential famine and recession. This paper touches on these problems and their impacts on Bangladesh back in South Asia.

Impacts of the War on World Economy

The Russia-Ukraine war continues to have a concatenation of knock-on effects on the global markets and food supply chain. Ukraine's inability to export grain throughout the first five months of the conflict has worsened a global hunger crisis with catastrophic impacts throughout the world. The war is a major blow to the world economy as it continues to slump for significant disruptions to trade, food and fuel price

shocks, all thereby contributing to high inflation and subsequent tightening global financing conditions. Beyond the suffering and humanitarian crisis from the Russian invasion of Ukraine, the entire global economy feels the effects of slower growth and faster inflation.

Fuel and Energy Supply Crunch: Russia meets around 40 percent of the total fuel and energy requirements of Europe, and there is no alternative source for them as well. The prices of petroleum and natural gas have increased significantly all over the world due to this crisis. Besides, the recent declaration by Moscow to pay the price of fuel in 'ruble' (Russian currency) has exacerbated the crisis. Gas price has increased by 23 percent since the beginning of the war and oil price has reached the highest level in 14 years.

Grain Output and Supply Uncertainty: Russia and Ukraine

are among the world's largest exporters of cereals and crops. Both countries play a pivotal role in global food markets. According to the Food and Agricultural Organisation (FAO), 95 countries rely on Russia and Ukraine for 50 percent of their wheat imports. Russia accounted for 17 percent of world exports of grains in 2021. The recent crisis has affected the overall production of food grains and supply chain. It might lead many countries into famine and increased malnutrition.

Downtrend in GDP and Rising Unemployment: The world economy is still reeling under the effect of the Covid-19 pandemic. Moreover, the recent crisis in Europe has amplified the problem. This war might cause a downtrend in GDP (gross domestic product) growth in Europe by 2.2 percent. Besides, the problem of unemployment is rising high in almost all the countries, thereby hindering the economic development globally.

Disrupted Supply Chain of Goods: Supply chains of many essential commodities are disrupted due to this ongoing war. Russia is the source of minerals like titanium, nickel and platinum. These minerals are highly essential raw materials for electronic and automobile industries. What is more, oil price hike has increased shipment charges, thus disrupting supply chain. The sky-rocketing prices of daily



commodities are due to this chain effect.

Price Hike of Commodities: Economic sanctions against Russia prevent many countries from importing essential commodities like food grains and fuel oil, creating a scarcity of these items in the international market. As a result, both production and distribution costs have escalated leading to an upward movement in commodity prices. The prices of daily commodities have shot up substantially which may be astronomical in 2023. The FAO earlier perceived that food prices could rise by up to 20 percent due to this war.

Impact on Food Security: The Russia-Ukraine crisis has implications on regional and global food security at large. High food import-dependent countries, including Bangladesh, are most vulnerable to trade shocks for this war. It became clear from the first days of

military operations that the events in Ukraine would directly affect world food security. Things soon took a turn for the worse in Ukraine as its entire port infrastructure on the Black Sea turned out to be inaccessible for trade due to security concerns. However, millions of tonnes of food stuck waterborne have started to release after the recent UN-brokered talks.

Spillover Effects on Bangladesh's Economy

The economic impact of war is so bad on this integrated interdependent economy that it is more costly than the war itself that we have experienced since the onset of the Russia-Ukraine war. With the responses of many countries, the situation emerged with uncertainties and challenges from many fronts. Being an import-dependent country, Bangladesh's economy has been mostly affected adversely on the heels of the

pandemic devastation. Commodity prices have gone higher and higher for the domino effect from multiple factors starting from the war between Russia and Ukraine. Like other economies of the world, Bangladesh has been going through the trials and travails of supply crunch, foreign-exchange volatility and sagging remittance. The country has already faced the effects of the war, with its inflation reaching 7.0 percent, the highest in decades, reduction in exports to Russia and Ukraine as well as a rise in import bills for oil and food. Ukraine and Russia, known as global food baskets, together are the biggest sources for us. Russia exports to countries like Turkey, Egypt, Kazakhstan, Latvia, Saudi Arabia, Azerbaijan, Nigeria, Bangladesh and China. Ukraine is also an exporter supplying wheat and butter to Egypt, Indonesia, China, Turkey, Pakistan, Bangladesh, Morocco, Tunisia and Yemen.

Bangladesh-Russia bilateral trade: Bangladesh and Russia enjoy healthy growth in bilateral business and it is expected that the Bangladesh-Russia Intergovernmental Commission on Trade, Economic, Scientific and Technical Cooperation will remove the bottlenecks in further expansion of trade. In fiscal year 2018-19, Bangladesh exported \$548.26 million worth of merchandise to Russia while it imported goods like cereals, minerals, chemical products,

How Bangladesh Economy Fares Amid Russia-Ukraine War?



plastic products, metal, machinery and mechanical equipment worth \$653.05 million. Bangladesh mainly exports apparel items, jute, frozen foods, tea, leather, home textiles and ceramic products to Russia. But scope is plenty for export of sea foods, potato and pharmaceutical products there.

Bangladesh-Ukraine bilateral trade: In fiscal year 2020-21, Bangladesh's procurement of wheat from Ukraine stood at 2.3 million tonnes, which was a little over 17 percent of its total imports. Ukraine exports to Bangladesh was \$250.57 million throughout 2021, according to

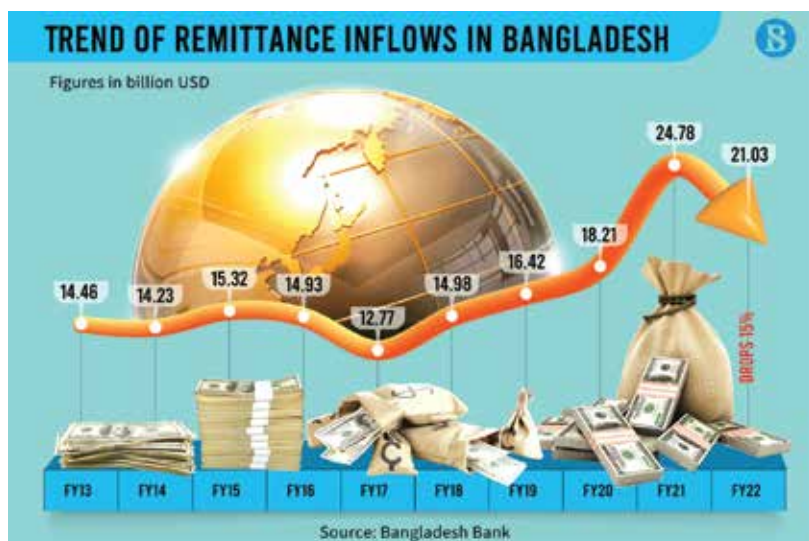
the United Nations COMTRADE database on international trade, available data, historical chart and statistics last updated in October 2022.

Difficulties in Import: Bangladesh is feeling the heat of the war in many ways, especially in importing fuel and grains. Being an oil-importing country, Bangladesh is suffering due to the increased oil price in the global market. In addition to oil, Bangladesh imports nearly 1.0 million tonnes of wheat and maize from Russia every year. But things have become uncertain this time. Imposed global sanctions against Russia

means Bangladesh will have to import these consumables from somewhere else at much higher rates. In addition, increased freight charges have also worsened the problem.

Problems in Export: Bangladesh is also facing difficulties in exporting products due to the Russia-Ukraine war. Europe is the key export destination of Bangladeshi goods. Increased fuel and energy prices, inflation in internal markets and unemployment, among other factors, are affecting the shipment of export items. Moreover, increased rates of freight charges soar the prices of exportables. However, economic sanctions against Russia by the USA, the UK and their allies have augmented a plethora of economic uncertainties.

Impacts of Sanctions against Russia: Russia is the fourth-highest development partner of Bangladesh. The classic example of this partnership is the \$12.65 billion Rooppur Nuclear Power Plant which is programmed for completion by 2025. The ongoing war and economic sanctions could delay this expensive project, meaning an escalation in project cost and implying higher loans and burden on Bangladesh. Even the mutual trade between the duo is going to be affected by massive western economic sanctions against Russia.



Price Hike of Fuel and Commodities: As a small country with an emerging economy, Bangladesh has been one of the worst sufferers due to the price hike of fuel and daily commodities. At the start of the war, the US put an embargo on Russian oil and gas exports. On the other hand, other large oil-producing countries like Saudi Arabia and the UAE refused to increase oil production. Therefore, fuel prices soared and crossed \$100 per barrel which was \$65 before the outbreak of the dispute. Ultimately, prices of other commodities have increased due to the spillover effect.

Impacts of Increased Freight Charges: As Bangladesh imports and exports many consumables, it has to pay higher freight charges that have increased significantly globally because of the crisis and the

subsequent economic sanctions. The increased freight charges have resulted in the ultimate hike in prices of all products. The UNCTAD in a report said this conflict would mean a 5.0-8.0 percent increase in the freight charges of the trade route. Products affected most by this price escalation are computers and electronic products, which will see a price escalation of as much as 11.4 percent.

Internal Market under Inflationary Pressure: Presently, the overall economy of Bangladesh is suffering from an acute inflationary pressure. The increased prices of essential commodities in the international market have resulted in the price hike in the local market too. The Bangladesh government increased the fuel price by 23 percent in November 2021 due to this price

hike of essentials. The ongoing war has aggravated the problem further. The Bangladesh Petroleum Corporation reported huge losses per day only in the oil sector.

Ways Forward for Bangladesh

Prudent Macroeconomic Management

As a developing country, Bangladesh should manage its macro-economy prudently. It can be managed by formulating effective policies, resources management and use of modern technology. A well-thought-out economic plan might help the government in the allocation of resources. It should widen the social safety net programmes for extreme and ultra-poor families. The authorities and agencies concerned of the government should keep an observant eye to keep the domestic market stable for consumers.

Close Monitoring of the Market

The government should not sit tight and only observe this awkward situation. It must take all possible measures in its capacity to closely monitor the essential commodity market with an iron fist to scuttle price-fixing by a syndicate of profiteers. It is a common tendency that prices of daily commodities rise during Ramadan and various religious occasions in the local market.

How Bangladesh Economy Fares Amid Russia-Ukraine War?



Additionally, the effects of the Russia-Ukraine war have aggravated the problem. Prudent steps by the government and monitoring the market closely can be helpful in controlling the situation.

Subsidies for Essential Commodities

The government should subsidise essential commodities to control the price hike. Essential commodities such as medicine, baby foods, cooking oil, sugar, rice and wheat are the basic items for living. These products should be kept within the purchasing power of people. Fuel subsidy will help control transport cost. Furthermore, subsidies in the agricultural sector will help regulate the food market.

Efficient Management of Resources

Efficient management of resources should be the prime concern as natural resources like fossil fuels and hydrocarbon deposits are fast depleting constraining in this country. Bangladesh needs to import minerals, oil and gas to meet the needs of the industries and the masses. Efficient management of these resources may save the costly foreign currencies through avoiding unnecessary expenditure.

Curbing Unnecessary Expenditure

Belt-tightening or curbing unnecessary expenditure is a must to cushion the blow of the Russia-Ukraine crisis. Bangladesh must meet the

completion deadline of the ongoing mega projects before embarking on any new scheme in future. It should lay more emphasis on export than import. New foreign markets should be explored for a basket of diversified Bangladeshi exportables. If necessary, the government should go for building diplomatic as well as trade relations with new countries.

Maintaining Prudent Diplomatic Relations

“Friendship to all and malice towards none” is the fundamental foreign policy of Bangladesh. Maintaining prudent diplomatic relations with all countries will pay dividends to Bangladesh. It will help continue the economic activity in times of any emergency or any crisis situation. A balanced relationship with all, including Russia and the USA, may help Bangladesh continue its trade with them and their allies.

Holistic Approach by Political Parties

A combined effort by the government and all the major political parties is required to face any economic recession. Any unstable political situation will rather increase internal problems and will ultimately make the economic sectors volatile. As it is an international crisis, Bangladesh should play a vital role in bringing all the



major parties under one umbrella. It will surely help the government to face such a crisis boldly.

Concluding Remarks

The seemingly unending Russia-Ukraine war has had multiple impacts on fuel and energy supply systems across the world. The supply chains of many essential commodities are already disrupted, thus pushing up the prices of commodities. As both Russia and Ukraine are leading countries producing grains, the war is likely to put many countries in tatters. Being a developing nation, Bangladesh is suffering badly due to the recent price hike of fuel and commodities. Economic sanctions against Russia have resulted in increased freight charges for import and export. Besides, the internal market is suffering from the bogey of inflation. Furthermore, being an oil-importing country,

Bangladesh is suffering a heavy loss daily. On the other hand, an unstable world economy causes problems in exporting goods. Additionally, economic sanctions against Russia will have a significant impact on its investment in Bangladesh that needs to be prudent to weather the economic shocks of this crisis. Bangladesh should adopt prudent steps to manage its macro-economy by making need-based policies, resources management and market monitoring as crisis-management measures. Subsidies for essential commodities will also help control the negative effects of the war. Simultaneously, efficient management of resources should be one of the key concerns for Bangladesh. Austerity measures can work better here. Most importantly, maintaining prudent diplomatic ties with all countries and a holistic approach by all political parties is highly required to handle such a crisis.

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(Facts and figures have also been garnered from a handful of national and international news outlets and agencies to make this article more analytical, informative and resourceful.)

ICAB's Roundtable Conference on 8th Five-Year Plan

Employment and Investment are Key for Implementation of SDGs and LDC Graduation of Bangladesh

By Abu Taher
Deputy Director
(Press & Publication), ICAB

Speakers at a roundtable conference said the government needs to properly address the issues relating to employment and investment in the 8th Five-Year Plan (8FYP), targeting implementation of the SDGs and the country's LDC graduation.

Besides, the government should remain watchful during the 8FYP implementation, so that lacking in the 7FYP are not repeated.

The speakers said in order to compete in the global market, the country has to focus on social, environmental and labor-related compliances, as these would be key issues after the LDC graduation.

Creating employment, export diversification, investment, and

policy support to adopt technologies relating to the Fourth Industrial Revolution (4IR) should be on the priority list in the 8FYP, they added. The tariff regime should be made by keeping the issue of competition in the global market in mind, experts said. In their views, the protective strategy has been hampering the non-garments sectors of the country.

State Minister for Planning, GoB **Dr. Shamsul Alam** commented that Bangladesh is in an advantageous position to take loans from institutions like IMF and World Bank. From this point of view, he said that it should be taken in the sectors which need to take loans, including the productive sector.

The Minister made this comment while addressing as





the chief guest at the round table discussion titled 'Eighth Five Year Plan (July 2020-June 2025)' organized by the Institute of Chartered Accountants of Bangladesh (ICAB) on 14 September 2022 at its Council Hall. ICAB President Md. Shahadat Hossain FCA delivered address of welcome while ICAB Council Member & Past President Md. Humayun Kabir FCA moderated the session. ICAB CEO Shubhashish Bose delivered opening remarks.

Dr. Atiur Rahman, Former Governor Bangladesh Bank; Dr. M. Masrur Reaz Chairman, Policy Exchange Bangladesh; Dr. Mostafa Abid Khan, Former Member Bangladesh Trade and Tariff Commission; Ferdaus Ara Begum, Chief Executive Officer (CEO), Business Initiative Leading Development (BUILD); Dr. Muhammad Abdul Mazid

Former Secretary, GoB and Former Chairman NBR; Dr. Zaidi Sattar, Chairman Policy Research Institute of Bangladesh joined online; Dr. Shishir Kumar Dev Former CEO, BFTI; and S M Rashidul Islam General Secretary Economic Reporters' Forum were the speakers in persons at the roundtable conference.

Shamsul Alam said, IMF and World Bank loans are being sought, I am in favor of it. Borrowing is needed to deal with the dollar crisis. This loan has to be taken to fix the productive sector and infrastructure. He also said, if we do some reforms at this time, then it will bring benefits for us.

ICAB president **Md. Shahadat Hossain** FCA in his welcome speech said, the transition from less developed countries can help to build self-reliant

countries without foreign aid. But it has other potential drawbacks, which may keep Bangladesh away from various trade advantages in the international market, he added. He said "When we graduate from least developed country status, we will have to face tough competition in the international market. For this, planning and strategy should be formulated in advance., he further said."

Being connected online, Policy Research Institute (PRI) Chairman **Dr. Zaidi Sattar** said, "we are only focusing on garments - but how do we diversify? The non-garments sectors are not doing well owing to the existing tariff structure. Because of the protective tariff structure, the domestic market is more profitable than exports for the non-garments sectors. This is tariff-induced profitability, not real profitability.

"Tariff strategy and export diversity are not separate. Therefore, to increase export diversity, the tariff strategy should be adapted for doing business in the global market," he added.

Dr. Sattar said, high growth strategies are coming from the UN Growth Commission. It has been mentioned that the growth of the developing countries will be at a rapid rate of 7% to 9%, which can be done by leveraging global markets. Bangladesh is doing this, he noted.

ICAB's Roundtable Conference on 8th Five-Year Plan
**Employment and Investment are Key for Implementation
of SDGs and LDC Graduation of Bangladesh**

He said, the higher growth of Bangladesh's gross domestic product came from the manufacturing sector. Currently, 55% of the manufacturing sector is export-oriented. Export- and manufacturing-led growth will serve as drivers for Bangladesh to meet its GDP growth targets, but it will require some adjustments.

Suggesting that GDP growth in the 8th Five Year Plan should be based on exports and production, Sattar highlighted the facts that exports of ready-made garments were projected to increase from \$42 billion to \$100 billion dollars by 2030.

He said, it would be possible to meet the projection if importance was given, but the goal of diversifying exports in the eighth Five-Year Plan must be achieved.

The 8th Five-Year Plan's main task is to begin the implementation of "Vision 2041" in a way that brings Bangladesh closer to the goals of attaining upper middle income country status and major sustainable development goals (SDG) strategies, and eliminating extreme poverty by the fiscal year 2031.

GDP growth is projected at 8.51% in 2025. To meet the target, the government has chalked out domestic and foreign investments of Tk64.96 trillion over the next five years. Of this, public investment will be 25.3% and private investment will be 74.7%.

In addition, the employment target is 1.13 crore, inflation 4.60%, poverty reduction 15.60% and revenue mobilisation is 12.3%.

In his keynote presentation, ICAB Chief Executive Officer **Shubhashish Bose** mentioned four challenges in implementing the plan, including Covid-19, LDC graduation, implementation of the SDGs and climate change vulnerability.

Besides, the Russia-Ukraine war, devaluation of currency, fuel price hike and supply chain disruptions were also major obstacles, he said.

Mr. Bose said, in the current context, only five months of import expenditure can be met with reserves. Again, exporters are becoming defaulters by taking loans from the Export Development Fund. These were matters of concern.

Addressing the discussion, **Dr. Atiur Rahman**, former governor of the Bangladesh Bank, said, "The Bangladesh Bank and the government are working to curb trade and current account deficits. Foreign exchange reserves may also improve. But we need to pay special attention to the agriculture sector, which saved us during the crisis."

Dr M Masrur Reaz, chairman of Policy Exchange of Bangladesh, said while India and China have given a lot of effort to small businesses, Bangladesh is still lagging behind. He said, emphasis should be given here for generating employment.

*The write-up is the
Synopsis of the ICAB's
Roundtable Conference on
8th Five-Year Plan*

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GLOBAL RECOGNITION OF ICAB



THE INSTITUTE OF
**CHARTERED
ACCOUNTANTS**
OF BANGLADESH

Recognition of ICAB membership by ICAEW

Membership Scheme of The Institute of Chartered Accountants of England and Wales (ICAEW) allows the members of ICAB to apply for ICAEW membership based on their experiences.

Eligibility criteria of this membership scheme are a series of questions which assess ICAB Member's experience, achievements, skills and expertise. Each application must be supported by an eligible sponsor. Applicants need to complete an Examination of Experience.

Details of ICAEW Membership Scheme is available at <http://www.icaew.com/membership/becoming-a-member/members-of-other-bodies/campaigns/pathways-to-membership>.

ICAB signed its first Memorandum of Understanding (MoU) with the Institute of Chartered Accountants in England and Wales (ICAEW) in 2009. Since then, ICAB has been working with ICAEW as the learning and professional development partner, and also recognized as an approved tuition provider of ICAEW.

As per MoU, ICAB Members can be the members of ICAEW after successful completion of 04 papers out of 15. These members have the opportunity to apply for UK Practising Certificate (PC) subject to meeting the standard ICAEW PC requirement.

Recognition of ICAB Membership by CIPFA, UK

Members of the Institute of Chartered Accountants of Bangladesh (ICAB) are eligible to apply for membership of the Chartered Institute of Public Finance and Accountancy (CIPFA), a globally recognised membership body for the public sector.

An MoU between ICAB and CIPFA, UK was signed on 28 January 2017. Under this MoU, an ICAB member can also become a members of CIPFA subject to fulfillment of certain criteria.

An ICAB Member with good standing having five or more years post-qualification public sector experience are eligible for Full Membership of CIPFA as Chartered Public Finance Accountant (CIPFA) and the members having fewer than five years post-qualification public sector experience are eligible as Affiliate member of CIPFA (CIPFA Affiliat).

ICAB members having CIPFA Affiliate membership, or having no working experience in public sector can gain CIPFA status with the successful completion of exams of only two papers i.e. Public Sector Financial Reporting and Strategic Public Finance.

Membership Pathways Agreement (MPA) with CPA Australia

The Institute of Chartered Accountants of Bangladesh (ICAB) has recently signed a Membership Pathways Agreement (MPA) with CPA Australia, one of the largest accounting bodies around the world. Through this agreement, ICAB members can be the members of CPA Australia just after passing 04 papers (i.e. 1. Ethics and Governance, 2. Financial Reporting, 3. Global Strategy & Leadership and 4. Strategic Management Accounting) out of their 12 papers. This MPA has been in effect since 20 July 2018.

Membership through Chartered Accountants Australia & New Zealand (CA ANZ) International Pathway Program (IPP)

The Institute of Chartered Accountants of Bangladesh (ICAB) signed an MoU with the Chartered Accountants Australia & New Zealand (CA ANZ). Under this, ICAB members living in Australia or New Zealand having five years post qualification experience at anywhere will be eligible to be member of CA ANZ after successful completion of CA ANZ International Pathway Program (IPP).

There will be no requirement of passing CA ANZ general route examinations by eligible ICAB members as their International Pathway Program (IPP) workshop through case studies would examine the contemporary Australasian business, accounting and finance environment relevant for members of ICAB. On the other hand, CA ANZ members can also be members of ICAB subject to having Bangladeshi citizenship and other requirements as prescribed by ICAB Bye-laws.

Membership of the International Valuation Standards Council (IVSC)

Efforts are underway for ICAB to Become a member of the International Valuation Standards Council (IVSC). This would create an opportunity for the members of ICAB to involve in the valuation process of local and foreign investment in Bangladesh.

This would allow Chartered Accountants to put up their highly essential services and play positive roles in attracting foreign investment. With regard to this, ICAB has already conducted a Members Conference. More so, a virtual meeting with the CEO of IVSC was held on 8 June 2021 where the IVSC proposed ICAB to become member of IVSC on pro-rata basis.

Other Memberships

ICAB is an active member of International Federation of Accountants (IFAC), Confederation of Asian and Pacific Accountants (CAPA) and South Asian Federation of Accountants (SAFA). ICAB is also an associate member of Chartered Accountants Worldwide (CAW).