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Abstract

This study aims at investigating the prospects of a bond market in Bangladesh. Most of the developed and developing economies have an active and successful bond market. But Bangladesh despite being one of the fastest growing economy, does not have an active bond market. Hence, this study was designed to investigate the impact of a bond market on the economic growth of Asian countries and what are the prospects and challenges in Bangladesh. To investigate the benefits of a bond market in Bangladesh, this study examined the relationship between bond market return and economic growth of 4 Asian economies which included, India, Indonesia, Hong Kong and Japan. The average annual yield of 10-year bonds was used as the independent variable and the annual GDP growth rate of these countries was used as the dependent variable in the econometric model. Data of last 20 years from 2000 to 2019 were used for all the variables. The Unit Root Test showed that 3 variables were stationary at first difference and other five variables were stationary at level. The Johansen Co-integration test identified the long run association among the variables indicating long run relationship between bond market return and economic growth. Granger Causality revealed a bi-directional relationship for India; unidirectional relationship for Indonesia (Bond→GDP growth) and Japan (GDP Growth→Bond); and no unidirectional or bidirectional relationship among the bond market return and economic growth of Hong Kong. The various new projects, the over extension of the banking sector and perhaps the overall good condition of the economy has created the perfect situation to develop a bond market in Bangladesh. As there are conditions that provide advantages in bond market creation, there are also various challenges that the government must overcome. Some of the most important challenges to clear up are the underdeveloped tax system, the illiquid or absent secondary market, the alternative source of debt and the overall lack of investors. Considering the various developed bond markets these policy implications could seriously aid the development process.

Keywords: GDP growth, Johansen Co integration Test, Granger Causality, Bond Market

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1. Background

The bond market, also called the debt market, fixed-income market, or credit market-is all trades and issues of debt securities. Basically, government issues bonds to raise capital to pay debts or provide for country's development. For expanding projects or maintain ongoing operations, publicly traded companies issue bonds. Broadly the bond market can be segmented into two different categories: The Primary Market and The Secondary Market. Bonds are either issued on the primary market, which rolls out new debt, or on the secondary market, in which investors may purchase existing debt via third parties. The economic development of any country relies mostly on the establishment of sound, effective and efficient financial policy of the country. A well-developed financial system plays an important role in escalating economic growth by deploying savings and facilitating investment in a proficient way. Financial market consists of different markets- Money Market, Capital Market, Derivative Market etc.

All the markets together play an interactive role for the economic prosperity by formatting capital through mobilizing money, industrialization of economy through supplying sufficient funds, providing services, connecting investors to the entrepreneurs and industries etc. Besides, this needs sound regulation, flawless investment and sensitive administrative infrastructure, adequate fiscal supports for making their role effective for the development of the economy. An efficient bond market is essential for figuring public debt and bank liquidity and for controlling the monetary policy. In Bangladesh, the bond market has played a limited role in her economy. The infrastructure of the whole economic system and the financial policies are not well enough to derive towards country's development. Bond market plays a crucial role here and since years, it has not been dynamic. To develop the capital markets of Bangladesh, priority should be given to promote the bond market development. Without an efficient bond market, the monetary transmission processes of policy measures would be evaded and the aimed impact on the economy cannot be fulfilled, which would not meet the effectiveness of the monetary policy operations.

Thus, this study attempts to put some essential prerequisites to the development of government bond market, an economy in general and to recommend some worthy lessons for government bond market development of Bangladesh.

2. History of Bangladeshi Bond Market

Bangladesh consequently experiences the poor economic growth because it has not been blessed with the contribution of both Corporate and Government bonds. Such as High interest rate barriers, absence of a secondary bond market, fail to attract right issuers and investors in the corporate bond market, and the lack of knowledge which leads to an inactive corporate bond market. Before independence, the bonds were used as a resource mobilization which was virtually non-existent in Bangladesh. Immediately after liberation, Bangladeshi nationals and institutions reissued long-term bonds accepting the liabilities of the Income Tax Bonds and the Defense Bonds of the Pakistan government. The government provided some facilities to Bangladeshi shareholders of nationalized industries such as issued a 5% non-negotiable bond to Bangladeshi shareholders of nationalized industries. In addition, savings bonds were also issued to pay for the value of

demonetized 100-taka notes in 1974.In 1981, the first effort to mobilize savings for use of development expenditure was the issue of Wage Earners Development Bonds which are sold to Bangladeshi wage earners abroad. Later in January 1984, a two-year special treasury bond was issued to be sold to individuals, public and private sector organizations including banks. In December 1985, another instrument was issued which is known as the National Bond sold to non-bank investors. In October 2004, the Bangladeshi Institutions and individuals and non- resident Bangladeshis introduced the Islamic Investment Bonds in accordance with Islamic Shariah who are willing to share profit or loss. (Jahur and Islam, 2014).

From January 10 2005, Bonds were traded in the secondary market which is the most important event in the history of the Bond market in Bangladesh. Dhaka Stock Exchange listed 18 bonds for trading in the market. It may be noted that primary dealers to facilitate development of bond market were appointed by Bangladesh Bank appointed in the country and till today (August, 2010) 12 Primary Dealers comprising banks and non-bank financial institutions are engaged in freely sale /purchase of bonds issued through auction mechanism. In case fund shortages Bangladesh Bank provide necessary support to Primary dealers. (Hossain, 2012). Though the bond market of Bangladesh is bested with numerous problems. If all the above steps can be done, then this could make a way for a well-functioning bond market that can change the existing bank into multilayered system, where capital markets can complement bank financing.

3. Objectives of the Study

The broad objective of this study is to evaluate the prospects of bond market in Bangladesh and to determine whether it would be a possible solution.
The specific objectives are:
  i.   To provide an overview of the bond market condition of Bangladesh
  ii.   To identify the relationship between bond market development and economic growth
  iii. To identify the impact of bond market-return on economic growth of few developing and developed Asian economies.
  iv.   To identify the prospects and challenges of bond market development in Bangladesh.
  v.   To provide few suggestions on policy development of the bond market in Bangladesh.

4. Literature Review

4.1 The Relationship between Financial Sector and Economic Growth

Study (Fink, Haiss, & Hristoforova, 2003) investigated the relationship between the aggregate bond market growth and real GDP in 13 highly industrialized economies. This paper promotes a practical approach to the position of financial systems that reflects on the relationship between growth and the efficiency of the financial system's functions (including tracking management, promoting trading risk, allocating money, mobilizing savings, etc.). A country's legal structure and democratic bodies play a part in social and economic growth.

Financial markets play secondary roles to the real economy business, and have long ago lost the center of gravity. Bond markets have been overlooked on the grounds that what matters is the overall financial stability of a nation and the variations in structure and structures that make up the financial system of a nation are negligible as long as an economy has access to a well-functioning financial system. Paper added that this is because a well-functioning stock system not only helps economic agents to minimize transaction costs by hedging, selling and pooling risks, but also raises the profitability and scale of the capital market, both of which are important for economic growth. (Thumrongvit, Kim, & Pyun, 2013).

4.2 The relationship between Bond Market and Economic Growth

(Bhattacharyay, 2011) attempted to classify primary determinants of the growth of bond markets in Asian economies, through analyzing its relationship with selected primary financial and economic influences, and formulating policy guidelines for further growth of Asian bond markets. This study identified the determinants of development in bond markets of Asia economies like - the complexity of the economy, the level of economic growth, the economic transparency, the scale of the financial system and the expansion of interest rates. This paper includes that the absence of the well-functioning bond market could minimize the economy's efficiency and boost its vulnerability to a great recession. The author has defined the main factor as "disintermediation", which implies an increasingly close interaction between companies and capital markets.

Various economic crises around the world illustrate the need for countries to have competitive bond markets to boost their financial portfolios. The growth of the bank, foreign debt, velocity of money and the growth of the economy are critical determinants of the creation of Ghana's corporate bond markets. Again, the rates of economic growth, fiscal deficit and bank scale are essential determining factors of the scale of Ghana's government bond sector. (Musah, Badu-Acquah, & Adje, 2019). Bond financing is becoming a global issue and is a focal point for project financing by most economic systems, both public and private sectors. Bond market growth includes the influence of a network of bond trading operations, stock capitalization, macroeconomic variables, bond spread, liquidity, legal and regulatory issues, as well as associated systemic problems, which contribute for shaping the fundamental bond market growth. (Akter, Himo, & Siddik, 2019).

The bond market plays an important part in a country's economic growth. (Alam et al., 2014) explored that being an important part of the capital system, the bond market plays a complementary role in emerging economy by allocating funds to the various deficit sectors. The debt market consists of the money, equity, bond and derivative markets. The bond market's key aim is to provide creditors with a safe stream of income against uncertain stock market. (Schou-Zibell & Wells, 2008) identified that the Indian financial system is rapidly evolving, characterized by fast economic growth, healthier economies and even greater performance.

4.3 Bond Market in Bangladesh

Bangladesh government operates their debt obligation through two types of security. One is treasury bill with a maturity of less than a year. And the other is Bangladesh government treasury

bond with a maturity of one year or more. Treasury bills are issued by the Bangladesh bank. It has a maturity period of 91 days, 182 days and 364 days. The price of treasury bills is determined by the market and it can be further traded in the secondary market. They are issued with a discount price but gives the face value in maturity. Treasury bonds are also issued by Bangladesh bank. It has maturity period of 2 years to 20 years. It has a risk-free fixed coupon rate. The yield of treasury bond is determined by the market and they are also tradable in the secondary market. It is a risk-free investment as it is issued by the government. Any individual can buy these bonds through primary dealers or through banks in auction. Also, banks, insurance companies, corporates and non-bank financial institutions can also take part in investing in these bonds. Foreigners can also buy treasury bond from market and they can sell or transfer the treasury bond. (Himo, & Akter, 2017).

Some of the banks and corporations introduced corporate bond in Bangladesh few years ago but there is not active corporate bond market at this moment in the country. IBBL introduced profit sharing Mudarabah Perpetual Bond in 2007. The size of the issue is BDT 3000 million of which BDT 1500 million was in private placement and the rest was in IPO. BRAC Bank introduced 25% Subordinated Convertible Bonds in 2011. This bond had a maturity of 84 months from the date of issue. The size of the issue was BDT 3000 million where the pre-IPO placement was BDT 2700 million and rest was done through public offering. ACI Limited introduced 20% Convertible Zero Coupon Bonds in 2010. This bond has a term of 5 years with yearly redemption. The private placement was Tk 801,510,000 and public offering was Tk 534,340,000. The bond has a credit rating of A+. But these corporate bonds were withdrawn from the market few years back. (Alam et al., 2014).

5. Research Methods

5.1 Sources of Data and Description

With a purpose to accomplish the predetermined objective of this paper bond market variable and economic growth indicator were used. Average annual 10Y bond yield of four Asian economies which include India, Indonesia, Hong Kong and Japan were collected for this study. To measure the economic growth annual GDP growth of these four countries were collected from World Bank metadata archive. This study used 20 years-data from 2000 to 2019 to analyze the impact of bond market on the economic growth of some Asian economies. 10 Years-Bond market return is reported on a daily basis, the daily was converted into average annual bond market yield.

5.2 Model Specification

This study employed Johansen Co-integration test, and Granger Causality method to investigate both associations between the independent variables (bond market return) and the study's dependent variable (GDP growth rate). In order to conduct time series analysis, it is necessary to examine whether the data set is stationary or not. The unit root of all the selected variables were measured by the ADF test suggested by (Dicky and Fuller, 1981).

(i) The Augmented Dicky Fuller (ADF) test is conducted assuming the null hypothesis that the time series data of the chosen variable is not stationary or has unit root, which means H_0: Y_t is not I (0). The full model with trend and intercepts is represented in the equation below:

$$\Delta Y_t = \alpha + \beta T + \rho Y_{t-1} + \sum_{i=1}^{k} \gamma_i \Delta Y_{t-i} + e_t$$

H_0: Y_t is not stationary or has unit root; H_1: Yt is stationary

Here, Y_t indicates the variable selected for the period t, Δ signifies the differential operator, T represents a time trend, *et* is an error term with mean 0, variance as σ^2, and k symbolizes the number of lags of the differences in the above ADF equation.

(ii) The Johansen Co-integration test is conducted based on the null hypothesis that there is no co-integration among the chosen variables. Johansen Co-integration test through trace and maximum eigenvalue statistic rank test was performed to develop the long run association between the average bond market yield of 4 countries and their GDP growth. There could be multiple co-integrating vectors and Johansen test can identify all the co-integrating associations. (Johansen & Juselius, 1990; Juselius, 2006; Kasa, 1992). The trace statistic is determined using the following formula:

$$\text{Trace}(r, k) = -T \sum_{i=r+1}^{k} \ln(1 - \lambda_i)$$

(iii) Granger Causality

The Granger Causality technique developed by (Engle & Granger, 1987) was used in this study to specify the direction of causality among the selected variables. This tool identifies whether the

$$X_t = \gamma_0 + \sum_{k=1}^{M} \gamma_k X_{t-k} + \sum_{l=1}^{N} \delta_l Y_{t-l} + v_t$$

$$Y_t = \beta_0 + \sum_{k=1}^{M} \beta_k Y_{t-k} + \sum_{l=1}^{N} \alpha_l X_{t-l} + u_t$$

association is unidirectional, bidirectional or there exists no relation among the variables. Co-integration test examines the long run linkage between variables, whereas VECM represents short run association. But the direction of this association can only be presented by the Granger Causality technique. To test the Granger causality, the following regression Equations can be applied:

At first, all the variables under this research was transformed into their logarithm form before analysis. Then the stationary variables were used for further analysis to explore the causal relationship between bond market return and economic growth of India, Indonesia, Hong Kong and Japan. Statistical analysis was performed by using the EVIEWS version 8.0 software.

6. Results and Discussions

6.1 Descriptive Statistics

It is better to take a look at the descriptive statistics of the variables used in analysis before going straight to the econometric analysis. The descriptive shows that variable LIDN10Y, LIDNGDP and LIND10Y are positively skewed and other five variables are negatively skewed. The result implies that LHKGGDP, LIND10Y, LINDGDP, LJPN10Y and LJPNGDP are leptokurtic and variable LHKG10Y, LIDN10Y and LIDNGDP are platykurtic. The Jarque-Bera statistic show that among the variables, we can reject the null of that the error term is normally distributed for seven variables (P>0.05) except LJPN10Y, as it has P<0.05. (Table 1)

Table 1: Descriptive Statistics of Variables in the Model

	LHKG10Y	LHKGGDP	LIDN10Y	LIDNGDP	LIND10Y	LINDGDP	LJPN10Y	LJPNGDP
Mean	0.997277	1.217792	2.165762	1.692762	2.031164	1.852928	-0.221251	0.110393
Median	0.934985	1.117217	2.102895	1.674020	2.045754	1.986236	0.185812	0.402186
Maximum	1.990610	2.163339	2.547099	1.847671	2.401525	2.139782	0.556755	1.433116
Minimum	-0.061875	-0.578463	1.757858	1.532313	1.724551	1.127102	-2.900422	-2.137132
Std. Dev.	0.556425	0.690764	0.239262	0.100688	0.149210	0.298890	1.029358	0.873828
Skewness	-0.011990	-0.658689	0.255146	0.182314	0.223069	-1.154611	-1.816313	-0.976406
Kurtosis	2.103461	3.432982	1.877471	1.650997	3.827745	3.120223	5.078273	3.692555
Jarque-Bera	0.670297	1.522341	1.013646	1.301842	0.736833	4.455798	13.13639	3.040948
Probability	0.715232	0.467119	0.602407	0.521565	0.691829	0.107755	0.001404	0.218608
Sum	19.94553	23.13804	34.65219	27.08419	40.62329	37.05856	-3.982526	1.876682
Sum Sq. Dev.	5.882573	8.588788	0.858694	0.152070	0.423009	1.697370	18.01284	12.21720
Observations	20	19	16	16	20	20	18	17

Source: EViews 8 output

6.2 Unit Root Test

Augmented Dicky Fuller (ADF) test was conducted to check the unit root of the dataset. It is important to conduct unit root test on time series data to test the stationarity of the data set. The

null hypothesis of the ADF test was that the selected variables are not stationary meaning the variables have unit root. Table 2 shows that LIND10Y, LINDGDP, LHKG10Y, LHKGGDP and LJPNGDP are stationary at level. As the test statistics of these two variables exceeds the critical value at 5% significant level and P value is less than 0.05, null hypothesis is rejected. On the other side, the rest of the three variables are found to be not stationary at level, so null hypothesis cannot be rejected (t-statistic < critical value; p > 0.05). Table 3 shows the ADF test of LIDN10Y, LIDNGDP AND LJPN10Y at their 1st difference. The results show that all these three variables are stationary at their 1st difference. (t-statistic > 5% critical value; p <0.05). Thus, it proves that all the variables chosen for this research is stationary rejecting the null hypotheses.

Table 2: ADF Unit Root Test at Level

Variables	Test Statistic	Critical value at 5%	P-value	Results
LIND10Y	-3.144299	-3.029970	0.0401	LIND10Y is stationary
LINDGDP	-3.903723	-3.029970	0.0086	LINDGDP is stationary
LIDN10Y	-1.966354	-3.759743	0.5717	LIDN10Y is non-stationary
LIDNGDP	-2.775355	-3.081002	0.0852	LIDNGDP is non-stationary
LHKG10Y	-2.518348	-1.962813	0.0153	LHKG10Y is stationary
LHKGGDP	-1.991662	-1.962813	0.0471	LHKGGDP is stationary
LJPN10Y	0.483556	-3.791172	0.9976	LJPN10Y is non-stationary
LJPNGDP	-3.588081	-3.098896	0.0211	LJPNGDP is stationary

Table 3: ADF Unit Root Test at 1st Difference

Variables	Test Statistic	Critical value at 5%	P-value	Results
DLIDN10Y	-3.933364	-5.119178	0.0101	DLIDN10Y is stationary
DLIDNGDP	-3.649597	-3.119910	0.0202	DLM2 is stationary
DLJPN10Y	-4.358852	-3.791172	0.0202	DLEXC is stationary

6.3 Johansen Co integration Test

Table 4 and 5 demonstrate the results of Johansen Co-integration test using both trace and maximum-eigenvalue statistic. Johansen Co-integration test is performed to predict the long run connection among the variables. The principle mentioned in Johansen (1995) is based on Pantula's (1989) principle. According to the same principle, only if the test statistics are higher than the critical value at 5% significant level, then the null hypothesis of having no co-integration can be rejected. The result reveals presence of two co-integrating vectors at 5 percent level of significance for India and Japan and one co-integrating equation for Indonesia and Hong Kong. As the test statistics for trace and maximum-eigenvalue statistic exceeds the 5% critical value, the null hypothesis of this study can be rejected concluding that bond market return has long run association with economic growth.

Table 4: Unrestricted Co-Integration Rank Test (TRACE)

Country	Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**

India	None *	0.530666	22.86317	15.49471	0.0032
	At most 1 *	0.401743	9.247228	3.841466	0.0024
Indonesia	None *	0.725176	19.95383	15.49471	0.0099
	At most 1	0.125105	1.871114	3.841466	0.1713
Hong Kong	None *	0.707751	21.15150	15.49471	0.0063
	At most 1	0.164690	2.699280	3.841466	0.1004
Japan	None *	0.955361	31.92726	15.49471	0.0001
	At most 1 *	0.585943	7.054019	3.841466	0.0079
* indicates rejection of the hypothesis at the 0.05 level					

Table 5: Unrestricted Co-Integration Rank Test (Maximum Eigenvalue)

Country	Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
India	None	0.530666	13.61595	14.26460	0.0631
	At most 1 *	0.401743	9.247228	3.841466	0.0024
Indonesia	None *	0.725176	18.08272	14.26460	0.0119
	At most 1	0.125105	1.871114	3.841466	0.1713
Hong Kong	None *	0.707751	18.45222	14.26460	0.0103
	At most 1	0.164690	2.699280	3.841466	0.1004
Japan	None *	0.955361	24.87324	14.26460	0.0008
	At most 1 *	0.585943	7.054019	3.841466	0.0079
* indicates rejection of the hypothesis at the 0.05 level					

6.4 Granger Causality

The Granger Causality test aims to specify whether historical values of a variable help to forecast changes in another variable (Granger, 1988). Moreover, it also states that if variable X helps forecast variable Y value, variable Y is Granger caused by variable X (Ray, 2012). The Granger Causality test was performed in this empirical research to assess the causal association between bond yield and GDP growth. The stationary variables derived from the ADF test were used for this Granger Causality test. IND 10Y, INDGDP, HKG10Y, HKGGDP, JPNGDP were used at level, on the other hand, the other three variables were used at their first difference. The result implies that in India, bond market return granger causes the GDP growth and vice versa. (Table 6). In case of Indonesia, the P-value indicates that there is a unidirectional causality between the variables and bond yield of Indonesia impacts its GDP growth rate. For Japan, there is another unidirectional causality but it's the opposite of Indonesia. In Japan the economic growth impacts the bond market return. There has been no unidirectional or bidirectional relationship seen between the 10Y Bond yield of Hong Kong and its GDP growth rate; thus the null hypotheses cannot be rejected. (P>0.05). Hence, it can be concluded that, the bond market of India and Indonesia have impacts on the country's economic growth, the GDP growth has impact on the bond yield in India and Japan, but there is no causality between the Hong Kong Bond Market return and its economic growth.

Table 6: Pairwise Granger Causality Test for 10Y Bond Yield and GDP Growth

Null Hypotheses	P-Value	Decision	Result
LINDGDP does not Granger Cause LIND10Y	0.0215	Reject Null	Bi-directional
LIND_10Y does not Granger Cause LIND_GDP	0.0224	Reject Null	Relationship
D(LIDNGDP) does not Granger Cause D(LIDN10Y)	0.5287	Do not reject	Unidirectional
D(LIND10Y) does not Granger Cause D(LINDGDP)	0.0094	Reject Null	Relationship
LHKGGDP does not Granger Cause LHKG10Y	0.8234	Do not reject	No
LHKG10Y does not Granger Cause LHKGGDP	0.3649		Relationship
LJPNGDP does not Granger Cause D(LJPN10Y)	0.0021	Reject Null	Unidirectional
D(LJPN10Y) does not Granger Cause LJPNGDP	0.3371	Do not reject	Relationship

7. Prospects and Challenges of Bond Market in Bangladesh

7.1 Prospects of Bond Market in Bangladesh

The bond market has been for a long time the stable source of finance for the companies and government of the world. The market capitalization of bonds in USA, China, Malaysia, Indonesia and Vietnam is around 144%, 68%, 98%, 19% and 23% of their GDP respectively; but in case of Bangladesh it is a meagre 2.4% of the GDP (Chowdhury, 2020). This absence of corporate bonds is the result of an over extended banking system. The over extension has created a maturity mismatch in the banking system. If we look at the credit market companies are more interested in getting loans from commercial banks. This scenario is responsible for the market volatility and negative impact on the interest rates. In this situation to deter the rising volatility the government should look to develop the bond market. There are many factors which can boost an effective bond market in our economy. The important factors are:

❑ Consistent GDP growth rate
❑ Government Budget deficit
❑ Significant role of private sector in credit disbursement
❑ Moderate inflation and exchange rates
❑ Considerable funds of insurance companies

7.2 Challenges of Bond Market in Bangladesh

The lethargic growth of the bond market in Bangladesh has been recognized due to a number of factors (Hossain, 2012). They are discussed below.

Limited number of investors: Compared to the total population in Bangladesh, only a small limited number of investors is interested in investing in bond market.

Capital gain: While making their investment decision, most of the investors in Bangladesh look for capital gain rather than fixed flow of income.

High return in risk free government bond: Rate of return in case of risk-free government bond is too highs so corporate bonds have to offer even higher rate for covering additional risk to the investors which make the rate non-viable for the issuers.

Alternative sources of debt financing: Other sources of debt financing, especially borrowings from commercial bank are very easy and widely used in Bangladesh.

Limited private management of pension fund: In Bangladesh private management of long-term pension fund is very limited.

Weak regulations and market infrastructure: Laws and guidelines with respect to administration of security advertise are deficient. Market failure is regular situation in Bangladesh. Hazard free financial specialists simply lean toward government securities while daring individuals go for interest in financial exchange. There are insufficient financial specialists for corporate bond market.

Underdeveloped tax system: Tax system in Bangladesh isn't appropriately evolved. Duty can be dodged through out of line implies. Along these lines, tax incentive for issuing bonds isn't high which causes immature corporate security showcase.

Illiquid secondary market: Illiquidity in secondary market of government debt securities makes constraints on determining proper pricing of the treasury bonds in the primary market.

High interest rate: Individual savings are attracted by national saving scheme due to its high interest rate.

High transaction cost of bond issuance: The high transaction cost of bond issuance is considered as constraint.

Cheap syndicated loans: Syndicated loan which is provided by a number of banks to finance large projects, is cheap as well custom-made and flexible which makes bonds non-attractive to the corporate issuers.

Inexperienced investor: In Bangladesh most of the investors are inexperienced. They are very much familiar with the bonds. They consider that return on debt instrument is very small with no chance of capital gain. Therefore, they take investment decision in stocks for abnormal capital gain.

High inflation: Comparatively high inflation has been prevailing since last decade, which has made potential investors introverted to invest in corporate securities

7.3 Policy Development

Based on global experiences, the net benefits from the secondary bond market development are well established. Thus, it is expected that further secondary bond market development will establish a true corporate bond market which will subsequently widen the financing options for both bond issuers and investors (Mortaza and Shadat, 2016). Here are some recommendations in light of our paper, which can be used in policy development.

- An SEC like regulatory body is a prerequisite for a strong and functional bond market that will coordinate and collaborate all the intermediaries and the bond issuing agencies and their trustees and assure total accountability, transparency and compliance issues.

- To promote and encourage corporate bond market various regulatory steps should be taken. For instance, to enable the secondary bond market, issuing of various corporate debt instruments should be imposed, insurance and companies and other major market players like mutual funds should be given conducive access to invest in bond markets with prudential guidelines that will ensure the supply of lucrative debt instruments.

- Interest rates should be reduced from the NSC (National saving certificates) alongside issuing of new NSCs and private bonds. Reducing the registration fees and withdrawal of competitive savings instruments would boost demand and incentives to issue bonds.

- To incentivize investing on bonds SEC might rebate taxes from the interests received by the investors or exempt tax up to a certain limit.

- The regulator's enforcement action should ensure that the task of credit rating agencies and trustees are made easier by enabling them to rate the bonds/debentures periodically to keep track of issuing company's financial position. Private institutions can also be let to play the role of trustees to ensure transparency and accountability from trustees and corporate/companies.

- To ensure participation of small investors marketable bonds issued by housing, transport, telecommunications and other public utilities and infrastructure projects could be split into small denominations. Additionally, bank/DFI loans of industries can be encouraged to replace with bonds.

8. Limitations and Directions for Future Research

This study represents a primary investigation into the possibility of bond market in Bangladesh and how bond markets have been influencing economic growth in other developing countries. While the results provide important insights about the impact of the bond market return on GDP growth, there are a few limitations that should be addressed. First, the time period taken under consideration for this study is small. It is difficult to evaluate the performance of a bond market considering twenty years' information only. The low number of observations hindrances many crucial econometric estimations. But most of the developing Asian countries introduced bond markets few years ago, that is why it was not possible to gather larger number of observations for the analysis. Second, there is no active bond market in Bangladesh at this moment. So it is not possible to analyze the impact of a bond market in Bangladeshi economy and the results of other countries may not reflect here because of several external factors. There is an ample scope of using more countries' data to get more accurate results on this topic. Despite these limitations, the results of this research have significant implications for the economy as well as the bond market of Bangladesh.

9. Conclusions and Policy Implications

This study was designed to explore the possibilities of bond market in Bangladesh. To investigate the benefits of a bond market in Bangladesh, this study examined the relationship between bond market return and economic growth of 4 Asian economies which include, India, Indonesia, Hong Kong and Japan. The average annual yield of 10-year bonds was used as the predictor variable and the annual GDP growth rate of these countries was used as the dependent variable for the empirical analysis. Data of last 20 years from 2000 to 2019 were used for all the variables. ADF test revealed that 10Y bond yield and GDP growth of Indonesia and 10Y bond yield of Japan these three variables are stationary at their 1st difference and the other five variables are stationary at their level. Johansen Co-integration test showed two co-integrating equations for India and Japan, and one equation for Indonesia and Hong Kong indicating a long run association among the variables. Finally, the Granger Causality test was conducted to identify the direction of causation among the variables. Granger Causality revealed there is a bi-directional relationship for India; unidirectional relationship for Indonesia (Bond→GDP growth) and Japan (GDP Growth→Bond); and no unidirectional or bidirectional relationship among the bond market return and economic growth of Hong Kong. The various new projects, the over extension of the banking sector and perhaps the overall good condition of the economy has created the perfect situation to develop a bond market in Bangladesh. As there are conditions that provide advantages in bond market creation, there are also various challenges that the government must overcome. Considering the various developed bond markets these policy implications could seriously aid the development process.

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