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IDLC MONTHLY

BUSINESS REVIEW

THE SELF-RELIANT PARTICLE BOARD INDUSTRY IN BANGLADESH: A SUSTAINABLE SOLUTION FOR FURNITURE AND OFFICE DECOR

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কাঙ্ক্ষিত লক্ষ্যে পৌঁছাতে
দরকার হয় একটু নির্ভরতার!
আপনিও আস্থা রাখুন আইডিএলসি’র চার দশকের দক্ষতা ও অভিজ্ঞতায়
আপনার দুরন্ত স্বপ্নগুলোকে ডানা মেলার শক্তি দিতে চাই দূরদর্শিতা, দীর্ঘ অভিজ্ঞতা ও দক্ষতা। দীর্ঘমেয়াদী পরিকল্পনা, সুশাসন, স্বচ্ছতা ও আন্তরিক সেবা নিয়ে দেশের সর্ববৃহৎ আর্থিক প্রতিষ্ঠান আইডিএলসি লাখ লাখ মানুষের পাশে আছে আস্থা ও ভরসা হয়ে।
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contents

The first ever particle board manufacturing factory in the country was established in 1962. After 2011, the demand for particle boards kept rising sharply, and the number of industry participants has only kept increasing since then. The lower cost of particle board furniture, enhanced durability due to the integration of modern manufacturing practices, and eco-friendly aspects of particle boards have helped the industry drive big numbers.

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FROM THE

EDITOR

The Self-Reliant Particle Board Industry in Bangladesh: A Sustainable Solution for Furniture and Office Decor

Development in the manufacturing and service industries says a lot about a country's economic strength. Bangladesh, being a developing country, has a few manufacturing industries in which it has achieved significant value addition and self-sufficiency. The particle board industry is undoubtedly one of them. The abundance of raw materials and cheap labour have fueled the growth of this industry, and the industry has already created a market valued at more than BDT 5,000 crore.

The particle board manufacturing industry started its journey in the country in 1962 by Star Particle Board Mills Ltd., a concern of Partex Star Group. Now, several conglomerates are catering their pie in the industry. It is also noteworthy that the industry has created a conducive environment for small and medium enterprises to grow here.

What is unique about the particle board industry is that it promotes sustainability by requiring fewer trees to be cut and recycling waste timber. Though the industry is growing exponentially, it is facing challenges due to the rising dollar price, as adhesives and some other chemicals still need to be imported. Moreover, rising energy costs are a big concern. However, the industry has all the potential to be a contributor to exports if it receives adequate policy support. We can surely expect a sustainable tomorrow with the growth of industries like the particle board industry.

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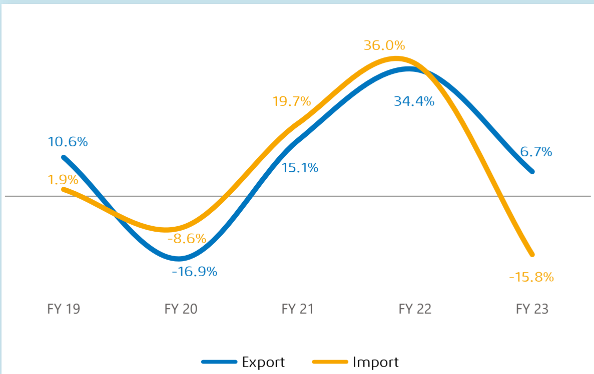
ECONOMY AT A GLANCE

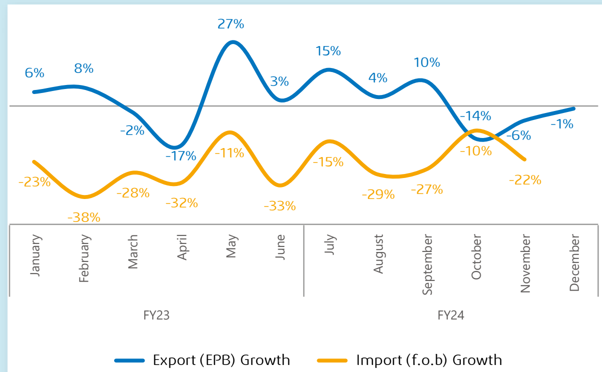
Prepared by IDLCSL Research Team

EXPORT-IMPORT

Growth in Export-Import Trade (Last 5 Years)

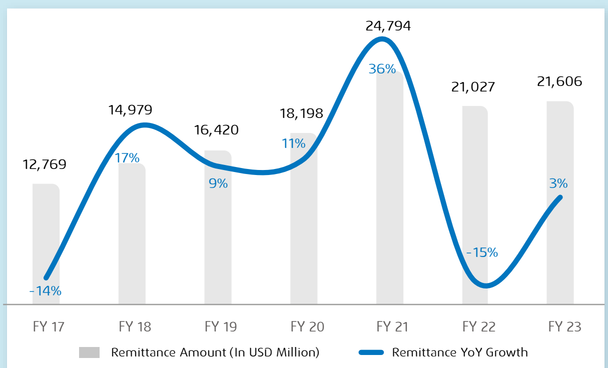


Export and Import Growth (Last 12 Months)

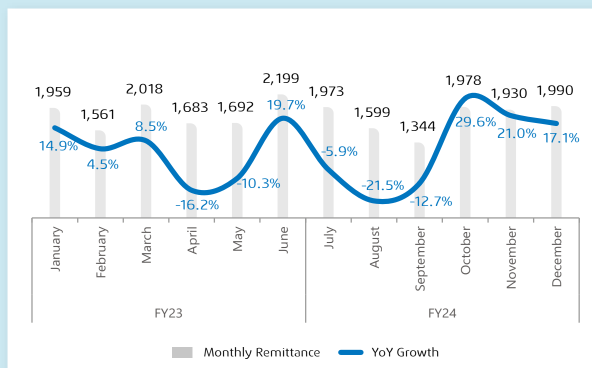


REMITTANCE

Remittance Amount (In USD Million, YoY Growth)

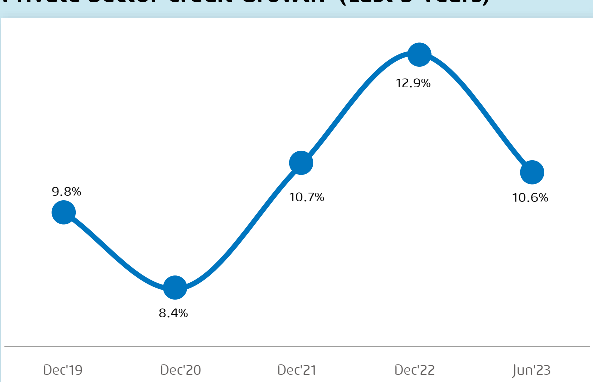


Monthly Remittances (In USD Million, YoY growth)

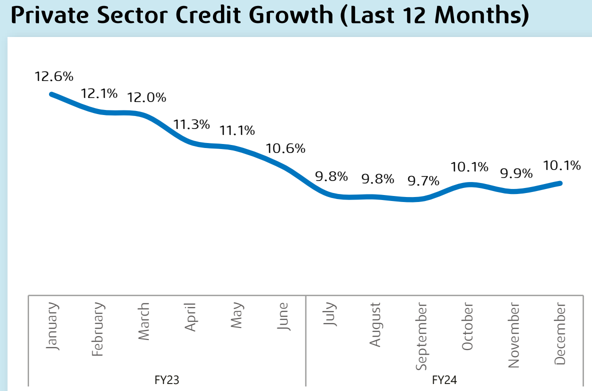


PRIVATE SECTOR CREDIT GROWTH

Private Sector Credit Growth (Last 5 Years)



Private Sector Credit Growth (Last 12 Months)



MONTH IN BRIEF

● As per the data of the Export Promotion Bureau, Bangladesh's apparel exports set a new record in 2023, surging to an unprecedented nearly **USD 47 billion and registering a year-on-year growth of approximately 10.27%.**

● **Excelerate Energy will purchase up to one million tonnes of liquefied natural gas per year from QatarEnergy for 15 years, starting in January 2026,** to supply to Bangladesh. An agreement between Excelerate Energy and QatarEnergy was signed in this regard on January 29, 2024.

● **According to the United Nations, the Consumer Price Index in Bangladesh is anticipated to decline from 9.6% to 6.8% in 2024,** reflecting regional trends of easing inflation due to stabilised international commodity prices, decreased domestic demand, and lesser currency depreciation.

● **As per the data from UK Trade Info, Bangladesh offered 21.39% lower prices for apparel products on average than China, 32% lower than Turkey, and 26.75% lower** than India during the period January 2023 to October 2023, indicating the competitive advantage of the apparel industry in Bangladesh over its competitors.

● As per the data of the central bank, internet banking transactions in Bangladesh experienced a significant surge in November 2023, reaching **BDT 82,866 crore, surpassing the previous month and reflecting the growing adoption of digital financial technologies among tech-savvy individuals.**

● In a notice published on January 11, 2024, Bangladesh Bank has permitted importers to purchase eight items, including edible oil, chickpeas, pulse, peas, onion, spices, sugar, and dates, **on usance terms for up to 90 days under supplier's or buyer's credits until March 31, 2024, with the purpose of ensuring the stability of the prices of essentials in Ramadan.**

● Bangladesh Bank is making moves to cut the term loan overdue period to three months to be classified as per the conditions of the **International Monetary Fund's USD 4.70 billion loan package.**

● **As discussed in a meeting between the foreign minister and the Chinese ambassador on January 28, 2024,** China is taking measures to import mangoes, jute, jute products, leather, meat, and seafood from Bangladesh.

● According to the data from the Bangladesh Bureau of Statistics, the overall inflation in December 2023 hit an **8-month low of 9.41%, with the decline largely attributed to a decrease in food prices.**

WE HAVE DONE WELL. IT COULD HAVE BEEN DONE BETTER IF WE HAD NOT FACED DOMESTIC HURDLES LIKE GAS SHORTAGE, ELECTRICITY SHORTAGE, BOND AND CUSTOMS-RELATED ISSUES. BUT IF WE TAKE THE GLOBAL MARKET, INFLATION, TURBULENCE ETC INTO CONSIDERATION WE HAVE DONE BETTER THAN OUR COMPETITORS.

Faruque Hassan, President of the Bangladesh Garment Manufacturers and Exporters Association, on RMG exports from Bangladesh reaching USD 47 billion in 2023, despite the global economic and geopolitical crisis. (January 03, 2024. Dhaka Tribune.)

We discussed how the economic reform agenda is very urgent to move in several fronts, whether it is on exchange rate policy, fiscal policy, safety net policy to protect the most vulnerable from shocks. It is also about banking sector reforms, and it's a huge agenda.

Abdoulaye Seck, Country Director of the World Bank, on the importance of reforms to drive sustainable development in Bangladesh. (January 18, 2024. The Financial Express.)

This new agreement will further strengthen our relationship with Excelerate while also supporting the energy requirements of the People's Republic of Bangladesh and its stride towards greater economic development.

Saad al-Kaabi, Chief Executive of QatarEnergy, on the agreement between QatarEnergy and Excelerate Energy to supply liquefied natural gas to Bangladesh. (January 29, 2024. The Business Standard.)

We feel that the policies that have been implemented by the government are on the right track and they need to fine tune and thus accelerate it to deal with this. The foreign currency reserve needs to be strengthened.

Edimon Ginting, Country Director of the Asian Development Bank, on the new policies highlighting the government's efforts to address issues concerning foreign currency reserves. (January 18, 2024. The Business Post.)

I have started working on corporate governance. It will continue in the new year as well. The Bangladesh Bank will take any action for the interest of the depositors because the main task of the Bangladesh Bank is to provide security to depositors.

Mezbaul Haque, Spokesperson for Bangladesh Bank, on the central bank continuing its contractionary stance to control inflation. (January 17, 2024. The Business Standard.)

They have taken measures to tighten the monetary policy to bring inflation down. And inflation is coming down, but further actions are needed to ensure that inflation durably comes down and comes back to target sooner rather than later.

Krishna Srinivasan, Director of the International Monetary Fund's Asia and Pacific Department, on the latest monetary policy by the Bangladesh Bank announced on January 17, 2024. (January 31, 2024. The Daily Star.)

The government of Bangladesh has formulated a favourable investment policy with tax exemption, duty drawback, access to working capital, one-stop services, and many more to attract local and foreign investors.

Mahbubul Alam, President of the Federation of Bangladesh Chambers of Commerce & Industries, on the collaboration between the Federation of Bangladesh Chambers of Commerce & Industries and the Canadian Hindu Chamber of Commerce to promote bilateral trade. (January 13, 2024. The Financial Express.)

We have 500 post offices in the district and upazila headquarters of the country, which are in very excellent positions. We will set up smart points there alongside the government's post office services. We want to make smart service points there as public and private service providers. This service will be provided at 500 points. This is a project of only Tk 490 million (Tk 49 crore).

Zunaid Ahmed Palak, State Minister for Posts, Telecommunications, and Information Technology, on the plans to establish 'Smart' service points in 500 post offices across the country. (January 23, 2024. The Financial Express.)

We want to launch it in the first quarter of this calendar year. We think stability has come back to the foreign exchange market and speculation has reduced. This is good news for all.

Selim RF Hussain, Chairman of the Association of Bankers' Bangladesh, on the introduction of the crawling peg system to regulate abrupt fluctuations of taka. (January 24, 2024. The Daily Star.)

WORLD ECONOMIC INDICATOR

PREPARED BY IDLCSL RESEARCH TEAM

Country	Nominal GDP: 2022 (In USD Billion)	Real GDP Growth: 2022 (Yearly % Change)	Inflation Point to Point (%)		Current Account Balance: (% of GDP)	Interest Rates (%), Ten years Treasury Bond	Currency Units (Per USD)
Frontier Markets							
Vietnam	406.45	8.02	3.37	January-24	-0.88	2.33	24,350.00
Kenya	115.99	5.37	6.90	January-24	-4.72	17.49	160.50
Nigeria	477.38	3.25	28.92	December-23	-0.72	15.16	1,194.50
Bangladesh	453.85	6.03	9.41	December-23	-0.70	11.68	110.00
Bangladesh	453.85	6.03	9.49	November-23	-0.70	10.46	110.00
Emerging Markets							
Brazil	1,924.13	2.90	4.62	December-23	-2.91	10.65	4.97
Saudi Arabia	1,108.15	8.74	1.50	December-23	13.79	N/A	3.75
India	3,386.40	6.83	5.69	December-23	-2.61	7.05	83.00
Indonesia	1,318.81	5.31	2.57	January-24	1.00	6.61	15,731.20
Malaysia	407.92	8.69	1.50	December-23	2.64	3.81	4.72
Philippines	404.26	7.60	3.90	December-23	-4.41	6.27	56.16
Turkey	905.53	5.57	64.77	December-23	-5.38	26.47	30.50
Thailand	536.16	2.64	-0.83	December-23	-3.26	2.67	35.44
China	18,100.04	2.99	-0.30	December-23	2.31	2.42	7.12
Russia	2,215.29	-2.05	7.40	December-23	10.27	12.36	91.01
Developed Markets							
France	2,784.02	2.61	3.10	January-24	-1.71	2.74	0.93
Germany	4,075.40	1.78	2.90	January-24	4.20	2.23	0.93
Italy	2,012.01	3.68	0.76	January-24	-0.73	3.81	0.93
Spain	1,400.52	5.48	3.40	January-24	1.06	3.15	0.93
Hong Kong	360.98	-3.51	2.40	December-23	10.73	3.41	7.82
Singapore	466.79	3.65	3.70	December-23	19.33	2.88	1.34
United States	25,464.48	2.07	3.40	December-23	-3.64	4.02	1.00
Denmark	390.68	3.62	0.70	December-23	12.82	2.42	6.91
Netherlands	993.68	4.52	3.20	January-24	5.49	2.52	0.93
Australia	1,701.89	3.66	4.10	December-23	1.20	4.09	1.53
Switzerland	807.23	1.70	1.70	December-23	9.84	0.82	0.87
United Kingdom	3,070.60	4.05	4.00	December-23	-5.55	3.96	0.79

Bangladesh Data: The new GDP size (FY23) is as per the provisional estimate of Bangladesh Bureau of Statistics and real GDP growth (FY23) is as per new base year. Calculation Method of CA balance (% of GDP) = CA balance of FY23 /Provisional Estimate for GDP of FY23

Interest Rate (%) 10 Years TB as per January 2024, Inflation as per January 2024 and Currency Unit (per USD) as Per 31st January 2024 are sourced from Bangladesh Bank

Nominal GDP: Data of all countries apart from Bangladesh is sourced from IMF estimates of 2023 data (April, 2023 Outlook)

Real GDP Growth and Current Account Balance: Data of all countries apart from Bangladesh is sourced from IMF estimates of April, 2023 data (World Economic Outlook, April 2023)

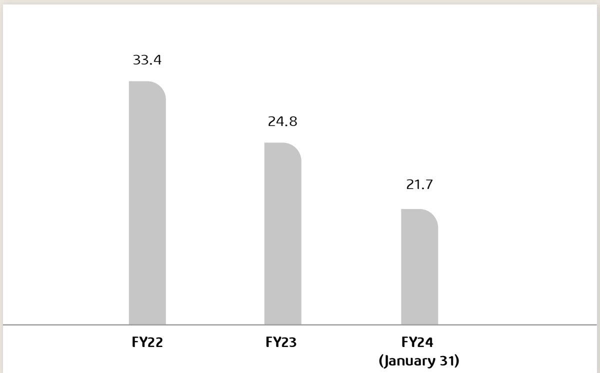
Inflation: Data of all countries apart from Bangladesh is sourced from tradingeconomics.com

Interest Rates 10 Years TB and Currency Unit : Data of all countries apart from Bangladesh is sourced from investing.com

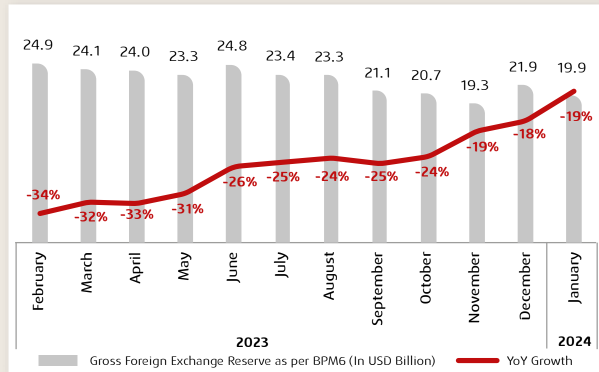
BANKING DATA CORNER

Prepared by IDLCSL Research Team

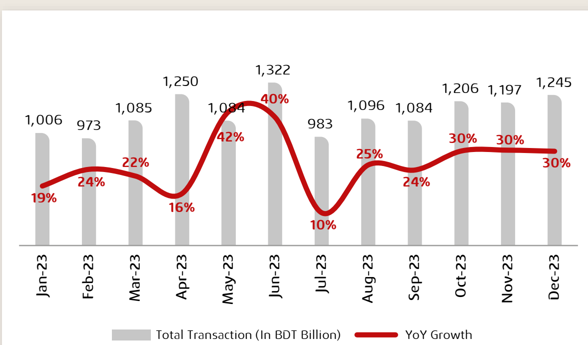
Gross Foreign Exchange Reserve as per BPM6
(In USD Billion and Last 2 Years)



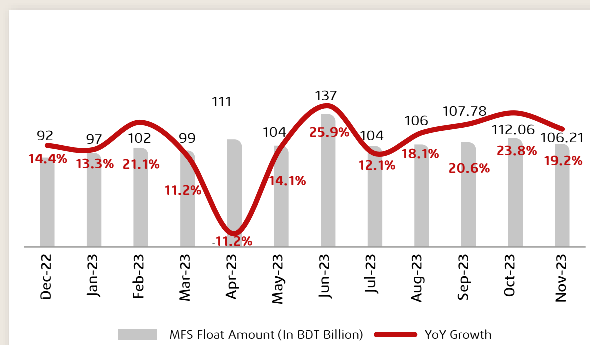
Gross Foreign Exchange Reserve as per BPM6
(In USD Billion and Last 12 Months Trend)



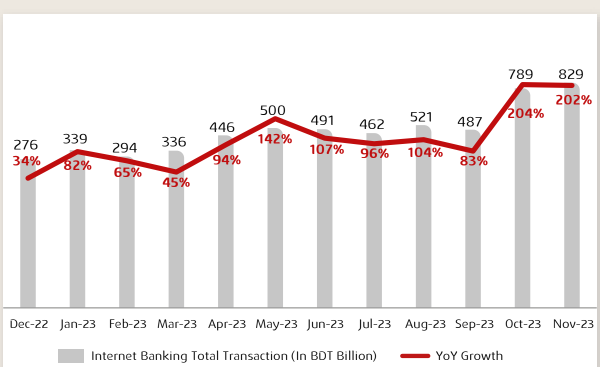
MFS Total Transaction Value
(In BDT Billion and YoY Growth)



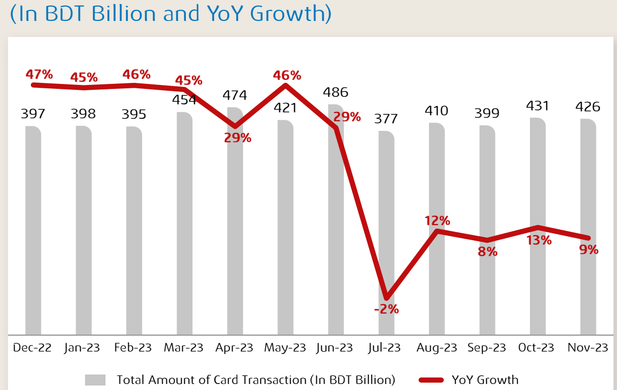
MFS Float Amount
(In BDT Billion and YoY Growth)



Total Amount of Internet Banking Transaction
(In BDT Billion and YoY Growth)



Total Amount of Card Transaction
(In BDT Billion and YoY Growth)



Source: Bangladesh Bank

OpenRefactory

Mushfique Manzoor
Co-Founder and Managing Director, OpenRefactory

Interviewed By
Muktadir Mubassir, Team MBR

A seasoned professional with experiences in diverse roles at quite a good number of esteemed organisations such as British American Tobacco, Novartis, Aramex, Robi, ACI Logistics, and so on, Mr. Mushfique Manzoor has always had an entrepreneurial mindset. He is one of the key figures behind the launch of the largest retail chain in the country, Swapno. Mr. Manzoor and his friend from Notre Dame College, Dr. Munawar Hafiz, formed the startup OpenRefactory in September 2016, which provides a one-of-a-kind tool, iCR, that can not only detect bugs in codes with super precision but also fix those automatically. He completed his bachelor's and master's degrees from the Institute of Business Administration, University of Dhaka. Team MBR was in a conversation with Mr. Manzoor and had the opportunity to learn about the behind-the-scenes story of OpenRefactory and his vision for this startup.

Muktadir Mubassir: You have years of corporate experience in various important roles at different renowned organisations such as British American Tobacco, Novartis, Aramex, Robi, and so on. Could you please elaborate on how these diverse experiences influenced your mindset to establish a unique startup like OpenRefactory?

Mushfique Manzoor: I have always been intrigued by innovation. All throughout my career, I tried to do something innovative within, and sometimes beyond, the boundaries of the roles that I was in. The diverse experiences that I went through enabled me to look at a broad spectrum of things. If you look at the industries I have worked in, they are diverse, including telecom, tobacco, logistics, FMCG, and so on. I believe it has enabled me see and connect the farthest and diverse ends together. For instance, during my FMCG days, I launched ready-to-drink Ovaltine vending cart in selected locations in Dhaka which got regional recognition. During my AKTEL days (now known as Robi), I along with my team launched the very first mobile-network-based hunting number service for call centers of Standard Chartered Bank and BRAC Bank which ultimately led to today's 5-digit hunting short-code service that all banks and enterprises use. When I left Robi and started the journey to establish the retail chain of Shwapno all across the country, no one could actually think that such a retail chain could be established. At that time, we actually made plans to dethrone the market leader which was achieved in about a year, with the establishment of 60 outlets nationwide. It was surely a big challenge. It takes a certain amount of 'craziness' above everything else to pull off such an initiative, especially in our country. I had the opportunity to be in a general management role, as Country Manager, very early in my career when I was posted in Vietnam and then in Nepal to set up ARAMEX franchisee operations on those countries. I was also part of a team in setting up a cargo airline in Dhaka. All these experiences taught me invaluable lessons in business development and management and made me more confident of our talent. Like everyone else, I got influenced by how startups were raising funds from investors solely based on ideas in the west and flourishing and I started to look for real innovative ideas for new business/startup. The co-founder of OpenRefactory, Dr. Munawar Hafiz, and I are good old friends. We got into Notre Dame College in 1993. Later on, he got into BUET to pursue computer science, and I got into IBA to pursue business administration. In our friendship, we know each other's skills and strengths, and we complement each other very well. During his PhD in the United States, Munawar worked on bug identification and fixing. The tools that were available back then on the market were capable of identifying the bugs, with limited accuracy, but those could not fix the bugs. Munawar wanted tools to not only identify bugs precisely but also fix bugs, like spellings, in word processing software. In May 2012, we were having dinner at a restaurant in Chicago, Illinois and he discussed his project on automated bug fixing. The idea sounded amazing to me. So, we planned to form a startup and bring the product to market. Over the next couple of years, Munawar fine-tuned the algorithms. Once it became more stable, Munawar applied for a grant from the US National Science Foundation. While drafting the plan for the grant, Munawar contributed to the technical parts, and I contributed to the business parts. With the drafted plans, we won a USD m 225,000/- grant, and we formed a company named OpenRefactory in the United States in September 2016. In 2019 we shifted our development center in Bangladesh by setting up our subsidiary, OpenRefactory Bangladesh Ltd. In 2021, OpenRefactory became champion in the Bangabandhu Innovation Grant (BIG), the flagship event for startups in Bangladesh.

Muktadir Mubassir: OpenRefactory uses its automated analysis and correction tools to fix bugs and vulnerabilities in complex digital systems. Would you kindly share the operating procedure of OpenRefactory and how it is differentiating itself in its area of business?

Mushfique Manzoor: Bug detection tools have been there for more than 20 years, and all of these tools can only detect bugs though the accuracy is poor. None of these tools can actually fix the bugs automatically. While these tools can suggest corrections the programmers have to review the suggestions and then rewrite the codes manually to fix the errors. Even if the same error recurs in the code multiple times, it needs to be solved individually every time. Secondly, the existing tools generate lots of false positives. In the case of false positives, the tools show that there are errors. However, when the programmers review it, they find no bugs. As of now, the rate of false positives is very high in the industry. There are even billion-dollar players in this space but their rates of false positives are as high as 90%. That means, out of every ten bugs reported by these tools, nine of those are not even bugs in the first place. Thirdly, when someone intends to use these bug detection tools, they need to use the cloud and share their codes with the bug detection companies. These are the three major unwanted realities in the industry that need to be addressed.

Here comes OpenRefactory with its tool iCR. Firstly, iCR can detect critical security vulnerabilities that other bug detection tools cannot. For instance, OpenRefactory has been capable of detecting Log4Shell, which remained undetected by all the bug detection tools for eight years. This bug itself is estimated to have caused more than USD 100 trillion worth of financial losses all over the world. Till now iCR is the only tool that can detect Log4Shell and similar critical bugs like Text4Shell.

Secondly, on the SAMATE benchmark (Software Assurance Metrics and Tools Evaluation, developed by US Dept. of Defense, Dept. of Homeland Security and NIST of Dept. of Commerce), our rate of False Positives is less than 6%, whereas it is around 94% for the industry leader, Sonar. We made a huge difference in this aspect, maintaining an accuracy level of almost 16 times. Thirdly, as of now, OpenRefactory is the only bug detection tool in the world that can automatically replace bugs with corrections in the source codes in about half of the cases. The other half needs to be corrected manually. Lastly, OpenRefactory is not cloud-based software as a service. So, we do not see the codes of the clients. Our tool is deployed at the clients' end, and the clients run them on their own servers under their own control.

Muktadir Mubassir: OpenRefactory's signature product, Intelligent Code Repair (iCR), helps fix bugs efficiently and significantly reduces the time it takes for bugfixing in conventional manners. Would you kindly share with us some statistics on the degree of operational efficiency that can be achieved employing iCR based on user feedback?

Mushfique Manzoor: As I mentioned earlier, on the SAMATE benchmark, the rate of false positives is less than 6%. It is around 94% for Sonar, which is one of the industry leaders. As a result, with iCR being deployed, the efficiency of the programmers can be enhanced by at least 15%, though it may vary from organisation to organisation. In monetary terms, a 500-member team of programmers can save about USD 20 million a year, considering the global average salary of programmers is USD 40,000 a year. For a 50-member team, the saving is about USD 2 Million, which is still a lot of money.

Muktadir Mubassir: Mishandling codes may sometimes result in infringement of intellectual property rights. How does OpenRefactory ensure the confidentiality of the codes while rendering its bugfixing services?

Mushfique Manzoor: Whenever iCR gets deployed, it is deployed at the clients' end. It is not deployed at OpenRefactory's end. The clients do not have to upload their codes to OpenRefactory. The iCR is not even in the cloud. iCR is delivered to the client in a Docker container and it operates inside the Docker container which is deployed at the clients end. Whatever the clients have written gets scanned by iCR at their end, and all the confidentialities remain with them. Our deployment model itself ensures that confidentiality remains with the clients and we don't get to see clients proprietary codes.

Muktadir Mubassir: Automated analysis and correction tools may not identify all the bugs or may detect false bugs. Would you kindly share with us how accurate OpenRefactory's bug detection is and how it is working on improving the accuracy?

Mushfique Manzoor: OpenRefactory's bug detection accuracy stands out in the industry. Our statistics are far ahead of those of many of the industry leaders, like Sonar. As I already mentioned, on the SAMATE benchmark' Juliet Testsuite v1.3 which comprises of 1.8million Lines of Code (LoC) over 9,575 files, our false positive rate is below 6%. In contrast, Sonar's false-positive rate is approximately 94%. If we consider the true positive rate, it is 98% for iCR and 77% for SonarQube on the same above mentioned benchmark. So, it is evident that iCR can detect bugs with more accuracy than the industry leaders. We are continuously working to sharpen the accuracy of iCR through fine-tuning the Deep Static Analysis, Machine Learning and Code Refactoring elements of our analysis engine in line with OWASP Top10, CVE Top 10, CWE Top 10 as well as National Vulnerability Database of USA which result in regular feature and maintenance update of our tool.

Muktadir Mubassir: Software projects may vary in terms of size and complexity. Do the prices for OpenRefactory's services vary depending on the size and complexity of the projects? May we know how the revenue model works?

Mushfique Manzoor: OpenRefactory's pricing structure is adaptable to the diverse needs of software projects across different organisations. We recognise the spectrum of software development, ranging from freelancers to industry giants like Google and Facebook. To accommodate this diversity, our pricing varies based on the segment of users and the complexity of projects.

For users integrating iCR into their Continuous Integration and Continuous Deployment (CICD) pipelines or using on-demand usage we offer License subscription where users receive licence to deploy on their premises and gets billed by number of contributors per month. This is typically seen in larger enterprises with heavy development environment.

Our other subscription model offers different pack sizes of certain Lines of Code (LoC) scanning capacity for a specific duration (monthly or yearly). Unlike usual LoC where everything including white space is counted, iCR does not count white space in the code for calculating LoC which is a benefit to the client and is called OpenRefactory Bundled Lines of Code (OBLoC). A good analogy to this is the mobile/cellular data packs. Every time iCR scans any code it deducts its OBLoC capacity purchased, iCR will continue to scan the code as long as it has enough OBLoC capacity in it.

Furthermore, we provide managed security audit services, leveraging our tools and expertise to manually review code and deliver comprehensive reports. While this involves exposure to client code, we maintain strict confidentiality under legal obligations.

In summary, our revenue model encompasses subscription packages tailored to code review needs, contributor-based pricing for enterprise-scale projects, and managed security audit services, ensuring flexibility and confidentiality for our valued clients.

Muktadir Mubassir: OpenRefactory currently provides its services in Java and C. Does it have plans to extend its services to other programming languages?

Mushfique Manzoor: OpenRefactory currently offers services for four programming languages: Java, Python, Go, and C. Each language includes support for its respective frameworks along with the native language, such as Java EE, Spring, Springboot and Android for Java; Django and Flask for Python; and http(standard library), Fiber, Gin for Go. iCR for C, being our initial offering, is currently undergoing a significant update.

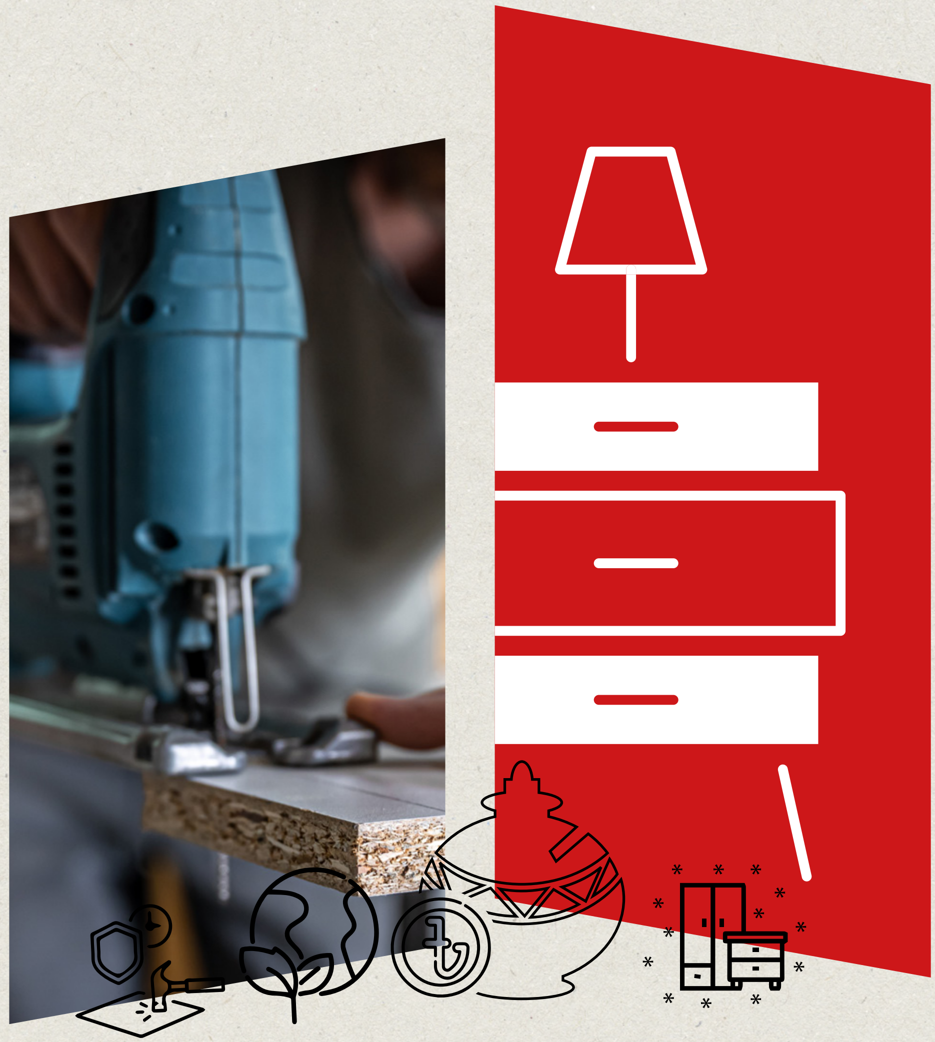
Looking ahead, we are expanding our language support to meet evolving industry needs. This year, we are introducing Rust, a language positioned to replace C and C++ in the future. Additionally, we plan to incorporate JavaScript into our portfolio by the end of this year, followed by PHP in 2025. However, as with any startup, operational dynamics like revenue, growth, and funding may influence the timeline. Our goal remains to enhance our offerings to best serve our clients' diverse needs.

Muktadir Mubassir: Geographical barriers are not an issue for OpenRefactory, considering the types of services it provides. How successful has OpenRefactory become in terms of onboarding international clients? Would you kindly share with us how you envision OpenRefactory's future?

Mushfique Manzoor: OpenRefactory has successfully onboarded international clients across various regions, leveraging its robust service offerings and overcoming geographical barriers. While our Silicon Valley office primarily caters to the United States market, our development centre in Bangladesh manages operations for the Asia Pacific, Middle East, Africa, and parts of Europe. This strategic setup has enabled us to serve clients globally, including prominent organisations like the RedHat, The Linux Foundation and Highrise Talent in the United States, TCS and RouteMobile in India, Cataleya in Singapore as well as clients across Europe, , Australia, the United Arab Emirates, and Bangladesh.

Looking to the future, our vision is to democratise access to OpenRefactory's tools, making them integral and indispensable for programmers of all levels, from beginners to seasoned professionals. We aspire to see widespread adoption of our tool, iCR, becoming a routine practice akin to brushing one's teeth before bed. Our goal is to instill a culture where developers habitually run code scans with iCR before finalising their work, ensuring code quality and security.

From a business perspective, our aim is to grow and leave a lasting impact, bringing recognition to Bangladesh on the global stage of technological innovation. Historically, almost all fundamental innovations in computer science have originated in Western countries, particularly the United States. However, OpenRefactory, with its Bangladeshi talent, for the first time, is pioneering an innovative solution to a fundamental computer science problem. We hope to inspire and pave the way for other Bangladeshi businesses to tackle fundamental challenges and drive real innovation in the sector and ultimately contributing to the advancement of Bangladesh's tech ecosystem.



THE SELF-RELIANT PARTICLE BOARD INDUSTRY IN BANGLADESH:

A SUSTAINABLE SOLUTION FOR FURNITURE AND OFFICE DECOR

Written By
Akhlaqur Rahman Sachee

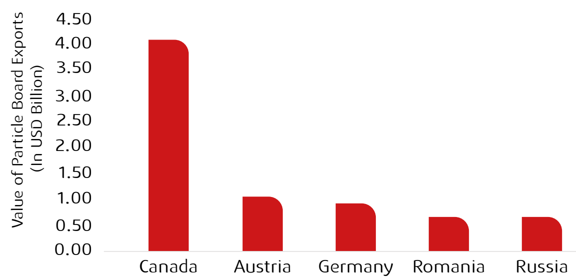
The prevailing concept of appealing aesthetics is quite different from what it was just a decade or two ago. These days, simplicity of appearance, whether that is a gadget, home appliance, or piece of furniture, makes it aesthetically appealing to the user. This massive shift in taste and preference clearly indicates why the consumption of particle boards in the country is only growing at a phenomenal rate. In addition to the change in taste and preference, the growing concern about the environment and price sensitivity of modern customers are playing crucial roles here. These factors have led to the market size growing at a rate of around 15% to 18% per annum since 2017, according to the Bangladesh Brand Forum, which makes it one of the fastest-growing industries in Bangladesh.

Global Outlook of the Particle Board Industry

The history of particle boards can be traced back to 1935, when Farley and Loetscher Manufacturing Co. first started production of particle boards in Iowa, United States. Now many of the developed and developing countries are engaged in the production and export of particle boards, resulting in a highly fragmented global market. According to Emergen Research, the estimated value of the global particle board market was USD 22 billion in 2022, and the global market is expected to grow at a compound annual growth rate (CAGR) of 3.7% during the period 2023–2032. If the market keeps growing at the estimated CAGR, the value of the global particle board market will stand at USD 31.91 billion by the end of 2032. The availability of raw materials, the rapid growth of the furniture industry, and the increasing number of construction projects will fuel the expected growth.

In 2022, Asia Pacific alone generated 42.3% of the global market revenue. Rapid urbanisation and industrialisation in countries like China, India, Japan, and South Korea drove the growth of the particle board industry in this region. In terms of exports of particle boards, Canada, Austria, Germany, Romania, and Russia have positioned themselves in the chart of top countries. These countries exported USD 4.07 billion, USD 1.05 billion, USD 931 million, USD 676 million, and USD 676 million worth of particle boards to the global markets in 2021, respectively. The inter-country trade of particle boards was valued at USD 14.3 billion in that year.

Figure 01: Top Five Particle Board Exporting Countries



Source: Observatory of Economic Complexity

Particle Board Industry in Bangladesh

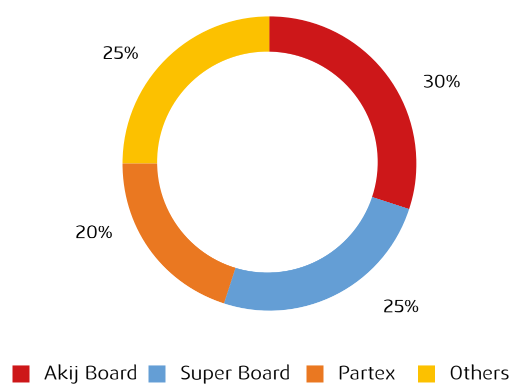
Star Particle Board Mills Limited of Partex Star Group established the first ever particle board manufacturing factory in the country in 1962. After 2011, the demand for particle boards kept rising sharply, and the number of industry participants has only kept increasing since then. The lower cost of particle board furniture, enhanced durability due to the integration of modern manufacturing practices, and eco-friendly aspects of particle boards have helped the industry drive big numbers.

Major Industry Participants

Currently, there are multiple large conglomerates that are engaged in the manufacturing of particle boards, such as Akij Bashir Group (Akij Board), T.K. Group (Super Board), Amber Group (Amber Boards), Akhtar Group (Akhtar Board), BRB Group (MRS Industries), and so on. According to a report published by The Business Standard, an approximate BDT 10,000 crore investment has been made in this sector. Among the industry participants, Akij Board holds the largest share (30%) of the BDT 5,000 crore particle board market, followed by Super Board (25%) and Partex (20%).

Figure 02: Major Industry Participants in Bangladesh

Figure 03: Distribution of Market Shares



Source: The Business Standard

Product Diversification

Particle boards mostly come in sizes of 8 feet by 4 feet. However, thickness and density vary widely. Also, there are multiple variants of board, such as plain particle board, veneered board, plywood board, melamine board, MDF board, and so on. These variants are different from each other in terms of the layers on the board surface and the technologies applied to form the cores.

Supply Chain

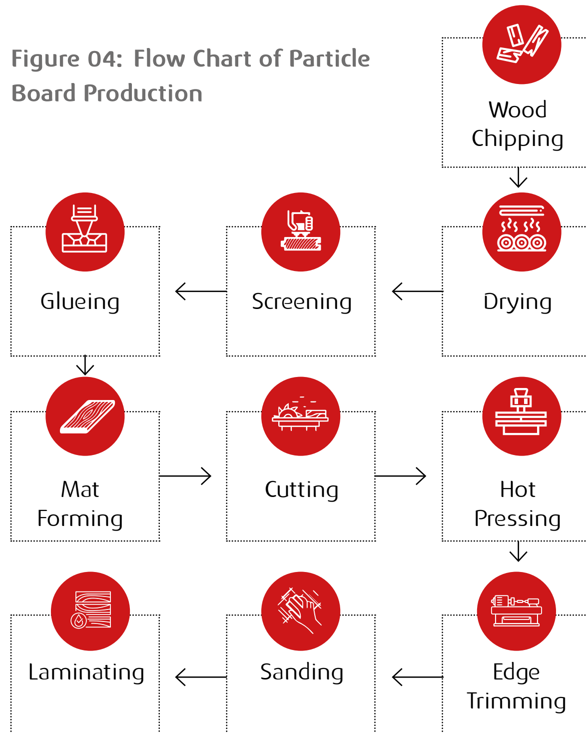
Jute sticks and tree branches of mahogany, raintree, akashmoni, and chambal trees are mostly used for the production of wood chips, which go into the cores of the particle boards. Jute sticks and tree branches are sourced locally. However, the adhesives and other chemicals that are used in the production process are mostly imported. The current annual demand for particle boards stands at 80 crore square feet, and the total production capacity of the country's particle board industry is capable of meeting 80% of the local demand. Around 55% of the particle boards are used in the furniture sector, and the rest, 45%, are for office decor, according to a report by The Business Standard. The abundance of raw materials required to produce wood chips and cheap labour have made the industry self-reliant.

Creation of Employment Opportunities

Alongside the large conglomerates, there are more than 300 small and medium enterprises (SMEs) that are operating their businesses in the particle board industry. SMEs play a crucial role in creating jobs in a country. As the production of particle boards is labour-intensive, the industry has created more than 25,000 employment opportunities in Bangladesh.

Manufacturing Process of Particle Boards

Figure 04: Flow Chart of Particle Board Production



The industrial production of particle boards requires heavy machinery and a huge labour force. It is a multi-step process, as follows.

1. Wood Chipping:

This is the first stage of the manufacturing process of particle boards. Jute sticks and tree branches go into the chipping machine, and wood chips are produced at this stage. Wood chips form the core of the particle boards.

2. Drying:

Wood chips are dried in the dryer machine at a very high temperature so that the moisture level of the chips comes down.

3. Screening:

Wood chips are then screened, and those that are not perfect enough to go into the next stage of the production process are filtered out.

4. Glueing:

Screened wood chips are soaked in glue at this stage so that soaked wood chips in glue can be used for forming mats of wood chips, which are the core of the particle boards.

5. Mat Forming:

Mats are formed with wood chips soaked in glue, and this is the stage where the thickness and density of the particle boards are determined.

6. Cutting:

The freshly formed mats are cut into smaller mats of desired length and width at this stage. After this stage, they become ready for hot pressing.

7. Hot Pressing:

The freshly formed mats of the desired length and width are pressed under very high temperature and pressure. The time required for hot pressing depends on the thickness and density of the mats.

8. Edge Trimming:

After hot pressing, the edges of the boards are trimmed, and the boards are sent for sanding.

9. Sanding:

This is the stage of the production process responsible for smooth finishing and calibration of the particle boards.

10. Laminating:

Decorative laminating papers, veneer, etc. are glued to the surface of the particle boards to make them water-resistant, durable, and aesthetically appealing.

The production process varies depending on the variants of the boards. Plywood boards are very popular in Bangladesh, and the production process is quite different from the production process of particle boards. In the case of plywood boards, logs are cut into thin sheets (plies) first. After drying the thin sheets, they are glued to each other to form the cores. Based on the production process, bending strength, elasticity, tensile strength, screw withdrawal strength, and multiple other factors depend.

Particle Boards vs. Solid Wood

There are multiple benefits that particle boards offer over solid wood while being used for furniture and office decor. Some of the benefits are as follows.

Affordability:

Due to the decreasing number of trees and forest areas, solid wood is gradually becoming a scarce resource. It has resulted in rising prices for furniture, and the prices of furniture will only go up in the future. Whereas, as particle boards are mass-produced at factories, the prices can be kept affordable for the customers. Hence, particle boards have become a popular choice for home and office furniture.

Durability:

Due to the employment of modern technologies in the manufacturing process, particle board furniture is no less durable than solid wood furniture. If proper care is taken, furniture made of particle boards should last at least a decade or more.

Aesthetics:

Simplicity with functionality has become the new defining factor of appeal in modern times. Furniture made of particle boards looks clutterless, which appeals to customers.

Environment-friendliness:

Protecting the environment has become a big concern these days. Production of particle boards requires fewer trees to be cut, as jute sticks and waste timber are also used for the production of particle board furniture. This helps recycle the waste and protect the environment.

Though the raw materials to produce wood chips are sourced locally, the adhesives and pasting materials are mostly imported from China, Myanmar, and Malaysia. Also, most of the machines required for the production of particle boards are imported. Due to the ongoing dollar crisis, the costs of imported materials have risen a lot, and the importers are facing difficulties importing the adhesives and pasting materials. Also, a good amount of MDF boards are still being imported, mostly from Malaysia. However, particle boards produced in Bangladesh are being exported too, though in small quantities. India, Singapore, and the United Arab Emirates are some of the growing particle board export destinations for the country. Rising energy costs have also impacted the bottom lines of manufacturers. However, this industry aims to offer an affordable alternative to solid wood to customers while ensuring the environment remains protected. Also, there is an abundance of raw materials and cheap labour in the country, which are highly required for the industry to flourish. The government should come forward with policy support mechanisms like it did for the RMG sector to help this self-reliant industry contribute to our export basket and keep protecting the environment while offering functionality in an efficient way.

The author is working as a credit analyst at IDLC Finance PLC. and can be reached at akhlaqur@idlc.com.

Syed Kaium Hasan
Head of Business,
Star Particle Board Mills Limited
Star Gypsum Board Mills Limited
Partex Laminates Limited

Interviewed By
Akhlaqur Rahman Sachee, Team MBR

With over 24 years of experience at the helm of Partex Star Group, Mr. Syed Kaium Hasan has played an instrumental role in developing the particle board industry in Bangladesh. His impressive leadership and vision have led him to become one of the key executives at his company within a time span of three decades. Currently, he works as the Head of Business at Star Particle Board Mills Limited, Star Gypsum Board Mills Limited, and Partex Laminates Limited. Team MBR was in a conversation with Mr. Hasan regarding the particle board industry in Bangladesh and was fortunate enough to receive his take on the prospects of this sector.

Akhlaqur Rahman Sachee: According to a recently published news report, the particle board market has been growing at 18% to 20% per year on average since 2015. What are the factors, you think, that are contributing to this phenomenal growth of the industry?

Syed Kaium Hasan: The development of our particle board industry is directly correlated to the economic development of our country. Due to the overall economic development of the country, we have experienced a rise in demand for interior design, furniture, doors, and so on. Besides, the purchasing power of individuals has increased a lot over the years all over the country. Particle boards were once used mostly in urban areas but now cater to a much wider consumer base, even in rural areas. Nowadays, in rural areas, it is not very surprising to see a reading table or a dressing table made of particle boards. Due to this growing adoption of particle boards, I believe that we can sustain this 20% annual growth of this industry for the next 10 years. However, the government's industry-friendly initiatives are required to unlock promising opportunities and further navigate the export markets.

Akhlaqur Rahman Sachee: Partex Star Group pioneered the production of particle board in Bangladesh in 1962. However, many of the renowned large conglomerates and more than 300 manufacturers and suppliers have entered the particle board manufacturing business in the latter period. What are the factors that have motivated these participants in the industry to explore the particle board business, in your opinion?

Syed Kaium Hasan: It is a very good question. Actually, in order to support the particle board industry in Bangladesh, many sub-sectors have been created. Even though there are particle board manufacturers that operate on a large scale, some small market players have entered the market. For example, the plywood industry exists on a much smaller scale, with around 42 manufacturers operating in different parts of Bangladesh. In the case of particle boards, only 10 manufacturers exist that can operate on a large scale. In a bid to support these large concerns, several cottage concerns have started to appear on the market. Since particle boards have a lot of varieties and a high number of SKUs, a lot of these concerns have achieved success catering to diverse customer segments. Finally, as I mentioned earlier, since the growth and development of Bangladesh have escalated over the years, it has had a direct impact on the country's particle board industry.

Also, previously, the board industry was import-dependent, with almost 50% of the boards coming from abroad. Now, not only can we meet the local demand for particle boards, but we are also exporting boards on a large scale, especially to India. In order to meet these local and foreign demands, we have seen an uprising of particle board businesses in recent times.

Akhlaqur Rahman Sachee: Particle boards have often been reported as an environment-friendly alternative to timber. Would you kindly explain the environment-friendly aspects of the particle boards?

Syed Kaium Hasan: It is a very important question. Boards, especially particle boards, are undoubtedly very good alternatives to timber. As trees play a crucial role in protecting the environment, we have focused on reducing the cutting down of trees in a bid to preserve the environment. This is why we want to raise awareness among the mass population regarding the benefits of particle boards in terms of environmental friendliness. Every year, almost 10 million pieces of particle boards and 8.5 million pieces of plywoods are used. In order to manufacture an 8 feet by 4 feet particle board, almost 40 kg of particle chips are required depending on size and thickness. If we had cut down trees to manufacture that amount of particle board, we would have caused great harm to the environment.

Besides, the particle boards possess a lot of advantages. Like, an 8 feet by 4 feet, 8 feet by 6 feet, or 8 feet by 8 feet tree cannot be found everywhere. In the case of particle boards, these obstacles do not act as issues.

Akhlaqur Rahman Sachee: As it has been reported, the local particle board industry is capable of meeting 80% of the local demand. Would you kindly discuss the roadblocks that are hindering the industry from fulfilling the local demand completely?

Syed Kaium Hasan: Currently, even though the total manufacturing capacity of the country's particle board industry is sufficient, as evident by the exports of particle boards, there are several varieties of boards that need to be imported. The technological capacities of overseas countries vary hugely from Bangladesh, enabling them to manufacture much more diverse particle boards while ensuring superior quality. Some of those boards are imported from abroad to Bangladesh, as there has not been much development in the manufacturing of those boards locally. Our neighbouring country, India, boasts a huge production capacity for plywood, which is imported to Bangladesh through land ports. Nowadays, particle boards are not imported to Bangladesh much, and even if they are, it is due to the features or technologies used in those boards, which cannot be replicated here. If we take the example of MDF boards, different types of layers are placed on the surface of the boards to create different variants. We have seen that some of the imported boards contain the same materials inside, but the quality of the outer layers on the boards is better than those produced locally. However, imports have decreased quite a lot as the local industry has flourished over the years.

Besides, there are charcoal factories which burn around 8 lakh maund of jute sticks every year, hindering the growth of particle board industry to a large extent. The government has not mentioned anything about it yet but we hope to overcome the existing challenges in the near future.

Akhlaqur Rahman Sachee: Nearly 55% of the production of the particle board industry is being utilised in the furniture industry. Where does the furniture made of particle boards stand in terms of durability and aesthetics in comparison to solid wood furniture, in your opinion?

Syed Kaium Hasan: It is a very vital question. Definitely, there is no doubt that board furniture is much better than solid wood furniture, given the fact that solid wood becomes impacted by changes in weather. Due to changes in weather, the dimensions of solid wood become distorted. If we look at flush doors, about 5 lakh flush doors are being used in Bangladesh currently. So, if all of these 5 lakh flush doors were manufactured with solid wood, they would have been impacted by the variations in seasons, and the distortions in dimensions would have made them unusable. Particle boards do not have this issue. Also, in the case of furniture, every design can be executed on particle boards, just as it can be done on solid wood. Thirdly, all sorts of particle boards are much cheaper than solid wood. Another disadvantage of solid wood is that each tree possesses unique kinds of fibres as well as unique colors. When solid wood from different trees goes into the manufacturing of one piece of furniture, it creates multiple issues. On the other hand, all the particle boards have similar characteristics and features, with no changes in colour or texture due to variations in weather. So, it is clearly evident that furniture made of particle boards stands in a superior position in terms of durability and aesthetics.

Akhlaqur Rahman Sachee: Though plain particle boards, veneered boards, plywood boards, and melamine boards are being manufactured in Bangladesh, the country has to rely on imports mostly for Medium-Density Fiberboard (MDF). Would you kindly explain why the country is lagging behind in the production of MDF?

Syed Kaium Hasan: Actually, I cannot agree with the question completely, as MDF boards used to be imported previously. Now, there are 4 companies that manufacture MDF boards, meaning that there is sufficient capacity to produce MDF boards in the country. So, the import of raw MDF boards is not something very necessary these days. Certain MDF boards are brought from many countries including Austria, where the only differentiating factor from the local particle boards is the surface/lamination of the boards. But if we compare the cores of the boards from Austria and Bangladesh, the quality and density are almost the same. The problem is that we do not have the technology required to produce the surface used on the MDF boards.

Akhlaqur Rahman Sachee: The main raw materials for particle boards, such as waste timbers, jute sticks, tree branches, etc., are sourced locally. However, adhesives and other chemicals that go into the production process are mostly imported. Would you kindly share with us how the particle board industry is being affected amidst the ongoing dollar crisis? Is there any scope for establishing local backward linkages to make the industry completely self-sufficient?

Syed Kaium Hasan: In terms of the chemicals that go into the manufacturing of particle boards, we are fully import-dependent. Currently, there is no production of chemicals required to produce resins. Even though we have local resin factories, the chemicals required for its production have to be imported. It is not that this problem cannot be solved. There have been some developments recently. The production of resins requires paraformaldehyde, which used to be imported before. In order to produce paraformaldehyde, methanol is required. In recent times, we are now importing methanol as opposed to paraformaldehyde, meaning that we have now become more advanced by moving further back in the supply chain. Imported methanol is now used to produce paraformaldehyde locally, which is then used to produce resins. The basic raw materials are not being manufactured yet in Bangladesh, and as per my understanding, there have not been signs of development in this area.

Akhlaqur Rahman Sachee: Considering the quality of particle boards the manufacturers in the country are producing and the capacity of the industry to fulfil the major portion of the local demand, how do you envision the industry's potential to be one of the significant contributors to the country's export basket?

Syed Kaium Hasan: Obviously, I am very confident about the growth of this industry, given the size of the market and the rate at which it is expanding every year. The local demand has already been met, and I also believe that there are export opportunities lying ahead. But the government's policy support is required to make this industry flourish. If the government patronises the industry in terms of tax and other facilities, I believe the industry will reach new heights. Also, going back to the dollar crisis situation, it is not just the chemicals but also the machinery that has to be imported. This crisis has made the opening of LCs very difficult. The frequent fluctuation in the price of the dollar has affected us a lot, as we have to open LCs for large volumes with the same margin, which is not possible all the time. This has affected the industry's growth to a large extent in recent times.

Facilitating Connectivity in the Digital Bangladesh:

Unearthing the Dynamics of the ISP Industry

Written By
Muktadir Mubassir

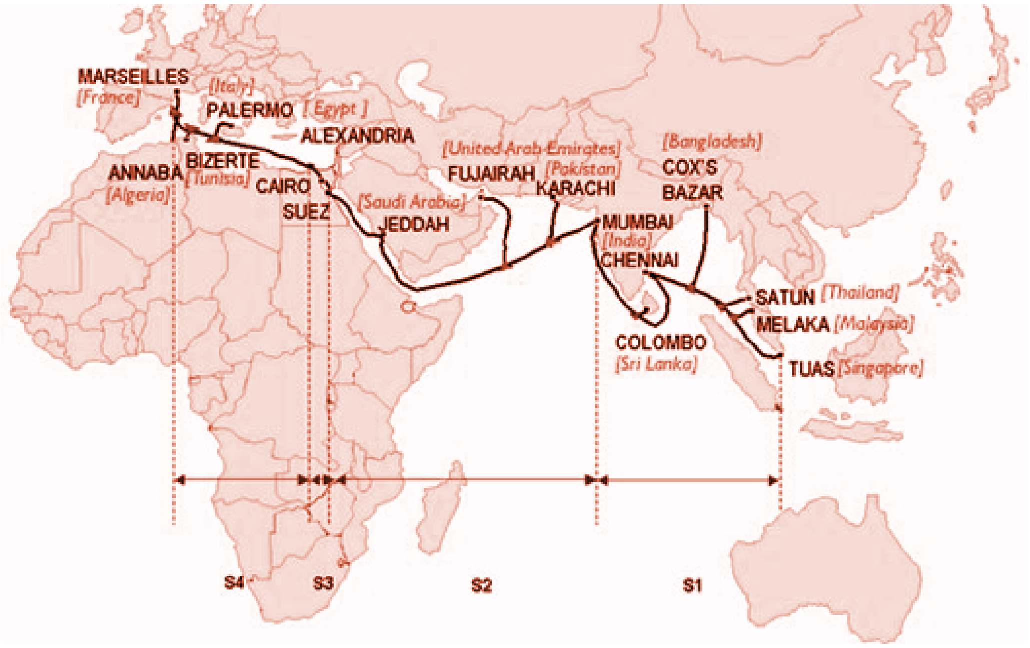
The digital sector of Bangladesh has experienced a noteworthy metamorphosis in the last few decades. From the early adoption of Very Small Aperture Terminal (VSAT) technology to the deployment of submarine cables spanning thousands of kilometres, Bangladesh has steadily expanded its bandwidth capacity, resulting in an era of unparalleled connectivity. Currently, the internet infrastructure in Bangladesh boasts an impressive bandwidth utilisation of approximately 5,000 Gbps.

The Evolution of Internet Access in Bangladesh

Bangladesh's internet access in the early 1990s was limited to dial-up connections through Bulletin Board Systems (BBSs), serving fewer than 500 users. Email usage was costly, charged by the kilobyte, and relied on international dial-up connections via the Unix-to-Unix Copy Protocol (UUCP). However, in June 1996, Bangladesh embarked on a journey towards faster internet by adopting Very Small Aperture Terminal (VSAT) technology and connecting to Thaicom, a Thailand-owned satellite. Despite these advancements, internet accessibility remained challenging until 2005–2006, when optical fibre cables replaced copper ones, revolutionising internet speeds across major towns.

The years 2005 and 2006 were watershed moments for a digital Bangladesh, when the country began employing optical fibre cables rather than copper cables to build Internet connections. In 2005, internet speed rose dramatically after ISPs began using this cable to provide connections in all major towns around the country. A significant milestone was reached in May of the following year when Bangladesh joined the South East Asia-Middle East-Western Europe (SEA-ME-WE) gateway through its inaugural submarine cable connection. This cable, SEA-ME-WE 4, spanning approximately 18,800 km, linked Bangladesh with various countries like Singapore, Malaysia, Thailand, Bangladesh, India, Sri Lanka, Pakistan, the United Arab Emirates, Saudi Arabia, Egypt, Italy, Tunisia, Algeria, and France. Positioned in Cox's Bazar, the cable station facilitated substantial returns for Bangladesh Submarine Cable Company Limited (BSCCL), marking a pivotal moment in the nation's digital evolution.

Figure 01: Mapping of SEA-ME-WE 4



Source: Submarine Networks

Submarine Cables at a Glance

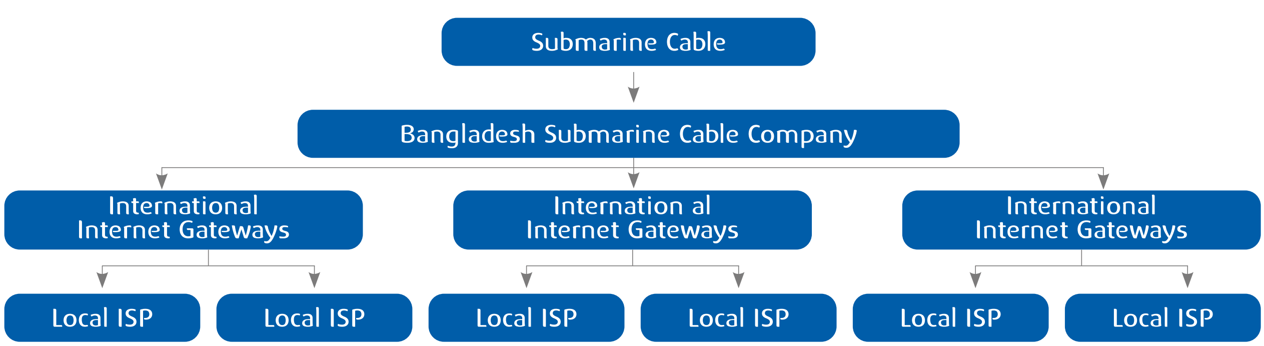
A submarine cable is a type of fibre optic cable that links a nation to the global network and is positioned on the floor of the ocean. These cables, which can stretch for thousands of miles, enable the rapid transmission of data. Specially adapted ships are employed to transport and gradually lay these cables on the seabed. The internet cables that are used to transmit data under the sea are carefully laid on the ocean floor using specialised submarine vessels, ensuring that they are installed with the utmost precision to guarantee optimal signal strength. As per the Asia Pacific Network Information Centre (APNIC), the average depth of the sea bed where these submarine cables are placed is approximately 3,600 metres, although they can be laid as deep as 11,000 meters. Bangladesh's first submarine cable, the SEA-ME-WE 4, spans an impressive 18,800 kilometres, connecting Southeast Asia, the Middle East, and Western Europe. It consists of three fibre pairs and has a design capacity of 40 Tbps. Additionally, Bangladesh is also linked to the Bay of Bengal Intra-Cooperative Cable Network (BIX), a regional submarine cable system completed in 2014 that connects India, Bangladesh, Sri Lanka, and Thailand with a capacity of 2.5 Tbps. These submarine cables play a crucial role in Bangladesh's telecommunications infrastructure and have significantly contributed to the country's economic development.

Bangladesh's second submarine cable, SEA-ME-WE 5, has been operational since 2017 and has further enhanced the country's bandwidth capacity, significantly supported by the Islamic Development Bank's financial assistance. Cox's Bazar and Kuakata serve as key submarine landing stations, connecting Bangladesh with backhaul service providers.

Figure 02: Transformation of Internet Connections: From Bulletin Board System to Submarine Cable

These submarine cables establish the connection between Bangladesh and the worldwide web. Bangladesh Submarine Cable Company Limited, a government-controlled entity, serves as the entry point for international internet traffic into the country. The traffic is then directed through the International Internet Gateways (IIG) in Bangladesh, which distribute it to different local ISPs throughout the nation. These local ISPs subsequently provide internet services to residences and businesses using various methods, such as fibre optic cables.

Figure 03: The Supply Chain of Bandwidth through Submarine Cables



At present, the overall utilisation of bandwidth is approximately 5,000 Gbps, with over half of it, around 2,700 Gbps, being sourced through International Terrestrial Cable (ITC) licenses. These licences enable the import of bandwidth from India via land connections. The remaining portion, approximately 2,300 Gbps, is provided by the submarine cables, which facilitate connectivity to the country through two submarine cables.

Meanwhile, BSCCL's announcement of the SEA-ME-WE-6 submarine cable project underscores Bangladesh's commitment to further expanding its digital infrastructure, anticipating a significant boost in bandwidth capacity by 2025. The cable is designed to accommodate three sets of fibre pairs, each capable of transmitting data at a capacity of approximately 15,000 Gbps. Furthermore, with over 2,000 ISPs and 37 International Internet Gateways (IIG) operating within the country, Bangladesh is poised for continued growth and innovation in its digital landscape.

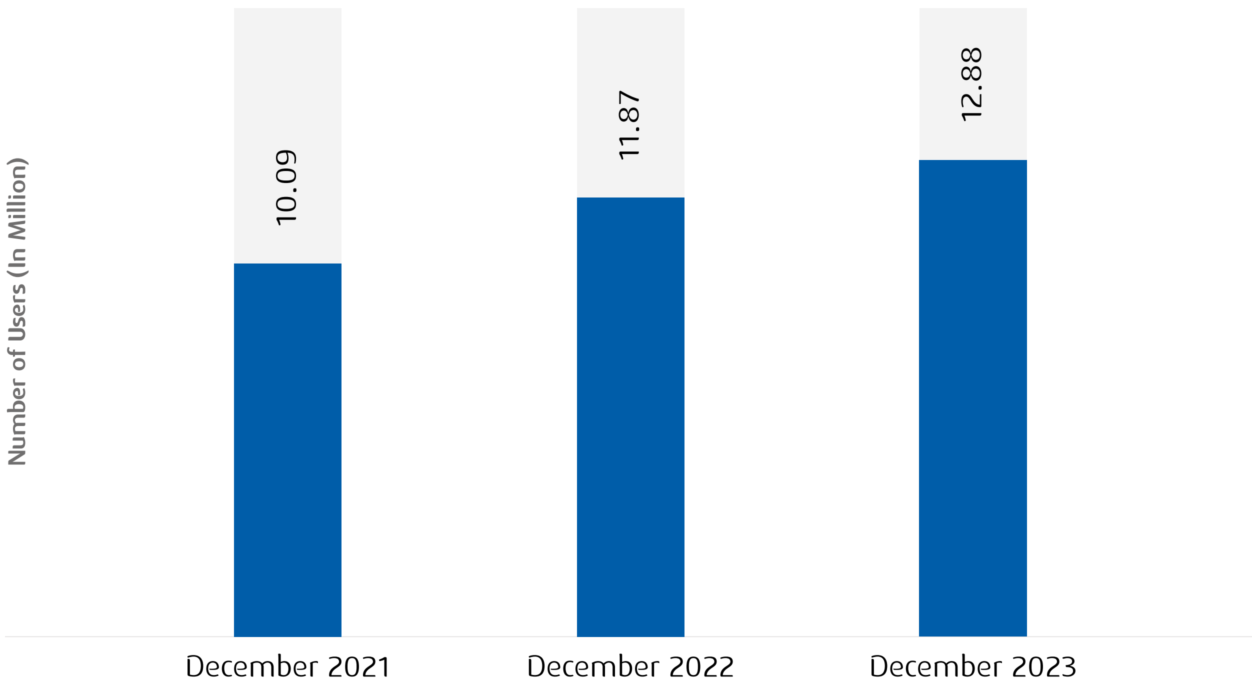
Rapid Expansion and Innovations

According to a recent survey report conducted by the Bangladesh Bureau of Statistics (BBS), internet connectivity in Bangladeshi households has grown by almost eightfold over the span of ten years. Broadband internet has become increasingly popular among both corporate entities and individual users over the past decade, driven largely by the availability of affordable packages. This trend extends to suburban and rural areas, reflecting a broader accessibility trend. With a competitive landscape, ISPs are leveraging diverse technologies, from traditional wired connections to advanced fibre-optic networks and wireless solutions, to cater to varied consumer and business demands. ICC Communications, KS Network, and DoTNet are among the leading Internet Service Providers (ISPs) that are leading the way by providing a variety of customised packages to cater to diverse requirements. These include internet access, along with value-added services such as streaming subscriptions and additional features like IP surveillance and VPN services.

Figure 04: Some of the leading Internet Service Providers of Bangladesh

According to data provided by the Bangladesh Telecommunication Regulatory Commission (BTRC), the number of broadband internet users in Bangladesh exhibited steady growth throughout 2023. March marked a milestone as the user count surpassed 12 million, nearing 13 million by December 2023.

Figure 05: The Number of Broadband Internet Users in Bangladesh (In Millions)



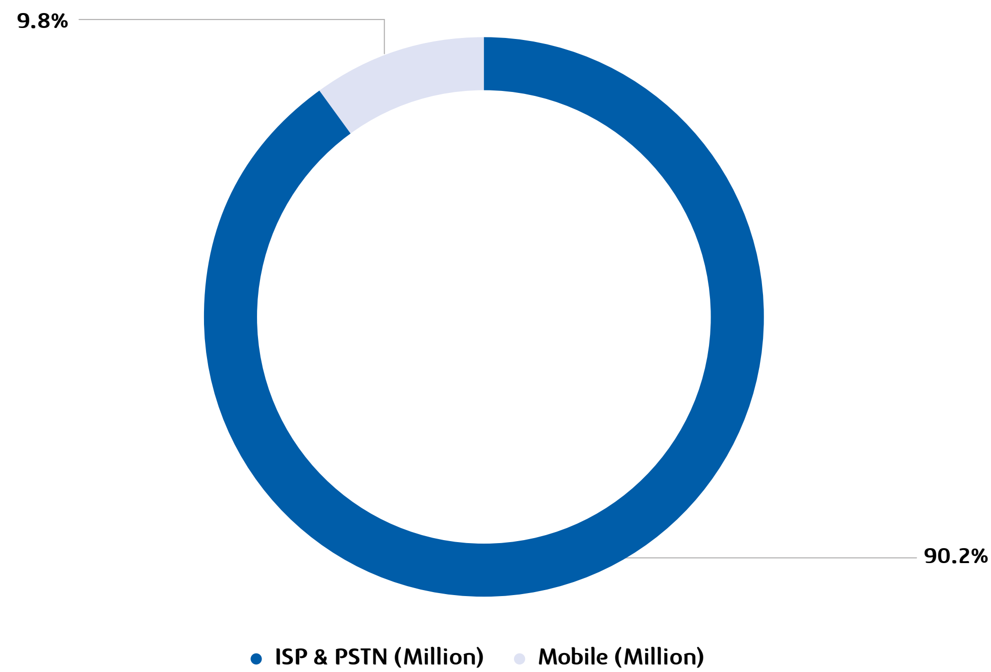
Source: Bangladesh Telecommunication Regulatory Commission

Challenges

Despite progress, the ISP industry faces a significant obstacle in the form of inadequate infrastructure. While major cities enjoy a relatively robust internet infrastructure, rural areas often lack even basic connectivity. The construction of infrastructure in these regions is both expensive and logistically challenging, making it difficult for ISPs to extend their services to underserved areas. Additionally, the presence of intricate licensing procedures, bureaucratic red tape, and inconsistent enforcement of regulations increases the uncertainty ISPs face and deters investment in the sector. Another major challenge is the limited international bandwidth capacity, which restricts the speed and quality of internet connections, leading to slower speeds and higher costs for consumers. Furthermore, frequent congestion during peak hours exacerbates the problem, resulting in degraded internet performance. Due to these reasons, many people prefer to use mobile internet, as it offers better availability and lower pricing compared to broadband internet.

Mobile internet providers continue to dominate in terms of subscriber count. As per the Data Reportal, in January 2023, there were a total of 179.9 million active cellular mobile connections in Bangladesh, which is equivalent to 104.6% of the total population. By the conclusion of December 2023, as reported by BTRC, the total number of internet subscribers would amount to 131.37 million. Amongst these subscribers, approximately 118.49 million individuals are utilising mobile internet services, while only 12.88 million subscribers are utilising ISP and PSTN services. This implies that approximately 90.20% of the country's internet subscribers continue to rely on mobile internet connectivity.

Figure 06: Percentage of Mobile Internet, against ISP and PSTN Subscribers in Bangladesh



Source: Bangladesh Telecommunication Regulatory Commission

Government Initiatives and Future Prospects

The government's National Broadband Plan and collaborations within the private sector present opportunities for industry growth and wider connectivity. As digital services, e-commerce, and online entertainment gain momentum, the demand for high-speed internet is expected to soar. Based on the statistics provided by the Data Reportal on Digital Bangladesh 2023, it is revealed that in January 2023, there were approximately 44.70 million individuals in Bangladesh who actively used social media platforms. This accounts for approximately 26% of the country's total population.

Looking ahead, the future of Bangladesh's telecommunications industry is promising, with significant developments on the horizon. Summit Communications, CdNet Communications, and Metacore Subcom are responsible for the development of the nation's first private submarine cable, which represents a significant shift in the environment. This initiative is poised to disrupt the monopoly of the state-controlled wholesale bandwidth provider, Bangladesh Submarine Cables Company, potentially leading to lower internet prices and increased bandwidth availability. According to projections made by the Bangladesh Telecommunication Regulatory Commission (BTRC), widespread classroom connectivity and ongoing digital growth could lead to a spike in bandwidth consumption of 34,000 Gbps by 2025.

The ISP sector in Bangladesh is at the forefront of enabling connectivity in the nation's digital landscape. With the upcoming introduction of private submarine cables, the industry is set to experience significant growth. These advancements are expected to not only improve internet accessibility but also reduce prices, leading to increased connectivity in urban, suburban, and rural areas. With the projected increase in bandwidth usage and the implementation of 5G networks, ISPs are well-positioned to play a crucial role in shaping the future of Bangladesh. With innovation, adaptability, and a customer-centric approach, the ISP industry is instrumental in realising the vision of a truly connected Digital Bangladesh.

Green Grocery

Saba Chowdhury

Co-Founder, Green Grocery

Interviewed By
Syed Md. Rakeen, Team MBR

With eight years of experience in total at different organisations, Ms. Saba Chowdhury has built her career as an experienced digital marketing specialist. She has played an instrumental role in building Green Grocery, a D2C-safe food company, with the recognition of being a reliable source for high-quality, safe, and healthy food products. To protect consumers from harmful microbes and toxins, Green Grocery offers rice, spices, edible oil, ghee, pickles, and many other items that are farmed or sourced, packaged, stored, and delivered with the utmost safety. Team MBR was in a conversation with Ms. Chowdhury to learn about her journey in creating Green Grocery as well as her aspirations for the startup.

Syed Md. Rakeen: Having years of experience in digital marketing, that too at esteemed organisations like BITM, Jobike, and so on, you decided to form Green Grocery in 2020 with the goal of offering quality grocery items that are fresh and safe to consumers. Would you kindly share with us what motivated you to make this transition?

Saba Chowdhury: After gaining valuable experience in digital marketing at renowned organisations like BITM and Jobike, I noticed a gap in the market for quality, fresh, and safe grocery items. This motivated me to establish Green Grocery in 2020 with the aim of providing consumers with healthier and safer options for their everyday needs. I wanted to make a positive impact by offering products that prioritise both quality and safety in the increasingly digitalized world of grocery shopping.

Syed Md. Rakeen: There is a wide range of grocery items available on the platform, including different varieties of rice, lentils, spices, edible oil, ghee, pickles, and so on. May we know the quality standards that are followed while sourcing these items?

Saba Chowdhury: At Green Grocery, we adhere to stringent quality standards when sourcing our wide range of grocery items. We prioritise sourcing from trusted suppliers and farmers who maintain high-quality standards throughout the production process. Additionally, we conduct thorough quality checks and inspections to ensure that all products meet our strict criteria for freshness, purity, and safety. Our commitment to quality extends from farm to table, ensuring that our customers receive only the best and most reliable products for their daily needs.

Syed Md. Rakeen: Green Grocery is following a D2C approach to reach its target customers, which is quite unusual in the case of grocery items. Would you kindly share with us how this approach is working for Green Grocery?

Saba Chowdhury: At Green Grocery, our direct-to-consumer (D2C) approach revolutionises the grocery industry by providing customers with a seamless shopping experience. By cutting out middlemen, we are in control of our product quality and pricing. Also, the customers get to interact with us directly. This approach allows us to build stronger relationships with our customers, gather valuable feedback, and tailor our offerings to their preferences. Through strategic marketing and personalised outreach, we engage directly with our target customers, creating a sense of trust and loyalty. As a result, we can deliver fresher, safer, and more affordable groceries while offering a level of convenience and transparency that traditional retail cannot match.

Syed Md. Rakeen: 'Grocery as a Gift (GAAG)' is surely an innovative idea introduced by Green Grocery that will reshape the gift culture. May we know about the feedback Green Grocery is receiving from its customers regarding GAAG?

Saba Chowdhury: Customers have warmly embraced our 'Grocery as a Gift (GAAG)' service, with over 50 corporate entities utilising it for their stakeholders. This innovative gifting solution has resonated well, offering a unique and practical alternative for special occasions. Recipients appreciate the thoughtful gesture and the quality of the items received. Overall, GAAG has proven to be a popular choice, bridging the gap between meaningful gifting and practicality.

Syed Md. Rakeen: The products Green Grocery sells have short shelf lives. How does Green Grocery ensure that the freshness of the products is preserved until they reach consumers?

Saba Chowdhury: Green Grocery employs stringent quality control measures and efficient logistics to maintain product freshness. Our inventory turnover is optimised to minimise shelf time, and we prioritise sourcing from local producers to ensure maximum freshness. Additionally, we use advanced packaging techniques and temperature-controlled storage facilities during transit to safeguard product quality. Through these strategies, we guarantee that our customers receive only the freshest and highest-quality groceries, enhancing their overall shopping experience.

Syed Md. Rakeen: As Green Grocery sells the products with their own labels on the packages, it has the opportunity to distinguish itself while reaching the target customers through retailers. Would you kindly share with us if Green Grocery has plans to explore this approach?

Saba Chowdhury: Yes, Green Grocery is actively engaging with several retailers and modern traders to expand its market reach. Currently, we have established partnerships with a few retailers, and we are planning to scale up this approach significantly in the coming years. By collaborating with retailers, we aim to enhance brand visibility and accessibility, allowing us to reach a broader customer base and further solidify our position in the market.

Syed Md. Rakeen: Fresh and safe consumable items often come with hefty price tags. Would you kindly shed some light on the pricing strategy of Green Grocery?

Saba Chowdhury: Green Grocery strives to offer fresh and safe consumable items at competitive prices. We offer our products at competitive prices by optimising costs throughout the supply chain while ensuring quality and sustainability. By working directly with farmers and minimising intermediary costs, we can offer affordable products to our customers without compromising on quality. Additionally, we periodically review market trends and adjust our pricing strategy accordingly to remain competitive while delivering value to our customers.

Syed Md. Rakeen: What advice do you have for aspiring female entrepreneurs who would want to follow in your footsteps?

Saba Chowdhury: My advice for aspiring women entrepreneurs is to believe in themselves and their ideas. It is essential to stay focused, persistent, and resilient in the face of challenges. Seek mentorship, build a supportive network, and continuously learn from both successes and failures. Never be afraid to take calculated risks, and always prioritise self-care to maintain a healthy work-life balance. Most importantly, never underestimate the power of your voice and the impact you can make in the entrepreneurial world.

CAPITAL MARKET REVIEW

Performance of Equity Markets of Bangladesh and Peer Countries

Bangladesh equity market closed the month of January in mixed territory. During the month, the broad index DSEX decreased by -1.5% and Shariah index DSES declined by -0.9% while blue chip index DS30 increased by 0.5%.

Among the regional peers, Vietnam reported a positive return of 3.0% while Pakistan and Sri Lanka reported a negative return of -0.8% and -3.2% respectively. MSCI Frontier Markets Index increased by 2.4% in January. Over 5-year horizon, Sri Lanka (+72.1%) yielded the most encouraging return.

Table 1: Equity market performance of Bangladesh and peer countries

Indices	Index Points, January 2024	Return*					
		1M	3M	YTD	12M	3Y	5Y
Bangladesh							
DSEX	6,153.3	-1.5%	-2.0%	-1.5%	-1.8%	8.9%	5.7%
DS30	2,103.9	0.5%	-1.4%	0.5%	-5.2%	-2.6%	4.8%
DSES	1,352.0	-0.9%	-0.8%	-0.9%	-1.0%	6.8%	3.2%
Peer Countries							
Pakistan (KSE 100)	61,979.2	-0.8%	34.0%	-0.8%	52.4%	33.6%	51.9%
Sri Lanka (CSE - All Share)	10,311.2	-3.2%	-7.2%	-3.2%	16.3%	19.0%	72.1%
Vietnam (VNI)	1,164.3	3.0%	-4.8%	3.0%	4.8%	10.2%	27.9%
MSCI Frontier Markets Index	**765.6**	**2.4%**	**10.3%**	**2.4%**	**9.3%**	**2.3%**	**8.6%**

*All returns are Holding Period Return

Source: Investing.com, MSCI, DSE

Liquidity Condition in Equity Market of Bangladesh

During January, the total market capitalization decreased by -3.7%. The daily average turnover was BDT 7.1 bn (USD 64.9 mn) in January, up by 32.8% from that of last month. Turnover velocity which represents overall liquidity of the market stood at 25.1% in January, compared to 15.7% of last month. In 2023, turnover velocity of Bangladesh equity market was 18.1%, in comparison to 30.7% in 2022.

Table 2: Market capitalization and turnover statistics

Particulars	31-Jan-24	31-Dec-23	%change
Total market capitalization (USD* mn)	68,339	70,986	-3.7%
Total equity market capitalization (USD mn)	37,802	40,590	-6.9%
Total free float market capitalization (USD mn)	14,888	15,773	-5.6%
Daily Avg. Turnover (USD mn)	64.9	48.8	32.8%
Turnover Velocity~	25.1%	15.7%	N/A

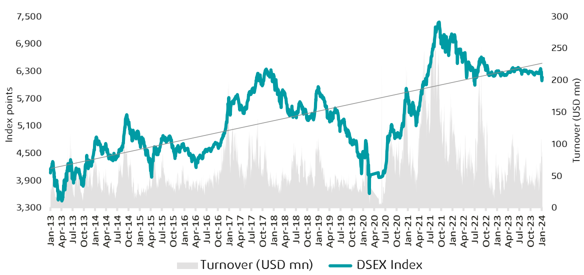
*All USD figures are converted using an exchange rate of 110 as of January 31, 2024 as per Bangladesh Bank website.

~Turnover velocity is calculated by dividing monthly total turnover with month-end market capitalization. The figures are annualized.

Historical Index Points and Market Participation Data

Since its inception on February 27, 2013, DSEX yielded a holding period return of 51.7% till January 2024. During this period, daily average turnover of the market amounted to BDT 6.8 bn (USD 61.5 mn) (Figure 1).

Figure 1: DSEX since inception along with market turnover

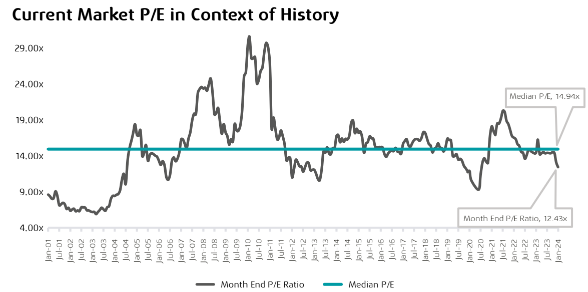


Source: DSE

Market Valuation Level - P/E Ratio:

The market P/E decreased to 12.43x in January, 2024 compared to 13.12x in December, 2023. It is lower than the 23 years' median market P/E of 15.00x (Figure 2).

Figure 2: Historical market P/E* and it's median



*Price Earnings (P/E) Ratio is calculated by dividing total market capitalization of all profit making listed companies with their total audited annual earnings.

Source: CEIC, DSE

Sector Performance

Large cap sectors mostly posted negative return in January 2024. Miscellaneous sector posted the highest return of 6.9%. On the other hand, NBFI sector (-25.6%) faced the most price correction.

Telecommunication sector has the highest dividend yield of 6.0% among all sectors.

Table 3: Sector performance snapshot

Sector	Market Capitalization (USD mn)		Return*						P/E** (x)	P/BV^ (x)	Dividend Yield~
	Total	Free Float	1M	3M	YTD	12M	3Y	5Y			
Pharmaceuticals & Chemicals	6,472	3,412	-1.1%	1.0%	-1.1%	0.4%	19.5%	53.4%	14.6	3.1	2.4%
Bank	6,050	3,316	-2.6%	-2.6%	-2.6%	2.4%	19.4%	16.8%	6.3	0.7	4.2%
Telecommunication	5,187	558	-1.0%	-1.0%	-1.0%	2.1%	-20.3%	0.3%	14.0	5.9	6.0%
Engineering	3,805	941	-20.9%	-20.1%	-20.9%	-18.6%	-13.9%	9.2%	24.7	2.0	3.0%
Fuel & Power	3,360	996	-14.9%	-12.8%	-14.9%	-11.9%	-7.1%	-15.1%	10.9	1.2	4.5%
Food & Allied	3,555	1,119	-0.2%	-0.7%	-0.2%	4.3%	11.3%	48.8%	17.1	8.8	3.2%
Miscellaneous	2,249	948	6.9%	10.3%	6.9%	12.9%	39.7%	115.3%	39.5	2.7	1.4%
NBFI	1,270	404	-25.6%	-25.3%	-25.6%	-23.9%	-30.1%	-28.9%	17.9	1.5	2.0%
Textile	1,261	724	-18.8%	-15.1%	-18.8%	-14.6%	19.0%	-21.8%	16.8	0.9	2.3%
Cement	1,143	447	2.9%	2.4%	2.9%	15.8%	44.5%	25.5%	12.7	3.3	4.8%
Non-life Insurance	978	554	4.4%	-0.4%	4.4%	9.2%	19.9%	95.3%	18.8	2.1	2.7%
Life Insurance	583	347	-14.1%	-13.6%	-14.1%	-16.1%	7.1%	-1.9%	97.2	6.4	2.2%
Tannery	263	133	-9.3%	-9.3%	-9.3%	-4.2%	56.5%	4.8%	25.5	2.6	2.0%
IT	354	219	2.4%	0.8%	2.4%	-4.8%	77.2%	56.4%	24.8	3.1	1.6%
Ceramics	229	93	-22.0%	-20.6%	-22.0%	-20.9%	14.3%	-8.7%	33.7	1.6	2.1%
Travel & Leisure	305	159	3.1%	-22.2%	3.1%	-35.3%	47.0%	47.5%	25.7	1.2	2.4%
Paper & Printing	330	122	-6.4%	-5.3%	-6.4%	-10.0%	100.6%	25.1%	23.7	2.6	1.0%
Services & Real Estate	227	116	-4.2%	-5.3%	-4.2%	-13.3%	45.3%	40.4%	18.7	1.4	3.6%
Jute	62	32	-4.9%	-18.8%	-4.9%	23.0%	76.3%	-21.0%	60.4	20.2	0.1%
Market	**37,802**	**14,640**	**-1.5%**	**-2.0%**	**-1.5%**	**-1.8%**	**8.9%**	**5.7%**	**12.7**	**1.7**	**3.5%**

*All returns are Holding Period Return.
**Price Earnings (P/E) Ratio is calculated by dividing total market capitalization of all profit making listed companies with their annualized earnings.
^P/BV is calculated by dividing total market capitalization of listed companies with their respective total book values, excluding companies with negative book values.
~Dividend yield is calculated by dividing last year's declared cash dividend with market capitalization

Cap Class Performance

During the month of January 2024, all caps closed in the negative territory.

Table 4: Performance of different market cap classes

Cap Class	Definition based on market capitalization (USD mn)	% of total equity Mcap	Return*						P/E (x)	P/BV (x)	Dividend Yield
			1M	3M	YTD	12M	3Y	5Y			
Large	≥92	77.4%	-3.7%	-3.0%	-3.7%	-0.6%	31.4%	44.2%	11.7	1.7	4.2%
Mid	28-91	10.8%	-15.4%	-17.0%	-15.4%	-19.1%	-45.7%	-45.9%	16.3	1.3	2.7%
Small	9-27	8.4%	-6.1%	-3.3%	-6.1%	0.5%	55.9%	40.5%	25.0	1.0	2.4%
Micro	<9	3.4%	-2.5%	-0.1%	-2.5%	19.4%	-84.0%	-85.1%	29.3	0.9	1.9%
Market		**100.0%**	**-1.5%**	**-2.0%**	**-1.5%**	**-1.8%**	**8.9%**	**5.7%**	**12.7**	**1.7**	**3.5%**

*All returns are Holding Period Return

Performance of 20 Largest Listed Companies in Bangladesh

Among the 20 largest listed companies in terms of market capitalization, BERGERPBL increased by 7.18% followed by BRACBANK (+5.31%), LHBL (+4.91%), SQURPHARMA (+3.66%), UNILEVERCL (+2.43%), MARICO (+2.43%) and BEACONPHAR (+0.45%). On the other hand, DUTCHBANGL generated a negative return of -4.74% followed by BXPHARMA (-9.78%), POWERGRID (-12.21%), ICB (-22.22%), UPGDCL (-24.73%) and WALTONHIL (-28.15%). All the other stocks of this list remained unchanged.

Majority of these companies yielded outstanding return over longer time horizon (5 years) such as BEACONPHARMA (+1192.3%), BEXIMCO (+409.1%), UNILEVERCL (+164.5%), MARICO (+141.9%), and BXPHARMA (+78.4%).

Among the scripts, GP, LHBL, SQURPHARMA, UPGDCL and WALTONHIL recorded higher dividend yield compared to that of market.

Table 5: Snapshot of 20 largest companies in terms of market capitalization

DSE Code	Sector	Market Capitalization (USD mn)		Daily Avg. Turnover (USD mn)	Return*						P/E (x)	P/ BV (X)	Dividend Yield
		Total	Free Float		1M	3M	YTD	12M	3Y	5Y			
GP	Telecommunication	3,518	352	0.23	0.0%	0.0%	0.0%	3.3%	-14.7%	-9.4%	10.7	13.3	7.7%
BATBC	Food & Allied	2,546	674	0.06	0.0%	0.0%	0.0%	1.9%	9.0%	53.7%	15.5	8.5	3.9%
WALTONHIL	Engineering	2,073	21	0.11	-28.1%	-28.1%	-28.1%	-26.1%	-25.0%	N/A	33.5	2.9	4.0%
SQURPHARMA	Pharmaceuticals & Chemicals	1,757	1,142	0.70	3.7%	8.4%	3.7%	9.1%	6.5%	9.1%	8.1	2.7	4.8%
ROBI	Telecommunication	1,429	143	0.01	0.0%	0.0%	0.0%	2.3%	-41.4%	N/A	68.2	2.6	2.3%
RENATA	Pharmaceuticals & Chemicals	1,270	619	0.00	0.0%	0.5%	0.0%	0.5%	27.2%	58.6%	36.8	7.1	0.5%
UPGDCL	Fuel & Power	927	93	0.03	-24.7%	-22.2%	-24.7%	-22.2%	-31.4%	-43.3%	11.2	3.8	4.5%
BEXIMCO	Miscellaneous	921	616	0.14	0.0%	0.9%	0.0%	0.9%	39.9%	409.1%	1,926.7	1.7	0.9%
BERGERPBL	Miscellaneous	802	40	0.11	7.2%	7.5%	7.2%	9.5%	28.6%	39.5%	28.9	12.1	2.1%
LHBL	Cement	768	275	0.81	4.9%	2.0%	4.9%	14.8%	59.6%	90.9%	12.1	5.4	6.6%
MARICO	Pharmaceuticals & Chemicals	722	72	0.09	2.4%	2.1%	2.4%	5.4%	25.9%	141.9%	16.5	43.1	3.0%
BRACBANK	Bank	551	296	0.46	5.3%	5.3%	5.3%	7.2%	0.0%	-22.3%	8.7	1.6	1.9%
BXPHARMA	Pharmaceuticals & Chemicals	535	374	0.28	-9.8%	-7.6%	-9.8%	-7.6%	-25.5%	78.4%	9.9	1.9	2.7%
ICB	NBFI	524	18	0.01	-22.2%	-22.0%	-22.2%	-22.0%	-31.3%	-31.1%		6.0	0.4%
BEACONPHAR	Pharmaceuticals & Chemicals	517	311	0.75	0.4%	1.1%	0.4%	-19.7%	205.1%	1192.3%	37.9	19.2	0.7%
ISLAMIBANK	Bank	477	306	0.00	0.0%	0.0%	0.0%	1.8%	25.8%	39.2%	9.0	0.9	3.1%
DUTCHBANGL	Bank	383	50	0.04	-4.7%	-4.7%	-4.7%	-0.7%	22.5%	55.0%	7.6	1.6	2.9%
UNILEVERCL	Food & Allied	362	52	0.04	2.4%	1.9%	2.4%	17.0%	14.6%	164.5%	44.1	35.3	0.7%
EBL	Bank	323	224	0.13	0.0%	0.0%	0.0%	7.9%	31.3%	52.7%	6.2	1.5	3.8%
POWERGRID	Fuel & Power	298	75	0.42	-12.2%	-10.5%	-12.2%	-10.5%	5.6%	-4.6%		0.6	2.2%
Market		**37,802**	**14,640**	**64.86**	**-1.5%**	**-2.0%**	**-1.5%**	**-1.8%**	**8.9%**	**5.7%**	**12.7**	**1.7**	**3.5%**

*All returns are Holding Period Return.

^WALTONHIL got listed on Sep 23, 2020. ROBI got listed on Dec 24, 2020.

Top Performing Mutual Funds:

The top ten open end mutual funds are selected based on the latest published fund size. In the year of 2023, all ten open end mutual funds mentioned below has outperformed the market.

Table 6: Top ten open end funds based on Fund Size

Name	Asset Management Company	Fund Category	Fund Size (USD mn)	NAV Return		
				2023	2022	2021-23
Bangladesh Fund	ICBAMCL	General	161.0	3.7%	-3.8%	7.9%
ICB AMCL Unit Fund	ICBAMCL	General	79.7	3.6%	-2.7%	8.4%
Grameen Bank-Aims First Unit Fund	AIMS	General	14.7	7.1%	N/A	N/A
ICB AMCL Second NRB Unit Fund	ICBAMCL	General	12.5	3.9%	-3.2%	7.2%
VIPB SEBL 1st Unit Fund	VIPB	General	9.3	2.8%	-3.5%	N/A
SEML PBSL Fixed Income Fund	SEML	Fixed Income	9.3	1.8%	N/A	N/A
Shanta First Income Unit Fund	Shanta	General	8.5	0.8%	-5.3%	8.9%
MTB Unit Fund	Alliance	General	8.2	2.2%	-2.5%	7.8%
Sandhani AML SLIC Fixed Income Fund	Sandhani	Fixed Income	7.9	6.3%	1.7%	N/A
First ICB Unit Fund	ICBAMCL	General	7.7	6.3%	-3.9%	10.1%
Market (Broad Index) Return (%)				**0.6%**	**-8.1%**	**5.0%**

*Based on published NAV and DSEX point of December 28, 2023

All the top ten closed end mutual funds on the basis of 3 years (2021-2023) outperformed the market during the same horizon. Among them ICBEPMF1S1 (+13.3%) posted the highest return. In the year of 2023, PF1STMF (+6.7%), ICBSONALI1 (+5.2%) and ICBEPMF1S1 (+4.5%) were the top performers.

Table 7: Top ten close end funds based on 3Y return (CAGR) performance

DSE Code	Fund Size (BDT mn)	Fund Size (USD mn)	Price1	NAV[1] (BDT)	Price/ NAV	Dividend Yield[2] (%)	NAV Return[3]			Redemption Year[4]
							2023	2022	2021-23	
ICBEPMF1S1	703.5	6.4	7.8	9.4	83.2%	3.0%	4.5%	0.8%	13.3%	2030
1STPRIMFMF	272.0	2.5	31.2	13.6	229.4%	11.0%	3.7%	0.5%	13.0%	2029
PF1STMF	571.8	5.2	9.9	9.5	103.9%	3.0%	6.7%	-4.1%	12.6%	2030
ICBAMCL2ND	509.5	4.6	8.7	10.2	85.4%	3.0%	4.4%	-0.8%	12.1%	2029
ICB3RDNRB	904.0	8.2	6.6	9.0	73.0%	3.0%	4.2%	-1.1%	12.0%	2030
PRIME1ICBA	965.0	8.8	9.1	9.7	94.3%	3.0%	3.0%	-2.3%	11.0%	2030
ICBSONALI1	1012.0	9.2	8.2	10.1	81.0%	2.5%	5.2%	-1.1%	9.6%	2033
IFILISLMF1	936.0	8.5	7.8	9.4	83.3%	3.0%	4.7%	1.7%	9.4%	2030
CAPMBDBLMF	550.4	5.0	9.9	11.0	90.2%	6.0%	-4.1%	4.7%	9.2%	2027
ICBAGRANI1	1027.6	9.3	9.2	10.5	87.9%	5.4%	4.7%	-1.6%	9.2%	2027
Market							**0.6%**	**-8.1%**		

[1]Price as on January 2, 2023 and index value as on December 28, 2023.

[2]On last cash dividend declared.

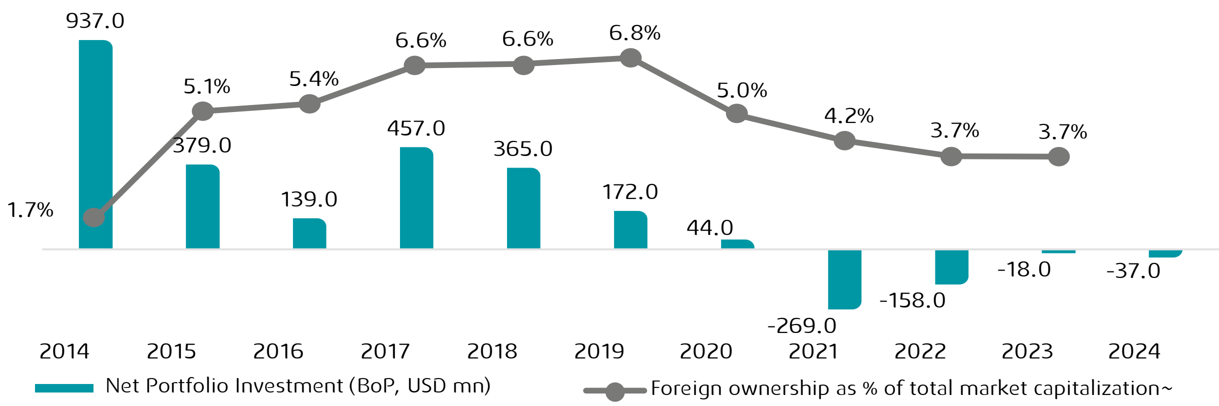
[3]CAGR computed for 2021-2023, adjusted for dividend. YTD returns of funds debuting within the year represent return generated since debut, hence is not directly comparable with return of funds that operated throughout the year.

[4]In reference to BSEC Press Release বিএসইসি/মুখপাত্র (৩য় খন্ড)/২০১১/২৫ published on Sep 16, 2018, tenure of existing listed closed end mutual funds can be extended by another tenure equal to maximum 10 years, provided that the full tenure of the subject fund does not exceed 20 years in total. However, the mutual funds those are not willing to extend their tenure will still have the option to convert or wind up as per rules and regulations.

Foreign Participation in Equity Market of Bangladesh

Over last 5 years, Bangladesh equity market has seen a fall of foreign investment. As of December 2023, total foreign ownership stood at 3.7% of the total equity market capitalization, which was only 1.7% in February 2014.

Figure 3: Net foreign portfolio investment and foreign ownership as % of total equity market capitalization



Source: DSE and Bangladesh Bank

Note:
1. % of foreign ownership of equity market capitalization as of December 2023 and net portfolio investment as of June of the respective years.
2. Net portfolio investment of FY'24 includes Jul-Nov, 2023.

Among all the companies with foreign ownership, BRACBANK had the highest foreign shareholding of 30.2% as of December 2023, followed by BXPHARMA with 28.9%.

Table 8: Top ten companies with highest foreign shareholding as of December 2023

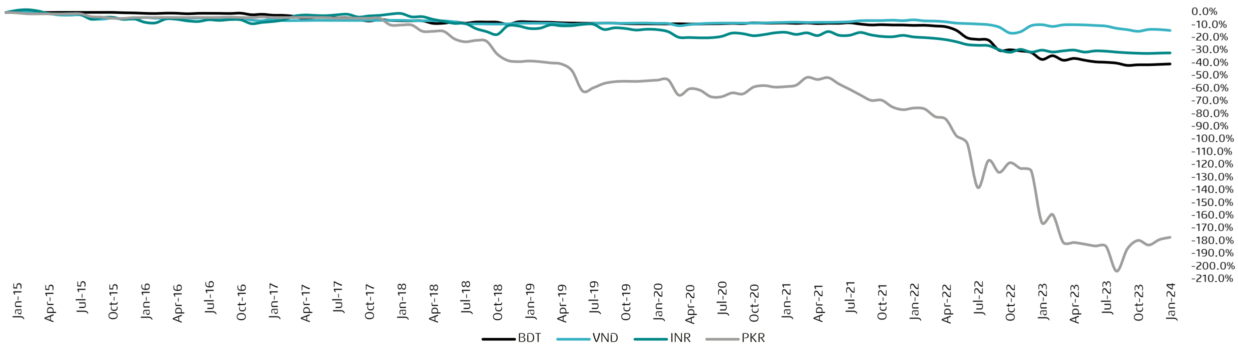
Ticker	Sector	Foreign Shareholding*
BRACBANK	Bank	30.2%
BXPHARMA	Pharmaceuticals & Chemicals	28.9%
NAVANAPHAR	Pharmaceuticals & Chemicals	27.7%
OLYMPIC	Food & Allied	24.9%
RENATA	Pharmaceuticals & Chemicals	22.7%
BSRMLTD	Engineering	17.3%
DBH	NBFI	17.0%
SQURPHARMA	Pharmaceuticals & Chemicals	13.6%
ISLAMIBANK	Bank	13.2%
SHEPHERD	Textile	9.5%

Source: DSE

Performance of BDT and Currencies of Peer Countries against USD

BDT depreciated by 40.5% against US Dollar while other currencies of neighbor countries like Vietnamese Dong (VND), Indian Rupee (INR) and Pakistani Rupee (PKR) also lost value against US Dollar by 14.2%, 31.8% and 176.9% respectively, since December 2014.

Figure 4: Nine year's relative performance of BDT and peer currencies



Source: Investing.com

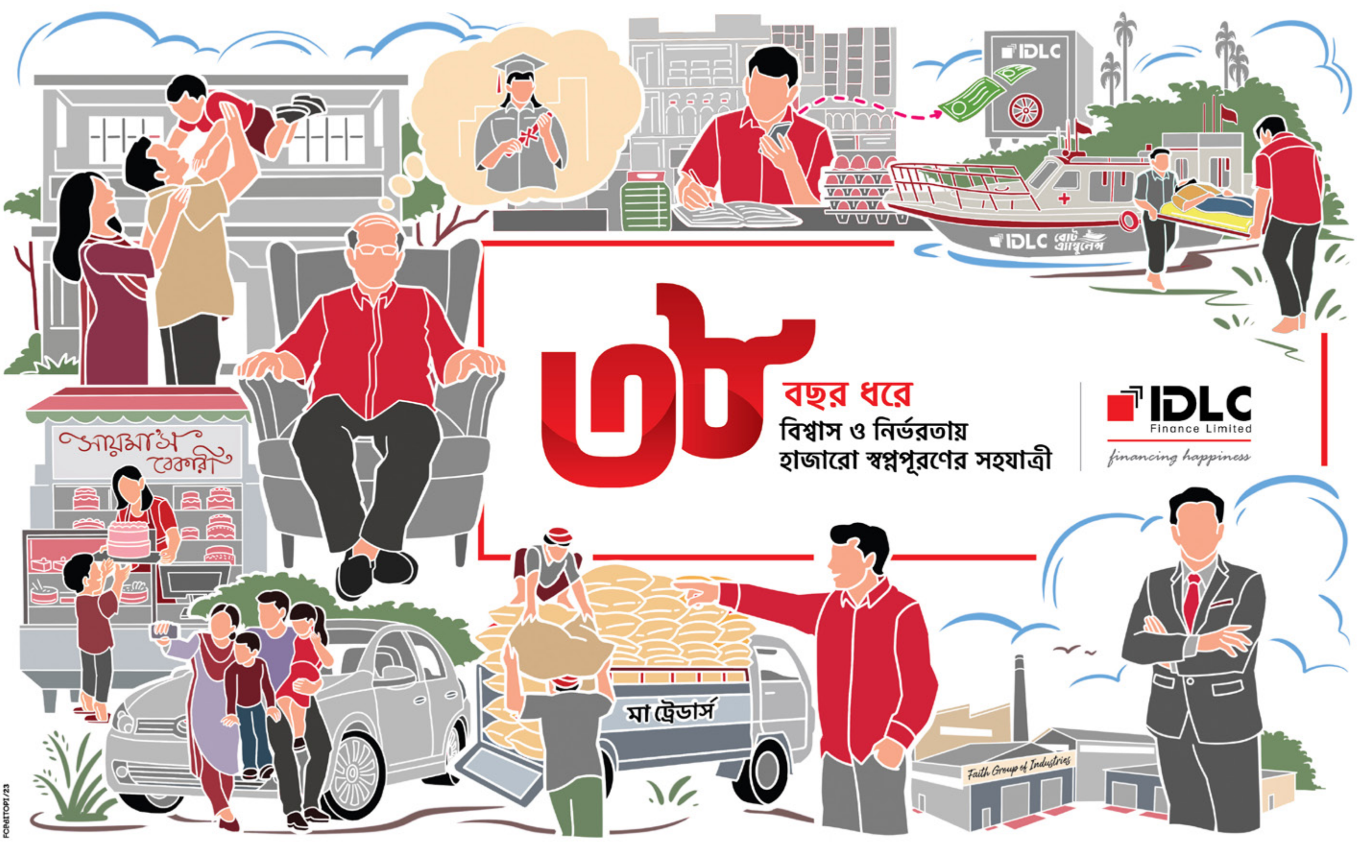
Major Commodity Price Movement

Among the major commodities, Crude Oil increased by 2.6% in January, followed by Cotton (+1.7%) and Aluminum (+0.5%). On the other hand, Wheat witnessed the most correction of -2.5%. Over last 5 years, wheat price hiked the most by 37.3%.

Table 8: Major Commodity Price Movement

Particulars	Price Change					
	1M	3M	YTD	12M	3Y	5Y
Crude oil (Average)	2.6%	-12.8%	2.6%	-3.4%	44.9%	37.3%
Wheat (US HRW)	-2.5%	-4.8%	-2.5%	-25.4%	-1.9%	35.3%
Cotton (A Index)	1.7%	-3.6%	1.7%	-8.2%	5.6%	11.8%
Aluminum	0.5%	0.0%	0.5%	-12.4%	9.4%	18.3%

Source: World Bank Pink Sheet
*Average of Crude oil (Brent), Crude oil (Dubai), Crude oil (WTI)



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