



**Uttara University**

**Project Report**

**On**

**Financial Impact of COVID-19 on Banking Sector**

**Supervised by:**

**Md. Anisuzzaman**

**Assistant Professor**

**School of Business**

**Uttara University**

**Submitted By:**

**Name: Sanzida Rahman**

**ID: 2193061022**

**Batch-50th**

**Major: Finance**

**Department: School of Business**

**Uttara University**

## **Letter of Transmittal**

To

Md. Anisuzzaman

Assistant professor

School of Business

Uttara University

Dhaka, Bangladesh

**Subject: Submission of Project Report on “Financial Impact of COVID-19 Outbreak on Banking Sector”**

Dear Sir,

With due respect I beg to inform you that I am a student of MBA, 50th<sup>th</sup> batch, School of Business at Uttara University. I am glad to submit you my project report prepared on “Financial Impact of COVID-19 Outbreak on Banking Sector”.

I have given my best effort to prepare the report with relevant information that I have collected from Articles written about COVID-19 & Its Impact on financial sector especially on Banking Sector. I also collect data from other source.

I pray and hope that the mistake of the report may have, will be kindly excused. So, I cordially request to you evaluating this report & enough kind to receive this report.

Sincerely yours

Sanzida Rahman

Program-MBA for BBA

ID-2193061022

BATCH-50th

Dept.: School of Business, Uttara University

## **Student Declaration**

I Sanzida Rahman, hereby declare that the presented report of project titled “Financial Impact of COVID-19 Outbreak on Banking Sector” Is uniquely prepared by me.

I also confirm that, the report is only prepared for my academic requirement not for any other purpose. It might not be used with the opposite party of the corporation.

SanzidaRahman

Program-MBA for BBA

ID-2193061022

BATCH-50th

Dept.: School of Business, Uttara University

### **Supervisors Declaration**

Dear student,

I hereby declare that The Project report is titled “Impact of COVID-19 Outbreak on Banking Sector” submitted to Uttara University in association with the institution’s project program is a trustworthy evidence of job done by “Sanzida Rahman” under my supervision.

Md. Anisuzzaman

Assistant professor

School of Business

Uttara University

## **Acknowledgement**

This report is the result of the assistance and truthful cooperation of different people. I could not possibly thank all of those amazing inhabitants who have contributed something of them directly or indirectly in preparing this report successfully. It gives me enormous thank them for their pleasant cooperation and support.

First, I would like to express my gratitude to the almighty Allah.

Then at first, I would like to thank my course instructor Md Anisuzzaman, Assistant Professor, School of Business for his important guidance, scholarly direction, and unconditional support during my tenure of the study.

In the next phase I would like to thank all the authors of the articles that I used. I have learned a lot from them.

Finally, my heartiest thanks go to all the Publisher of the articles, because of their articles I was able to finish my Report effortlessly.

## Project work Report Structure

| <b>Items</b>                                    | <b>Page</b> |
|-------------------------------------------------|-------------|
| (i)Cover Page                                   | 01          |
| (ii)Letter of Transmittal                       | 02          |
| (iii)Students declaration                       | 03          |
| (iv)Supervisor's declaration                    | 04          |
| (v)Acknowledgements                             | 05          |
| (vi)Table of Content                            | 06          |
| (vii)List of Table                              | 06          |
| (viii)List of Figures                           | 06          |
| (ix)Abstract/Summary                            |             |
| <b>Section-1:</b><br>Justification of the Study | 08          |
| <b>Section-2:</b><br>Objectives of the study    | 08          |
| <b>Section-3:</b><br>Method                     | 09          |
| <b>Section-4:</b><br>Discussion                 | 09-22       |
| <b>Section-5:</b><br>Future Forward             | 22-23       |
| <b>References</b>                               | 24          |
| <b>Appendices</b>                               | 25-28       |

## **Introduction**

With a view to acquire an in-depth knowledge about the practical orientation and experiences of dynamic business world, it is obligatory to undertake an extensive study to prepare project report the students of business administration, Uttara University That are desirous to the successfully completion of their MBA degree. During the preparation of the Project report, the students are guided and supervised by the faculties of the department with whom they are attached to. Each student is required to work on a specific topic to his/her learning with the attachment of any respective organization. As part of the program, I am highly proud to work about the Recent situation that help to know about what is going on around the world, especially in financial sector as well as banking sector.

The project program is helpful to bridge the gap between the theoretical knowledge and real experience as the part of the (MBA) program. During my project program, I have tried to observe and understand the financial ups and down around the world. I am also tried to understand for different scenario and different perspective Since my work is partially analysis based, I have used learn a lot of new things. It makes a bridge between the gap of classroom learning and practical learning.

# **Section:1**

## **Justification of the study:**

My major is Finance in MBA Program. So the effect of this global pandemic on international financial system made me curious and because of this I was motivated to study this topic. I was interested in this topic due to the nature of a global pandemics ever changing and drastic effect on the financial system. As a finance student, this topic will help me in my professional work since it has shown the overall ups and downs in economic situation due to COVID-19.

## **Objective:**

### **General Objective:**

This report is prepared to fulfill the degree Master of Business Administration (MBA) School of Business, Uttara University.

### **Specific Objective:**

- To understand overall financial impact due to COVID-19.
- To analyze what is the actual situation of financial sector
- To tell my readers about my experience and about the economic and financial impact due to COVID-19

## **Method:**

The main design is based on the Appendices' of 10 relevant article about Financial Impact of COVID-19 and the methods of the article. Around the basis of the study, I am preparing the project report.

## **Discussion:**

### **Overall financial impact due to COVID-19.**

The outbreak of coronavirus named COVID-19 has disrupted the Chinese economy and is spreading globally. The evolution of the disease and its economic impact is highly uncertain which makes it difficult for financial sector. In this project, I have learned so many things. For example -In the face of the rapidly growing COVID-19 pandemic, a wide variety of SIR models of the progression of this epidemic are being used by public health experts to generate scenarios that are being used to guide decisions to recommend and impose increasingly severe mitigation measures on economies worldwide.<sup>1</sup> Economists are not fully familiar with the quantitative implications of these models and thus are not fully engaged in the policy discussion regarding the trade off between the public health and economic implications of these mitigation and social distancing measures.(Andrew Atkeson,2020)

Another thing I have learn, increasing concerns are arising on the economic consequences of lockdown and how it can disproportionately affect the weaker and the poorer. Policy restrictions imposed by lockdown measures have determined a detrimental effect on several production

sectors, heavily deteriorating global value chains and trade exchanges, motivating governments to announce fiscal interventions of about \$8 trillion and massive monetary measures from the G20 and others (4). Supply shocks can, in fact, trigger variations in aggregate demand that ultimately can be even larger than the COVID-related shocks themselves, hence imposing to immediately incorporating principles of system resilience to systemic disruption in order not to condition the future socio-economic recovery for the next decade.(Giovanni Bonaccorsi,2020)

This pandemic has different impact on different nations. For example- the economy of Bangladesh will also observe a stark hit sourced by the nationwide shutdown aimed at deterring the blowout of this highly contagious disease causing suspension of many economic activities related to national and international trade, Transport, remittance, consumption & supply chain of foods, informal job sectors and so on. ADB has already projected that this COVID19 pandemic will wipe out USD 3.02 billion off Bangladesh's USD 300 plus economy in the worst case-scenario of a significant outbreak followed by a reduction of about 0.2% to 0.4% of GDP of Bangladesh. Moreover, it has added that COVID-19 pandemic could spoil the trend of growing domestic demand due to disruption in export demands, suppressed consumption and curbed remittance. Considering these upcoming inverse impacts on the economic cycle of Bangladesh, The government along with its stakeholder has announced several stimulus programs categorized with short term, mid-term and long term schemes intended to recover the economic fallouts.(RaadMozib Lalon,2020)

In India, the economic impact of the 2020 Covid-19 has been largely disruptive. The World Bank and some rating agencies had initially revised India's growth for the fiscal year 2021 with the lowest figure India has seen in three decades since India's economic liberalization in the 1990s. Nearly around 162 countries are decidedly going into lockdown, and businesses across the world are operating their works in fear of an impending collapse of global financial markets. This situation, clubbed with slowdown economic growth in the previous year, especially in a developing country like India, is leading to extremely uncomfortable with current market conditions. However, after the announcement of the economic package in mid-May, India's GDP predicts were downgraded even more to negative figures, signaling a deep recession. On 26 May,

CRISIL announced that this will perhaps be India's worst recession since independence. SBI research predicts a contribution of over 40% in the GDP in the Financial Year 2021. Referring to the recent happenings and data, the unorganized sector excluding this likely to suffer a great downfall in the upcoming days as the job generation and creation is going down at an alarming rate with the prolonged lockdown and weak GDP. With the commencement of the 2020-2021 financial year, the effects of COVID have affected the stability of the economy of 150 countries-threaten their lifestyle, economy, impacting business, and assumption of common wellbeing which we had taken for granted. The lockdown has adversely have affected service sector like banks, restaurants, food vendors, and food delivery providers at par with providing health safety and medical sustenance, we should also have to think about the health of the sickening economy by mobilizing the resources and make plans of job creation and job continuity. (Basappa M. Naik,2020)

### **Actual situation of financial sector.**

There are many things that I wanted to describe from those articles. They are given below-

The impact of the COVID-19 is of crucial importance, especially since its first outbreak happened in China, which is the main hub of foreign investment in Asia. Researchers believe that COVID-19 and SARS belong to the same family, but these two epidemics differ significantly. Many previous studies related to the economic effects of the infectious virus epidemic could be referred to as we discuss the impact of COVID-19.

Economic Impact of Virus Outbreak Existing literature concentrates on illness-associated costs of medical or economic effects arising from morbidity as well as mortality due to disease. Siu and Wong [16] studied the spread of Hong Kong's SARS epidemic, and addressed its economic impact and suggested that the most serious negative impacts were seen on the consumer side, with the short term severely affected by local consumption and the export of tourism and air travel-related services. The economy did not face any supply shock, as the manufacturing base present in the Delta of the Pearl River was unaffected and products were usually exported to

Hong Kong. By using the G-Cubed (Asia Pacific) model Lee and McKibbin[14]evaluated the global economic impacts of the severe acute respiratory syndrome(SARS) and according to them the effect of the SARS epidemic on human society all over the world is severe, not only because the disease spreads rapidly through countries by global travel, but also because of financial integration and globalization, any economic shock to one country spreads rapidly to others. Ichevand Marinć [17] investigated whether the geographical proximity of information disseminated by the 2014 Ebola outbreak, coupled with widespread media coverage, has affected US asset prices. The results show that the effect on stock prices is generally negative, while local media reporting also has a significant impact on local trading, and the effect is more pronounced in smaller and more volatile stocks and less stable industries.

Impacts on Stock Market Performances Looking at the effect on stock markets, DeLisle [18] proposed that the cost of the 2003 SARS outbreak result losses as high as in the financial crisis of Asia, estimated at \$3 trillion value in GDP

Int. J. Environ. Res. Public Health 2020, 17, 2800 4 of 19

and \$2 trillion value in financial markets equity. Nippani and Washer [19] examined the effect of SARS on Canada, China, the particular administrative region of HongKong, Indonesia, China, Singapore ,the Philippines, Vietnam and Thailand and concluded that SARS only affected the stock markets of China and Vietnam. Del and Paltrinieri evaluated the 78 mutual equity funds geographically based in African countries with observed monthly flows and results for the 2006–2015 period and suggested that Ebola and the Arab Spring seriously affect the funds flows, controlling the performance of the funds, spending, and returns of the market. Macciocchi et al., [20] studied the short-term economic impact of the Zika virus outbreak on Brazil, Argentina and Mexico, and their results showed that, with the exception of Brazil, the market indices of these three Latin American and Caribbean Countries (LCR) did not show large negative returns the day after each shock. The average return was–0.90 percent but on different occasions and countries it ranged from 0.90 percent to–4.87 percent. Ming-Hsiang Chen, Shawn, and Gon checked the SARS outbreak impacts on the efficiency of Taiwanese hotel stocks using an event study approach and found that during the SARS outbreak period, seven publicly traded hotel companies experienced steep declines in income and stock price. Taiwanese hotel stocks

showed significant negative cumulative mean abnormal returns on and after the day of the SARS outbreak, indicating a significant impact of the SARS outbreak on performance in hotel stock. Mei-ping Chen et al. analyzed the effect of the SARS epidemic on China's long-term relationship with four Asian stock markets; their findings support the existence of a time-varying cointegration relationship in aggregate stock price indices, and they also found that the SARS epidemic has weakened China's long-term relationship with the four markets. Wang, Yang, and Chen [23] suggested that infectious disease outbreaks have a major impact on the performance of biotechnology stock in Taiwan. According to Bai [24] Baker, Wurgler, and Yuan [25] investors may feel pessimistic about investment prospects in each market, selling off that market's stocks under communicable disease outbreak. (HaiYue Liu, 2020)

### **Possible Impacts on Economy**

The ramifications of COVID-19 pandemic, however, depend on the duration of the existence of this crisis as there are so many repetitive infected cases of patients across the globe divulging an uncertainty for the cessation of this disease due to not having any vaccine till now. The only solution to protect against this pandemic is to stay home to remain safe that will postulate a nationwide shutdown of almost all economic activities followed by lock-down of infected countries to deter the spread of this disease.

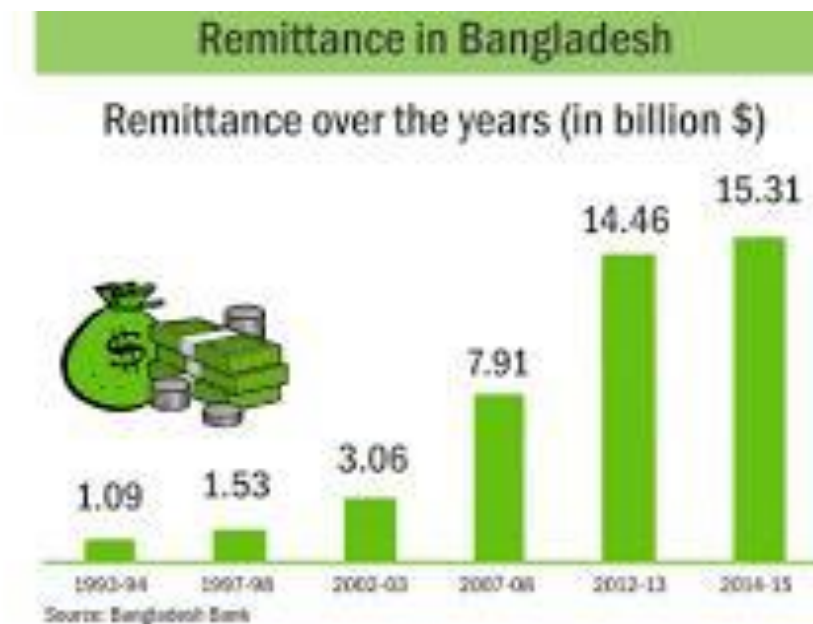
### **Falling revenue from RMG industry:**

Ready-Made Garment Industry becoming one of the most prominent contributors of economic development of Bangladesh is already confronting a total impact of order cancellation amounting to USD 1.5 billion which is almost 50% of average export revenue per month due to the shutdown of doors from all over the European and American companies such as H&M, GAP, Zara, Marks & Spencer, Primark that are major buyers of Bangladeshi RMG products. Insiders interviewed suggest that if this COVID-19 pandemic continues to affect global supply chains, buyers' demand, and of course health and safety of workers, by Q4 2020, loss in export revenue could reach at USD 4 billion (Sajid Amit 2020). Observing the largest export-oriented segment function properly has now become a major challenge to the government and apparel sector. Amid July 2019-January 2020, export earnings from Apparel items have been fallen by 5.71 % as compared to July-January, 2018-19. According to EPB (Export promotion bureau) data,

earnings from RMG export for export performance (goods) for FY 2019-20 July January is USD 19.06 billion. Earnings from woven garments fell by 6.29% to USD 9.44 billion in July – January fiscal year of 2019-2020 from USD 10.07 billion in the same period of last fiscal year. On the contrary, Knitwear export fell by 5.13% to USD 9.62 billion from USD 10.14 billion.

### **Falling growth of Remittance:**

The outbreak of COVID-19 forced Bangladeshi expatriates working in several countries of Middle-East, Asia, Europe, Australia and United States to return their home amid stern impact of the disease so that there is a significant disruption in the flow of remittance even after existing 2% stimuli offered from government. Moreover, most of the countries where Bangladeshi workers are executing their jobs, are defying the COVID-19 by imposing partial or complete lock down or travel restrictions cascading the opportunity of both formal and informal jobs resulting out from shutdown of all economic activities.(RaadMozib Lalon,2020)



Source: Statistics Department, Bangladesh Bank

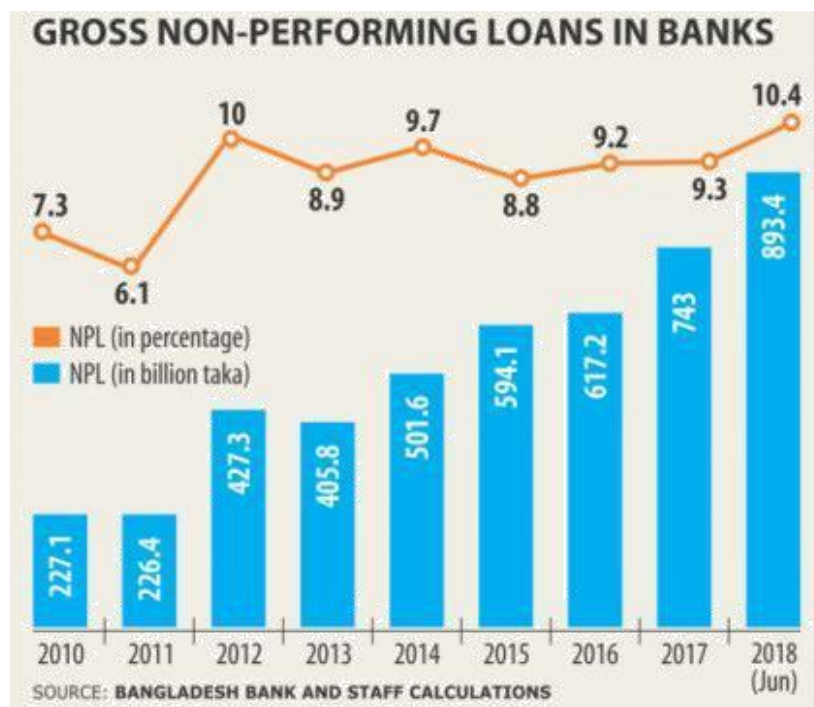
### **Falling opportunity for SME and Startup business:**

The significant outbreak of COVID-19 will certainly deteriorate the opportunity of SME and Start up business considering the flat rate of 9% interest offered from commercial banks as per the guidelines of Central Bank. At this stage, most of the commercial banks are reluctant to lend

fund for SME and startup business at 9% interest rate due to high operating cost maintained for SME financing. According to the Monthly major economic indicators published by Bangladesh Bank (March, 2020), Total amount of SME loans disbursed by Banks and Non-Bank Financial Institutions increased by 12.86% and stood at BDT 205490.93 crore at the end of September, 2019 as compared to the same month of earlier year. However, high volatility in public equity and sharp depletion in gold price may impose a stark hit for financing startup business amid this pandemic.

### **Imminent Unrest in Financial Institutions:**

Banks and other financial institutions in Bangladesh are suffered from a long peevish drawback of mounting amount of NPL (Non-performing Loan) expected to be increased further amid this pandemic as most of the institutional borrowers will be failed to repay the installments on time because of not generating sufficient operating revenue followed by less production and supply driven by suppressed demand, manufacturing hits and supply chain disruption. High growth of NPL will further abolish the capacity of banks to comply with BASELIII capital accord consisting of maintaining minimum capital requirement, supervisory review process, market discipline and liquidity coverage with stable funding ratio. Moreover, high NPL consisting of the summation of doubtful, substandard and Bad/loss loans will reduce the operating revenue and increase the operating cost becoming a filibuster to sustain 6% and 9% flat rate imposed for banks and NBFIs propelling to less profitability and EPS of Listed banks in capital markets of Bangladesh. The current state of non-performing loan ratio in Bangladesh is mentioned below:



## Characterizing Daily Stock Market Jumps

In Baker, Bloom, Davis and Sammon (2019), we examine next-day newspaper explanations for each daily move in the U.S. stock market greater than 2.5 percent, up or down. By this criterion, there were 1,143 stock market jumps from 2 January 1900 to 30 April 2020. While these days make up only 3.5% of all trading days in this period, they are highly impactful in terms of overall market movements, constituting 47% of total squared daily return variation in the past 120 years. To characterize these jumps, we read the lead article about each jump in next-day newspapers (or the same evening in the internet era) to classify the journalist's explanation into one of 16 categories, which include Macroeconomic News and Outlook, Government Spending, Monetary Policy, Unknown or No Explanation Offered, and Other – Specify. Our coding guide in Baker, Bloom, Davis and Sammon (2018) describes the methodology in detail.

There were 23 daily stock market jumps from March 1918 to June 2020, which spans the three major waves of the Spanish Flu. If we consider a longer span from January 1918 to December 1920, we find 4 jumps before Germany signed an armistice agreement with the allies on 11

November 1918 and 7 jumps before the signing of the Treaty of Versailles on 28 June 1919. Next-day accounts in the Wall Street Journal attribute 4 of these 7 jumps primarily or secondarily to war-related developments.

They also attribute jumps on 21 July and 28 November in 1919 secondarily to war-related developments. From the armistice agreement through the end of 1920, next-day accounts in the Wall Street Journal attribute 11 of 28 jumps to Macroeconomic News and Outlook (primarily or exclusively) and the rest to a wide range of categories that include Monetary Policy and Central Banking, Corporate Earnings, Taxes, Trade Policy, and Regulation. For 7 jumps during the period, next-day accounts in the Wall Street Journal offer no explanation or explicitly state that the reason for the jump is unknown. Turning to other pandemics, the U.S. Center for Disease Control estimates that the 1957-58 and 1968 influenza pandemics caused 116,000 and 100,000 excess deaths, respectively, in the United States.<sup>2</sup> Scaling by population yields excess mortality rates of 0.067 percent in 1957-58 and 0.050 percent in 1968. As of 1 June 2020, the U.S. excess mortality rate during the COVID19 episode is  $(71,500/326.69 \text{ million}) = 0.02$  percent of the population.<sup>3</sup> Thus, if the COVID-19 death toll in the United States ultimately triples, it will reach excess mortality rates comparable to the experiences in 1957-58 and 1968. There were 9 jumps in 1957-58 and one in 1968. Next day accounts in the Wall Street Journal attribute none to pandemic-related developments.<sup>4</sup> Data since late February 2020 tell a remarkably different story. In the period from 24 February to 24 March 2020, there were 22 trading days and 18 market jumps – more than any other period in history with the same number of trading days. Jump frequency during this period is over 20 times the average pace since 1900. From February 24 through the end of April, there were 27 jumps. Next-day newspaper accounts attribute 23 or 24 of them to news about COVID19 developments and policy responses to the pandemic.<sup>5</sup> In short, no previous infectious disease episode led to daily stock market swings that even remotely resemble the response in 2020 to COVID-19 developments. While other periods have seen large declines or increases in equity markets over periods of several weeks or months, the COVID-19 period stands out for an extremely high frequency of large daily stock market moves. And, as we have stressed, there is no previous episode in the past 120 years in which pandemic related developments drove any large daily stock market moves, let alone the 24 jumps that our newspaper-based analysis attributes to pandemic-related developments in the ten-week period

commencing on 24 February 2020. It is worth stressing that large daily stock market moves during this period were in both directions. Indeed, the S&P 500 index plunged 33 percent from 21 February to its trough on 23 March.<sup>6</sup> It then rose 30 percent from its bottom by the last trading day in April, the end of our sample period. Our analysis considers both negative and positive jumps in response to news about COVID-19 and policy responses as drivers of the stock market.

**Quantifying the Contribution of COVID-19 to Overall U.S. Stock Market Volatility** As in Baker, Bloom, Davis, and Kost (2019), we use a mechanized approach to quantify the role of COVID-19 and other infectious diseases in U.S. stock market volatility. In a first step, we calculate the monthly fraction of articles in 11 major US newspapers that contain (a) terms related to the economy, (b) terms related to equity markets, and (c) terms related to market volatility. We multiplicatively rescale this monthly series to match the mean value of the VIX since 1985. Figure 2 plots our resulting newspaper-based Equity Market Volatility (EMV) tracker alongside the VIX itself, with an inset showing recent data at a weekly frequency. As the figure shows, our EMV tracker performs well in the sense of mirroring the time-series behavior of implied stock market volatility. The same is true with respect to realized stock market volatility, as shown by Baker, Bloom, Davis and Kost. In a second step, we identify the subset of EMV articles that contain one or more terms related to COVID-19 or other infectious diseases. Specifically, we flag EMV articles that mention one of the following terms: epidemic, pandemic, virus, flu, disease, coronavirus, MERS, SARS, Ebola, H5N1, or H1N1. Multiplying the fraction of EMV articles that contain one of these terms by our EMV tracker yields our Infectious Disease EMV tracker displayed in Figure 3. The inset part displays the results of the same quantification exercise at a weekly frequency.

### **Why Such Powerful Stock Market Effects?**

Why have COVID-19 developments exerted such powerful effects on the stock market since late February? Clearly, the current pandemic has grave implications for public health. So, part of the answer surely lies in the severity of the COVID-19 pandemic, the apparent ease with which the virus spreads, and the non-negligible mortality rate among those who contract it. However, this answer is highly incomplete. The excess mortality rate during the COVID-19 pandemic is

currently only 1/25th as large as the rate during the Spanish Flu.<sup>7</sup> Nevertheless, as Table 1 shows, the Spanish Flu triggered not a single daily stock market move of 2.5 percent or more, while developments related to COVID-19 triggered two dozen such jumps.

The Spanish Flu unfolded in a quite different social, political, and economic context than the current pandemic. Agriculture and Manufacturing accounted for 61 percent of employment then, as compared to 10 percent now (Velde, 2020). The first wave of the Spanish Flu in Spring 1918 occurred during the last stages of World War I, and the deadlier second wave from September 1918 to February 1919 overlapped with the end of the war and the demobilization of troops. These contemporaneous developments complicate efforts to assess the economic effects of the Spanish Flu. Partly to address this challenge, Velde (2020) draws on a variety of high-frequency data to assess the short-term economic impact of the Spanish Flu in the United States. He concludes that “the pandemic coincided with, and very likely contributed to a mild recession from which the economy quickly rebounded.” Thus, his analysis only sharpens the contrast between the modest economic fallout of the Spanish Flu and the huge contraction in the wake of the far less lethal COVID-19 pandemic.

As we remarked earlier, U.S. excess mortality rates during the 1957-58 and 1968 influenza pandemics were 3.3 and 2.5 times as large, respectively, as the excess mortality rate to date under COVID-19. Yet, as Ferguson (2020) underscores, the 1957-58 pandemic imparted only a mild impact on aggregate economic activity, and it was not seen as a significant macroeconomic factor by contemporaneous observers. His conclusion is consistent with the absence of large daily stock market moves in reaction to the influenza pandemic in 1957-58. Similarly, US employment and output grew at a healthy pace during 1968, showing no visible reaction to the influenza pandemic. The stock market was quiescent, experiencing only a single large daily jump in 1968. These more recent pandemics also offer a startling contrast to the enormous stock market reaction and economic contraction triggered by COVID-19.<sup>8</sup>

A second potential answer, particularly in comparison to the Spanish Flu, is that information about pandemics is richer and diffuses much more rapidly now than a century earlier.<sup>9</sup> According to this explanation, the stock market impact of the COVID-19 pandemic is more temporally concentrated and more likely to trigger daily stock market jumps and high stock

market volatility than Spanish Flu developments a century earlier. As Velde (2020) discusses, however, the negative stock market impact of the Spanish Flu was modest even over time spans of weeks and months. The Dow-Jones Index rose over most of 1918 and 1919, reaching a peak in October 1919. The index then fell by nearly half, mostly during the recession that unfolded from January 1920 to July 1921.<sup>10</sup> This recession and coincident stock market decline had little to do with the Spanish Flu. In her analysis of the 1920-1921 recession, Romer (1988) does not mention the Spanish Flu. Hence, explanations that stress greater information availability and its more rapid diffusion to market participants cannot rationalize the huge stock market reaction to COVID-19, especially as compared to the mild stock market effects of the Spanish Flu. A third explanation stresses the role of cross-border flows of goods in the modern economy, driven by decades of falling transport costs, falling communication costs and, until recently, falling tariffs. These developments led to heavy reliance on geographically expansive supply chains and the ubiquity of just-in-time inventory systems.<sup>11</sup> Both are highly vulnerable to sudden supply disruptions. Thus, it is natural to ask whether stock markets reacted so forcefully to COVID-19 because of its potential to disrupt cross-border supply chains. (Scott R. Baker, 2020)

### **Empirical Results of Event Study on AR and CAR**

The mean and standard deviation of the composite index return before and after the event are given in Table 3. As the basic statistic description, where Panel A shows the data from 21 February, 2019 to 19 January, 2020 and Panel B shows the data from 20 January, 2020 to 18 March, 2020, Table 3 indicates that after 20 January, 2020, all the mean returns decreased and most standard deviations increased compared with the previous ones. The indices for France, Germany, Russia, Italy, Thailand, the UK, Canada, Japan, the USA, India, Abu Dhabi and Australia decreased the most in mean return, by 0.01 approximately, while those for Singapore, Thailand, Korea, Indonesia, and Hong Kong fell the most (by 325.245%, 274.619%, 115.163%, 64.345%, and 49.086%, respectively) by percentage. Whereas the mean returns of SSEC and SZCS, which represent the market of the mainland of China, fell the least in percentage. It appears that COVID-19 reduces the stock market returns in all affected countries and increases their volatility, showing not only a greater impact on the stock markets in Asia but also an inescapable influence on those in countries out of Asia. (HaiYue Liu, 2020)

#### Differences in mean returns of sample indices

| Index    | Number of Trading Days | Event Group's Mean | Event Group's Std. Dev |
|----------|------------------------|--------------------|------------------------|
| AAXJ     | 230                    | .0004542           | 0.0094672              |
| ADX      | 180                    | 0.0005975          | .00886469              |
| AXJO     | 231                    | 0.0002114          | .655644487             |
| CAC DJIA | 230                    | .02146565          | .35894556              |
| FTMIB    | 228                    | .00121231          | .564545585             |
| FTSE     | 227                    | .0000122156        | .232322211             |
| GDAXI    | 225                    | .000065655         | .085522445             |
| GSPTSC   | 228                    | .2121212511        | .12844471              |

#### **My experience about the economic and financial impact due to COVID-19.**

There are lots of things have been changed due to COVID-19. In the present world economic order, it does not take much time for a country to feel the impact of a massive disaster. If the calamity is global, scores of nations are seen struggling to cope with the socio-economic fallouts. The poorer countries feel the bite the most.

The coronavirus currently raging throughout the world has started demonstrating this stark reality. In the case of natural disasters like earthquakes or hurricanes and typhoons, only a limited number of countries in a region come out as being affected. Earthquakes are normally limited to single countries. But when the disaster is a worldwide pandemic, and continues to careen towards becoming cataclysmic, the scenario unveils itself in a different style. A great economic crisis starts brewing and, later, begins simmering, in a lot of countries after the initial shock of the epidemics' onslaught is tided over. The syndrome is found in all countries irrespective of economic status.

In the case of the present global onslaught of the Covid-19, many a highly developed country is found taking emergency plans to deal with abruptly surfaced economic disruptions. Bangladesh is not new to disasters or major humanitarian crises. Sitting astride a river delta at the bottom of the Himalayan range, the country is fighting a longstanding battle against the impact of climate change and currently hosts the world's largest refugee camp along its southern border. In its 49-year existence, Bangladesh and its people have shown tremendous resilience in fending off not only natural disasters such as floods and cyclones but also manmade ones, like the 1997 Asian financial crisis and 2008 global financial crisis.

The COVID-19 pandemic, however, is a crisis of a completely different magnitude and one that will require a response of unprecedented scale. Bangladesh's leaders in the public and private sector must come together to respond to the immediate threats to health systems and the long-term effects to the country's economy.

So after looking through my Project Report, my readers should accept the fact that due to this pandemic crisis, it's the time to cooperate the government by maintaining social distance for preventing the further spread of this disease and in return government along with all other stakeholders will initiate the steps required for ensuring the interest of mass people.

## **Future Forward:**

After reading this report the reader will clearly understand the current situation crisis, its impact, problems and lots of other things. They will know that Financial institutions across the world are monitoring and dealing with the effects of the COVID-19 pandemic. They are working to understand the immediate challenges to society and economies, and the long-term impact on the interconnected financial system. They are using their expertise to help themselves and their customers to make good decisions in today's highly volatile operating environment.

At a time of crisis, it is important that we share our insights and experience, helping each other to contain and mitigate the impact of COVID-19 on the financial system and the broader economy.

Our professionals within our global network are speaking every day with financial services business leaders and will continue to share our insights and resources on industry developments and responses.

## References:

1. Zhang, D., Hu, M., & Ji, Q. (2020). Financial markets under the global pandemic of COVID-19. *Finance Research Letters*, 101528.
2. Akhtaruzzaman, M., Boubaker, S., & Sensoy, A. (2020). Financial contagion during COVID-19 crisis. *Finance Research Letters*, 101604.
3. Atkeson, A. (2020). What will be the economic impact of covid-19 in the us? rough estimates of disease scenarios (No. w26867). National Bureau of Economic Research.
4. Liu, H., Manzoor, A., Wang, C., Zhang, L., & Manzoor, Z. (2020). The COVID-19 outbreak and affected countries stock markets response. *International Journal of Environmental Research and Public Health*, 17(8), 2800.
5. Baker, S. R., Bloom, N., Davis, S. J., Kost, K., Sammon, M., & Viratyosin, T. (2020). The unprecedented stock market reaction to COVID-19. *The Review of Asset Pricing Studies*.
6. McKibbin, W. J., & Fernando, R. (2020). The global macroeconomic impacts of COVID-19: Seven scenarios.
7. Fernandes, N. (2020). Economic effects of coronavirus outbreak (COVID-19) on the world economy. Available at SSRN 3557504.
8. Bonaccorsi, G., Pierri, F., Cinelli, M., Flori, A., Galeazzi, A., Porcelli, F., ...& Pammolli, F. (2020). Economic and social consequences of human mobility restrictions under COVID-19. *Proceedings of the National Academy of Sciences*, 117(27), 15530-15535.
9. Lalon, R. M. (2020). COVID-19 vs Bangladesh: Is it Possible to Recover the Impending Economic Distress Amid this Pandemic?. *Journal of Economics and Business*, 3(2).
10. Naik, B. M. COVID-19 OUTBREAK: IMPACT ON INDIAN ECONOMY.

# Appendix I

## Introducing Consulted Article

| SI | Article Title                                                                                         | Author(s)                                                                                                                                                                                                   | Journal Name                                                  | Volume & Issue       | Year | Publisher                                                  |
|----|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------|------|------------------------------------------------------------|
| 1  | Financial markets under the global pandemic of COVID-19                                               | Dayong Zhang<br>Min Hu, Qiang Ji                                                                                                                                                                            | Finance Research Letters                                      | Vol-33               | 2020 | Elsevier Ireland Ltd                                       |
| 2  | Financial contagion during COVID-19 crisis.                                                           | MdAkhtaruzzaman,<br>SabriBoubaker,AhmetSensoy                                                                                                                                                               | Finance Research Letters                                      | Vol-33               | 2020 | Elsevier Ireland Ltd                                       |
| 3  | What will be the economic impact of COVID-19 in us? Rough estimate of disease.                        | Andrew Atkeson                                                                                                                                                                                              | NBER Working Paper                                            | Issued-March         | 2020 | NBER                                                       |
| 4  | The COVID-19 Outbreak and Affected Countries Stock Markets Response                                   | HaiYueLiu,AqsaManzoor ,CangYuWang,Lei Zhang and ZairaManzoor                                                                                                                                                | International Journal of Environment Research & Public Health | V-17 I-08            | 2020 | MDPI                                                       |
| 5  | The Unprecedented Stock Market Reaction to COVID-19                                                   | Scott R. Baker, Nicholas Bloom, Steven J. Davis, Kyle Kost, Marco Sammon, and TasaneeyaViratyosin.                                                                                                          | Economics Working Paper                                       | June 16              | 2020 | London, Centre for Economic Policy Research                |
| 6  | The Global Macroeconomic Impacts of COVID-19: Seven Scenarios                                         | Warwick McKibbin,Roshen Fernando                                                                                                                                                                            | Centre for Applied Macroeconomic Analysis                     | February 2020        | 2020 | Australian National University                             |
| 7  | Economic effects of coronavirus outbreak (COVID-19) on the world economy                              | NunoFernandes                                                                                                                                                                                               | Social Science Research Network                               | March                | 2020 | Elsevier Ireland Ltd                                       |
| 8  | Economic and social consequences of human mobility restrictions under COVID-19                        | Giovanni Bonaccorsi, Francesco Pierri, MatteoCinelli, Francesco Porcelli, Alessandro Galeazzi, Andrea Flori,Ana Lucia Schmidt, Carlo Michele Valensise, Antonio Scala, Walter Quattrociochi, Fabio Pammolli | Social Science Research Network                               | June 18              | 2020 | The Proceedings of the National Academy of Sciences (PNAS) |
| 9  | COVID-19 vs Bangladesh: Is it Possible to Recover the Impending Economic Distress Amid this Pandemic? | RaadMozibLalon                                                                                                                                                                                              | Journal of Economics and Business                             | Vol.3, No.2, 825-836 | 2020 | The Asian Institute of Research                            |
| 10 | COVID-19 Outbreak: Impact on Indian Economy                                                           | *Basappa M. Naik                                                                                                                                                                                            |                                                               | Volume IX, Issue VI  | 2020 | MuktShabd Journal                                          |

## Appendix II

### Complications of Objectives/ Purpose/ Questions/ Hypotheses Addressed by the Article

| Article | Objective/ Purpose/ Questions/ Hypotheses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | This paper aims to map the general patterns of country specific risks and systemic risks in the global financial markets. It also analyses the potential consequence of policy interventions, such as the US' decision to implement a zero-percent interest rate and unlimited quantitative easing (QE), and to what extent these policies may introduce further uncertainties into global financial markets.                                                                                                                                                                                    |
| 2       | This study examines how financial contagion occurs through financial and nonfinancial firms between China and G7 countries during the COVID-19 period. The empirical results show that listed firms across these countries, financial and non-financial firms alike experience significant increase in conditional correlations between their stock returns.                                                                                                                                                                                                                                     |
| 3       | This note is intended to introduce economists to a simple SIR model of the progression of COVID-19 in the United States over the next 12-18 months. This model also allows for quantitative statements regarding the tradeoff between the severity and timing of suppression of the disease through social distancing and the progression of the disease in the population.                                                                                                                                                                                                                      |
| 4       | This paper evaluates the short-term impact of the coronavirus outbreak on 21 leading stock market indices in major affected countries including Japan, Korea, Singapore, the USA, Germany, Italy, and the UK etc.                                                                                                                                                                                                                                                                                                                                                                                |
| 5       | □ Why Such Powerful Stock Market Effects? □ Quantifying the Contribution of COVID-19 to Overall U.S. Stock Market Volatility. □ Characterizing Daily Stock Market Jumps                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 6       | To better understand possible economic outcomes, this paper explores seven different scenarios of how COVID-19 might evolve in the coming year using a modelling technique. It examines the impacts of different scenarios on macroeconomic outcomes and financial markets in a global hybrid DSGE/CGE general equilibrium model. These scenarios demonstrate the scale of costs that might be avoided by greater investment in public health systems in all economies but particularly in less developed economies where health care systems are less developed and population density is high. |
| 7       | This report discusses the economic impact of the COVID-19 crisis across industries, and countries. It discusses the economic channels through which economic activity will be impacted. And the asymmetric results across countries and industries. It also attempts a rough estimate of the potential global economic costs of COVID-19 under different scenarios.                                                                                                                                                                                                                              |
| 8       | In response to the COVID-19 pandemic, several national governments have applied lockdown restriction to reduce the infection rate. Our results highlight the necessity of asymmetric fiscal measures to avoid a further increase in poverty and inequality induced by the lockdown.                                                                                                                                                                                                                                                                                                              |
| 9       | This paper aims at imparting the possible economic consequences of outbreaking of COVID-19 pandemic in Bangladesh followed by the initiatives taken by government along with all other stakeholders to combat against the impending economic shock.                                                                                                                                                                                                                                                                                                                                              |
| 10      | □ To study the impact of COVID-19 in different sectors in the economy □ To predicting the future of the Indian economy by analyzing the current scenario □ To providing remedial measures to economic crisis.                                                                                                                                                                                                                                                                                                                                                                                    |

## Appendix III

### Complications of Methods

| Article | Methods                                                                                                                                                                                                                     |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | This article following the mixed method formula because it has observation, dataanalysis, Volatility analysis, Correlation analysis and some tables. It took support from The National Natural Science Foundation of China. |
| 2       | This article following the survey method. It includes Empirical strategy, Data and descriptive, Empirical result and also Robustness checks which indicate the survey method.                                               |
| 3       | This article has many models, experiments ,tables etc which indicates that it is following the survey method.                                                                                                               |
| 4       | The article followed the survey method. They have been discussed about some review, show some impacts, many study methods, and some results also.                                                                           |
| 5       | This Article is following the Observation Method. It characterizes daily stock market, follow them and searching the reason behind why such powerful stock market effects due to COVID-19.                                  |
| 6       | The article is following the Survey Method because it has so many data and some models, scenarios to show the overall research matter.                                                                                      |
| 7       | This Article followed the Survey Method. It has so many data collection, graphs, scenarios etc. which indicates survey method.                                                                                              |
| 8       | This Article followed the Survey Method. It includes many data, tables ,result, economic situation and many more things which makes to call the article Survey method.                                                      |
| 9       | This Article followed Focus Group Method because this article is basically about a specific country and its economic situation as well as many data's.                                                                      |
| 10      | This article is following Focus Group Method. It is all about a specific country and its data's which simply indicate that it is following Focus Group Method.                                                              |

## Appendix IV

### Complications of Conclusions

| Article   | Conclusions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b>  | The present results show that global financial market risks have increased substantially in response to the pandemic. Individual stock market reactions are clearly linked to the severity of the outbreak in each country. The great uncertainty of the pandemic and its associated economic losses has caused markets to become highly volatile and unpredictable.                                                                                                                                                                                                                                                                                                                                                              |
| <b>2</b>  | This paper analyses show financial contagion occurs through financial and non financial firms between China and G7 countries. The empirical results show that dynamic conditional correlations (DCCs) between Chinese and G7 financial and non financial stock returns increased significantly during the COVID-19 period.                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>3</b>  | The simulations of the model in this note, and, even more so, the fully detailed analysis in Ferguson et al. (2020), paint a grim picture of the choices regarding public health that policymakers face in mitigating the impact of the COVID-19 pandemic. What is urgently needed is an economic analysis of the economic consequences of the mitigation steps currently being implemented and contemplated going forward so that economic trade offs between public health and the economy can be considered quantitatively.                                                                                                                                                                                                    |
| <b>4</b>  | This research has aimed to analyze the immediate effect of COVID-19 on the stock markets of the major affected countries. This research adds to the literature as it explores the unexpected outbreak effects on financial markets of a feared disease. From the viewpoint of an investor, the findings of this analysis illustrate the importance of not only the company's business factors but also the investment risks brought on by such a sudden event.                                                                                                                                                                                                                                                                    |
| <b>5</b>  | The Article finds little support for explanations that stress more rapid information diffusion in today's economy and explanations that stress the role of disruptions to international supply chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>6</b>  | This paper has presented some preliminary estimates of the cost of the COVID-19 outbreak under seven different scenarios of how the disease might evolve. The goal is not to be definitive about the virus outbreak, but rather to provide information about a range of possible economic costs of the disease.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>7</b>  | A global recession now seems inevitable. But how deep and long the downturn will be depending on the success of measures taken to prevent the spread of COVID-19, the effects of government policies to alleviate liquidity problems in SMEs and to support families under financial distress. It also depends upon how companies react and prepare for the re-start of economic activities                                                                                                                                                                                                                                                                                                                                       |
| <b>8</b>  | The article analyzes a massive mobility dataset before and after the Italian lockdown introduced to face the COVID-19 pandemic. It explores how variations in mobility relate to some fundamental economic variables, and we accordingly show that reduction in connectivity tends to be stronger for municipalities with low average individual Income and high income inequality                                                                                                                                                                                                                                                                                                                                                |
| <b>9</b>  | The government of Bangladesh initiating a massive stimulus scheme to be implemented in three phases as mentioned earlier in order to protect these mass people affected by the stark hit of COVID-19 crowding out them from Jobs and other activities due to lock down of country. In fact, Bangladesh has two extreme options to be executed for obstructing the impending economic shock amid this pandemic and it helps to overcome the situation.                                                                                                                                                                                                                                                                             |
| <b>10</b> | Covid-19 has posed an unprecedented challenge for India. Given the large size of the population, the precarious situation of the economy, especially of the financial sector in the pre-COVID-19 period. The central and state governments have recognized the challenge and have responded but this response should be just the beginning. Policymakers need to be prepared to scale up the response as the events unfold to minimize the impact of the shock on both the formal and informal sectors and pave the way for a V-shaped recovery. At the same time, they must ensure that the responses remain enshrined in a rules-based framework and limit the exercise of discretion to avoid long-term damage to the economy. |