

# ACCOUNTANT

QUARTERLY JOURNAL OF THE INSTITUTE OF CHARTERED ACCOUNTANTS OF BANGLADESH

## CURRENT STATE OF ECONOMY: STRATEGIC PLAN FOR REBOUNding



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

In half yearly journal, articles focus on macro-economy of the country are published.

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



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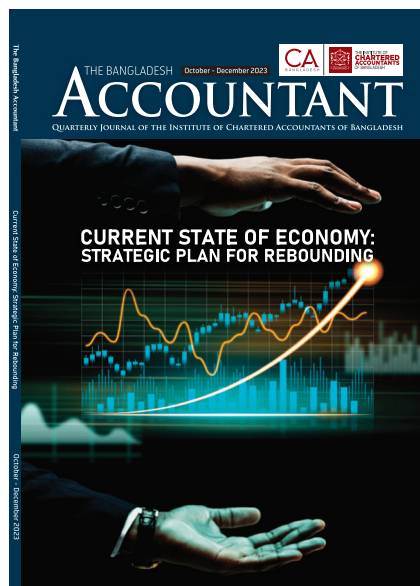
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# Editorial

**“ For achieving the growth rate of 7% to 8%, the country needs indigenous investment with a significant amount of FDI from 17.3 percent (average) to 32 % of total GDP growth. Investment in the power sector and employment generation are the priorities of the government to address the present economic volatility.”**



**Md. Shahadat Hossain** FCA  
Chairman - Editorial Board and  
Council Member - ICAB

Bangladesh Accountant encompasses a wide variety of current and burning topics and hence, there was no fixed theme for this issue. We have endeavored to collect views and opinion of researchers, academics, thinkers and our professionals on economic, development prospects and current issues of Bangladesh.

Bangladesh economy now is growing at a progressive manner and has undergone a major transformation over the past two decades. Bangladesh economy continues to be among the fastest growing economies in the world. To sustain this growth, the country needs continuity in development on priority basis in the areas like: financial sector, fiscal, infrastructure, human capital and business regulation. In order to become an upper middle-income country by 2031 and achieve high income country status by 2041, Bangladesh will require huge investments in physical capital, human capital, and innovation enabled by reforms in areas such as financial sector, business regulation, and addressing the infrastructure gap and the inflation.

Sound macroeconomic policies – such as keeping the budget deficit below five percent of GDP – and resilient domestic demand have led to growth in manufacturing and construction industries on the supply side. On the demand side, growth is led by private consumption and exports. After a modest performance last year, export earnings and remittances have bounced back helping the rural economy grow faster. In addition, the country has substantially improved its electricity generation over the years and a bumper agricultural harvest has further stimulated growth. The government has also made efforts to create an 'investor-friendly' environment so as to attract foreign trade. For achieving the growth rate of 7% to 8%, the country needs indigenous investment with a significant amount of FDI from 17.3 percent (average) to 32 %



of total GDP growth. Investment in the power sector and employment generation are the priorities of the government to address the present economic volatility.

We are very hopeful that, the development of a number of infrastructure projects in Bangladesh represents a positive shift in the country's future progress.

As always, we try to enrich our fellow members and valued readers with the scholarly thoughts and insight shared by the writers. This journal is a means to grow the writing skill of prospective writers of our members and thus, helps develop our professional improvement as a continuous process. Always we solicit your suggestions to uphold the advancement of the Bangladesh Accountant at home and abroad.

December is the month of victory. After a long armed battle and lots of sacrifices and bloodshed of the freedom fighters and innocent Bengali citizens, we earned our freedom on this month. A new nation with a new flag got her recognition in the world map. If we strive together for the betterment of the nation, it is not far away to achieve the success.

# President's Desk

**“We are global professionals. We are encouraging our members to provide us with their experiences & insights in their write ups. This helps us enrich resources, and to inform and influence the policy coming out of government.”**



**Md. Moniruzzaman** FCA  
President-ICAB

As the President of ICAB this is my final deliberation to our respected members and the readers through this journal. I appreciate the hard work of the chairman and the members of the Editorial Board who have done one of the most rigorous and intellectual jobs related to reviewing and editing of ICAB's Journal 'The Bangladesh Accountant'. I'm so glad that together we could accomplish many such coveted works, and I hope spontaneity and generosity of such works of our brilliant members and the official of ICAB would go ahead in coming days.

“We are global professionals. We are encouraging our members to provide us with their experiences & insights in their write ups. This helps us enrich resources, and to inform and influence the policy coming out of government.”

The lesson we learnt from the economic crisis is the resilience to adapt with the crisis where utilization of the tools including fintech will be the order of the day. Accounting is vital to business success. This profession continues to evolve – driven by ICT. In some ways, it is technological advancements that have pulled accounting from the dark ages and thrust us into the modern age.

Not only is the modern accountant being accurate, thorough, and meticulous, they have to also become integrated business advisors who are equipped to help businesses grow. They can advise on everything from profit growth to saving money, so really focusing on the more important aspects of economic growth for their clients, rather than just number crunching.



When CAs are carrying out their due jobs, ethics and public trust must be in the forefront of them. I do not think these should be compromised. Behaving ethically often means having to make tough decisions. It often means putting the public interest first, above and beyond any other interests. It is about doing the right thing, and could determine the fate of businesses.

Chartered Accountant needs to drive the organization's ability and innovation which can be termed as mirror in a sense that accounting profession must reflect activity innovatively, responding to the changes through upholding the trust. We are global professionals. We are encouraging our members to provide us with their experiences & insights in their write ups. This helps us enrich resources, and to inform and influence the policy coming out of government. Last but not the least, let us all put due emphasis on innovation, research and knowledge sharing in all our activities.

Thank you once again

Kind regards,

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# ARTICLES

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# Strategies for Economic Resilience: Navigating Trade Balance, Transparency, and Fundamentals in Foreign Currency Crisis and Inflation in Developing Countries

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## Preamble

In the intricate dance of global trade, the balance between import and export holds the key to a developing country's economic growth. While trade balance undeniably plays a pivotal role in managing foreign currency reserves and inflation, it represents just a single strand in the complicated web of economic management. Governments and central banks employ a diverse range of techniques and fundamentals to wield control over these vital aspects of their nation's financial well-being. In this article, we delve theoretically into the multifaceted toolkit employed by economic stewards, shedding light on the lesser-known yet equally essential strategies that shape the dynamics of currency reserves and inflation in emerging economies in today's ever-evolving global landscape.

## Unlocking Prosperity: The Power of Import and Export in Shaping Developing Economies

The exports generate foreign exchange earnings, enhance GDP, create employment opportunities, and foster industrial growth. Import and export play significant roles in the development of an economy, influencing various aspects such as economic growth, trade balance, job creation, technology transfer, and overall economic stability. Here are some descriptive examples:

## Economic Growth

Consider a developing country with a thriving textile industry. By exporting its textiles to international markets, the country earns foreign exchange, which can be used to invest in modernizing factories, improving supply chains, and training its workforce. This investment boosts the country's economic growth, creates jobs, and raises living standards.

## Job Creation

A developing country with a competitive advantage in producing low-cost consumer goods can attract international buyers. As its exports increase, the demand for labor in manufacturing and related services grows, leading to the creation of new jobs, particularly for the local workforce.

## Technology Transfer

Consider a developing country seeking to enhance its renewable energy capabilities. By importing cutting-edge solar panel technology, the country can quickly leapfrog in its clean energy development, reducing dependence on fossil fuels and contributing to environmental sustainability.

## Balancing Act: The Hidden Pitfalls of Export Dominance for Developing Economies

While having a trade surplus (more exports than imports) can be beneficial for a

## Strategies for Economic Resilience:

### Navigating Trade Balance, Transparency, and Fundamentals in Foreign Currency Crisis and Inflation in Developing Countries



developing economy in certain respects, it's important to note that there can be drawbacks or challenges associated with this situation. Here are some potential drawbacks:

#### Exchange Rate Challenges

A persistent trade surplus can lead to an appreciation of the country's currency. While this may seem positive, it can make the country's exports more expensive for foreign buyers, potentially reducing demand and causing a decline in export revenues.

#### Dependence on External Demand

Relying heavily on export markets can make the economy vulnerable to fluctuations in global demand. If there's a downturn in the global economy, demand for the country's exports may decrease, leading to a decline in economic activity.

#### Loss of Domestic Focus

An excessive focus on exporting might divert attention and resources away from developing domestic industries and serving the local market. This can hinder diversification and make the country more dependent on a few key export sectors.

#### Economic Shocks

If the global market for a particular product experiences a shock (e.g., a sudden drop in commodity prices), the country's export revenues can plummet, affecting its overall economic stability.

#### Skewed Development

Overemphasizing exports can lead to uneven development within the country. The benefits of export-led growth might not trickle down evenly to all segments of society, leading to income inequality and regional disparities.

#### Vulnerability to Protectionism

In times of global trade tensions or protectionist policies adopted by other countries, an export-dependent economy can be adversely affected if its trading partners impose barriers or restrictions on its exports.

#### Environmental Impact

An export-oriented focus may prioritize industries that have a higher environmental impact, such as resource-intensive manufacturing. This could lead to environmental degradation if not managed sustainably.

To mitigate these drawbacks, Developing economies must balance exports, bolster domestic markets, diversify, and invest in education, innovation, and sustainable development for progress.

#### Inflation Unleashed: The Impact of Imbalanced Trade on Prices

An imbalance between exports and imports can fuel inflationary pressures. If a country is importing more than it exports, it is essentially sending more money out of the economy than it is bringing in. This can lead to a scarcity of foreign exchange, causing the local currency to lose value. As the currency depreciates, the cost of imports rises, translating into higher prices for goods and services. This, in turn, contributes to inflation, which can adversely affect the purchasing power of the population, particularly low-income individuals.



## Navigating Crisis: Mastering Import Management in Foreign Exchange Turmoil

Foreign exchange crises can arise due to various factors, such as declining exports, capital flight, or geopolitical events. During such crises, managing imports becomes imperative to stabilize the economy. One effective mechanism is to prioritize essential imports, such as critical raw materials or goods necessary for production. Simultaneously, non-essential or luxury imports can be restricted temporarily to conserve foreign exchange reserves.

### Prioritization of Essential Imports

These are goods and materials that are indispensable for the functioning of critical industries,

infrastructure projects, and basic necessities. By ensuring the availability of essential goods, the government aims to prevent disruptions in vital sectors, maintain public confidence, and prevent social unrest.

### Scrutiny and Approval Process

Importers are required to provide detailed justifications for the imports, demonstrating their necessity and impact on the economy. This rigorous evaluation helps filter out non-essential and luxury imports, conserving foreign exchange for more vital purposes.

### Quota Implementation

To effectively manage foreign exchange reserves, the government may implement import quotas on certain goods.

### Import Substitution Promotion

During foreign exchange crises, developing nations often prioritize import substitution strategies. This involves boosting the domestic production of goods that were previously imported. By substituting imports with locally manufactured alternatives, the country reduces its reliance on foreign goods, conserving foreign exchange and fostering domestic industries.

### Negotiation of Extended Payment Terms

Importers may negotiate extended payment terms with exporters. This provides the country with more time to accumulate foreign exchange reserves before payment is due, alleviating immediate pressures on the reserves.

## Strategies for Economic Resilience:

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#### Temporary Suspension of Non-Essential Imports

To conserve foreign exchange, the government may temporarily suspend non-essential imports. Luxury goods and items that do not contribute significantly to the economy are temporarily banned or restricted.

#### Dynamic Exchange Rate Management

Developing countries facing foreign exchange crises may adopt dynamic exchange rate management strategies. This involves adjusting the exchange rate to reflect the scarcity of foreign exchange. A devalued currency can discourage imports, making domestically produced goods relatively more attractive and supporting local industries.

#### Collaborative Efforts with Exporters

Governments can collaborate with exporters to navigate foreign exchange crises. Exporters might be encouraged

to repatriate a certain percentage of their export earnings, thereby increasing the availability of foreign exchange. In return, exporters could be offered incentives or benefits to ensure their cooperation.

#### Strengthening of Import Monitoring

Effective monitoring helps prevent smuggling, under-invoicing, and other illicit practices that can further strain foreign exchange reserves. This requires robust customs and regulatory enforcement.

#### Currency Crisis Survival Kit: Essential Financial Tools for Resilience

Overcoming a foreign currency crisis requires a comprehensive and strategic approach that involves implementing various financial tools and measures. These tools aim to stabilize the currency, bolster foreign exchange reserves, and restore economic confidence. Here are some key financial tools that can be employed:

#### Exchange Rate Stabilization

##### Currency Peg

Pegging the local currency to a stable foreign currency, such as the US dollar or the euro, can provide a sense of stability and prevent abrupt currency fluctuations.

##### Managed Float

Implementing a managed floating exchange rate regime allows the central bank to intervene in the foreign exchange market to stabilize the currency when necessary.

#### Foreign Exchange Interventions

##### Foreign Exchange Reserves Management

The central bank can utilize its foreign exchange reserves to intervene in the foreign exchange market, buying or selling its own currency to influence its value.

##### Currency Swaps

Engaging in currency swap agreements with other central banks can provide temporary relief by offering access to foreign currency reserves.

#### Monetary Policy Tools

##### Interest Rate Adjustments

Central banks can adjust interest rates to influence capital flows and attract foreign investors. Higher interest rates can make the domestic currency more attractive for investment.



### Open Market Operations

Central banks can use open market operations to buy or sell government securities, influencing money supply and interest rates.

### Fiscal Policy Measures

#### Reducing Budget Deficits

Implementing measures to reduce budget deficits can ease pressure on foreign exchange reserves, as excessive government spending can strain the economy and exacerbate currency crises.

#### Austerity Measures

Temporarily reducing public spending and implementing fiscal discipline can help improve the country's financial credibility.

### External Borrowing and Aid

#### Bilateral and Multilateral Aid

Seeking financial assistance from international organizations, such as the International Monetary Fund (IMF), World Bank, and other bilateral partners, can provide temporary financial relief.

#### Sovereign Bond Issuance

Issuing sovereign bonds in the international market can inject foreign currency into the economy, but this should be done with caution to avoid increasing external debt burdens.

### Trade Policy Adjustments

#### Export Promotion

Encouraging and incentivizing export-oriented industries can

boost foreign exchange earnings, reducing the trade deficit and strengthening the currency.

### Import Restrictions

Temporarily imposing restrictions on non-essential imports can help conserve foreign exchange reserves.

### Capital Controls

#### Limiting Capital Outflows

Implementing temporary capital controls, such as restrictions on transferring funds abroad or foreign currency purchases, can prevent excessive capital flight.

### Foreign Investment Regulations

Adjusting regulations on foreign investments to ensure they align with the country's financial stability goals.

### Communication and Transparency

#### Transparent Policy Communication

Providing clear and consistent communication about the government's financial and economic policies can help maintain investor confidence.

### Central Bank Independence

Ensuring the independence of the central bank from political interference enhances its credibility and ability to implement effective monetary policies.

**Strategies for Economic Resilience:  
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**Economic Reforms**

**Structural Reforms**

Implementing long-term structural reforms that promote economic diversification, improve productivity, and enhance competitiveness can contribute to sustained economic stability.

It's important to note that the effectiveness of these financial tools depends on the specific circumstances of the country, the root causes of the foreign currency crisis, and the global economic environment. A combination of these tools, tailored to the unique context of the crisis, is often necessary to successfully navigate and overcome the challenges posed by a foreign currency crisis.

**Elevating Foreign  
Currency Reserves: The  
Vital Role of Financial  
Transparency in  
Developing Countries**

Financial transparency is indeed crucial for developing countries

aiming to increase their foreign currency reserves. It promotes investor confidence, attracts foreign investment, enhances economic stability, and reduces the risk of capital flight. Let's explore this concept with detailed examples and the effective ingredients that contribute to achieving financial transparency.

**Accountability**

Transparent financial practices ensure that government officials and institutions are held accountable for their fiscal and monetary decisions. This accountability fosters trust among domestic and foreign investors, leading to increased investment and a stronger reserve position. Suppose a developing country publishes detailed reports on its government expenditures, including public infrastructure projects. This transparency allows citizens and investors to monitor the allocation of funds, reducing the risk of corruption and mismanagement. As a result, foreign investors may be

more willing to invest in the country, boosting its foreign currency reserves.

**Accessible Information**

Making financial information readily available to the public, both domestically and internationally, is crucial. This includes regular updates on economic indicators, fiscal policies, public debt, and government revenues.

**Effective  
Framework**

**Regulatory**

Developing countries should establish and enforce clear regulations for financial institutions, including banks, securities markets, and non-bank financial institutions. Regulatory compliance ensures stability and reduces the potential for financial crises. A developing country implements robust banking regulations that require regular audits and risk assessments. This transparency builds confidence in the banking sector, encouraging foreign investors to deposit funds in local banks, which ultimately contributes to higher foreign currency reserves.

**Anti-Corruption Measures**

Addressing corruption is essential for financial transparency. Strong anti-corruption efforts create an environment where public funds are utilized efficiently, and resources are allocated based on economic needs rather than personal gain.

### Legal and Regulatory Clarity

Transparent legal and regulatory frameworks foster confidence among investors. They need assurance that their rights will be protected, and disputes can be resolved fairly.

Financial transparency involves providing accurate, accessible, and timely information, coupled with effective governance, regulations, and anti-corruption measures. By implementing these ingredients, developing countries can attract foreign investment, boost their foreign currency reserves, and achieve sustainable economic growth.

### Other Factors in Managing the foreign currency crisis and Inflationary Economy

Apart from balancing imports and exports, and financial transparency, several other factors play a role in managing the foreign currency crisis in emerging countries. These include prudent fiscal policies, effective taxation, investment in productive sectors, infrastructure development, and the creation of a conducive business environment. Addressing these aspects collectively contributes to a well-rounded strategy for economic stability. Over-reliance on a specific sector or commodity can make an economy vulnerable to

external shocks. Diversification into various industries can mitigate risks and enhance overall economic stability. Sound governance, transparent institutions, and consistent economic policies are essential for the effective management of foreign currency reserves and inflation. Predictable and well-communicated policies enhance investor confidence. Governments may use different exchange rate regimes, such as fixed, floating, or managed exchange rates. They can intervene in the foreign exchange market to stabilize their currency or prevent excessive volatility.

### Conclusion

Developing nations grapple with the complex game of economic harmony amidst import-export balance, currency turmoil, and inflation. In this difficult weave, proactive steps hold the key. Prioritizing export competitiveness, diversification, and innovation can bolster resilience. Transparent governance, fiscal discipline, and skill development are pivotal. Assembling a set of resources of import management strategies and embracing financial transparency fortify against currency crises. The delicate balance between these elements holds the power to shape the future of emerging countries like Bangladesh.

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# MPS of Jan-June 2024: Endeavour Towards Corrections Require Commitment

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*"If the highest aim of a captain were to preserve his ship, he would keep it in port forever."*

**-Thomas Aquinas OP (1225-1274)**

*Italian Dominican priest, an influential philosopher and theologian*

**T**he economy of Bangladesh successfully managed post-covid turbulent state, it regained the usual momentum. However, during last couple of years, Bangladesh economy has been experiencing significant depreciation of local currency against USD, gradual depletion of foreign currency reserve, high CPI (Consumer price index), continuous rise of non-performing loans leading to liquidity crunch in banking system. In this backdrop, Bangladesh bank has published the Monetary Policy Statement (MPS) for January-June 2024 (H2 of FY 2024) recently.

Its undoubted, this Monetary policy has been prepared in an unprecedented context. MPS should navigate a sustainable monetary strategy for the Peoples' Republic of Bangladesh to handle this economic jolt. Multiple challenges developed in the economy resulting from various internal and external shocks. Bangladesh Bank's stance in taming foreign currency exchange rate and inflation will carry a paramount importance in ensuring the financial stability of Bangladesh.

The summary of Central Bank's initiatives and policies in dealing with 4 most critical hurdles and its influence upon the economy is below:

## Exchange Rate

Average exchange rate of 1 USD against BDT was 84.81 in FY 2021 while its 110 on 1st February 2024. The average rate of depreciation of BDT against USD in almost 30 percent during this period. To deal with the significant depreciation of local currency against USD during last three years, Bangladesh Bank (BB) has decided to implement crawling peg arrangement based on a currency basket. Under Crawling peg system, currency with a fixed exchange rate is allowed to fluctuate within a band of rates. Due to the conservative approach of Government to keep the exchange rate within "expected band", the historical effort of Government motivated to create a large gap between formal and informal exchange rate. Market transaction of 7th November 2023 reveals that country's foreign exchange market experienced volatility as exchange houses quoted remittance rates between BDT 123 and BDT 124 per USD, 12% higher than the official set rate of BDT 110.50. Experts have been advising Government repeatedly during last several years to depend on the market forces in fixing the currency exchange rate while



Government refrained from it considering the hit on Balance of Payment, Current Account. Eventually, country economy is now taking a dicey shape by absorbing the accumulated effect of unfavorable exchange difference.

However, BB's ultimate objective is to enter free-floating exchange rate regime as stated in MPS. Most of the modern economies of the world including US, Euro Zone, Switzerland, UK, Japan, and Australia have been part of this regime. IMF has also suggested Bangladesh Government to ensure exchange rate flexibility to improve foreign exchange pressures. Meanwhile, controversy mounted as to whether this new regime will be successful in stabilizing the ongoing fluctuation in exchange rate of local currency with

foreign currency particularly USD. Central Bank of Bangladesh has been practicing a so-called market-driven (demand vs. supply) exchange rate with the active interference in it. As a part of the objective to stabilize the rate, BB infused (net) approximately USD 5 billion during July-Dec 23 period.

There is significant criticism against crawling peg system considering the recent ineffective outcome in Argentina. The speculators, forex traders manipulated the mechanism which resulted sharp devaluation of Argentine Peso. Since BB did not have adequate control over the market players during last couple of years, its apprehension of Experts that Bangladesh Taka may have the same fate of Argentine Peso.

Moody's, a leading global integrated risk assessment firm recently said that the BDT could trade at around 115 per USD by the end of June 2024 compared with 110 on January 28, 2024 which will result a weakening rate of 4% after the introduction of crawling peg system. Though this kind of volatility in next 6 months' time is satisfactory, many other uncertainties to be taken into consideration. The amount of FOREX Reserve is adequate to meet 4 months' import which is higher than 3 months' standard benchmark. Any kind of complacencies may push the FOREX Reserve to a "red" zone.

In addition to that, implementation of any system without identifying underlying reasons of this unfavorable exchange rate will not bring any satisfactory result. Rampant operation of Hawla market is one of the critical reasons of ongoing volatility. Without taking stern action against the wrongdoers of this market, stability in Forex market will remain as a nightmare.

### **Inflation**

Starting from October 2021, there has been a steady escalation in the twelve-month average CPI Inflation, registering 6.15 percent at the end of FY 22. The average headline inflation continued its upward trend throughout FY 2023 and H1 of FY 24 reaching at 9.02 percent in June 23. It again increased to

**MPS of Jan-June 2024:**  
**Endeavour Towards Corrections Require Commitment**



9.48 percent by December 23. With an objective to curb the inflation rate, BB's implemented below measures will be continued in future:

- a. Increasing policy rate: This rate increased from 6.00 percent to 7.75 percent with a standing lending facility rate of 7.75 percent during July-December 23. Moving forward, this will be increased to 8 percent. Standing Lending Facility rate will be reduced to 9.50 percent while Standing Deposit Facility rate will be moving to 6.50 percent resulting a reduction in policy rate corridor from +/- 200 points to +/- 150 points.
- b. Removing remaining lending restriction: "Six months moving average rate of Treasury Bill" (SMART) was introduced by BB with an added margin of 300 points

for bank's lending replacing previous 9% maximum rate.

- c. Removing deposit rate floor: Deposit rate will now be decided based on the negotiation between the Banks, NBFIs and depositors. The maximum deposit rate was set at 6 percent in April 2021 which is no longer valid.
- d. Quantitate tightening: Commercial banks spent over BDT 1.34 trillion in the FY 23 to purchase a record amount of USD 13.57 billion from the reserves maintained by the central bank. That is how, BB withdrew money from the market to control inflation.

Several other initiatives were taken by BB during H1 which will be continued in H2 to keep the inflation rate within revised target level of Government (7.5

percent) by June 24. If the price of essentials is allowed to rise without reasonable monitoring, CPI will be skyrocketing specially during the holy month of Ramadan.

**Non-Performing Loans (NPL)**

With an objective to reduce overall NPL rate to 8 percent by 2026, Government has made necessary amendments in Bank Company Act and Finance Company Act to take actions against willful defaulters. A privately owned "Assets Management Company (AMC)" will be established to manage distressed assets in the financial sector. However, the ultimate reasons of the upsurging NPL should be identified, culprits behind these corruptions to be persecuted and good governance in banking sector to be ensured. Several Shariah-based banks are struggling to meet their day-to-day cash requirement and borrowing funds from other banks at high interest cost. One of the leading Shariah banks failed to repay their borrowed fund to a state-owned commercial bank within stipulated time. Moreover, BB is printing money and supplying them to the "weak" banks owned by a large group of companies (Source: New Age Bangladesh, January 22, 2024). This is a serious threat to the country image also. Weak banks should be merged with other good banks and thereafter

adequate control mechanisms including vigorous monitoring systems should be in place. Otherwise, good banks will take the fate of weak banks. Bank and NBFIs should be free from all kinds of political influences.

### Foreign Currency Reserve

Foreign currency reserve was all time high of USD 48 Billion in August 2021 while it reached USD 27.13 Billion (USD 21.87 Billion as per BPM6) mark on 31st December 2023. Bangladesh economy is largely dependent on Import for commodities including fuel, essential goods and raw materials for industries like textiles and garments. As a result of inadequacy of foreign currencies to issue Letter of Credit for Importers, Bangladesh economy is expected to experience prolonged economic slowdown. Despite taking numerous initiatives to vibrate remittance inflows and improve foreign currency reserve thereby, the growth has not been impressive. Remittance inflow of USD 10.8 Billion is registered during July-Dec 2023 while it was 10.5 billion during corresponding period in last FY (July-Dec 22) resulting a marginal growth of 2%.

### Recommendations and Conclusion

Publishing of MPS is a routine job of Bangladesh Bank which is not enough to bring economic

sustainability either. The critical issues which were identified several years back are existing even today and became more fatal in absence of result-oriented action plan and implementation thereof. However, some recommendations are appended below to deal with these dire issues which are enough to foil all success of the economy registered so far:

- The upsurging price trend of essentials can be halted and keep within tolerable limit if the unusual costs in supply chain ecosystem particularly during transportation is removed. Though the farmers are not getting even the production cost of the produces, the price at retail level is fiery. Hence, wet-market vigilance by Govt. Officials is not enough to control the price of essentials with an objective to curb CPI. Regulators need to analyze the cost components of the essentials from field to shelf and identify the root cause of excessive price fueling inflation.
- Crawling peg can be an interim solution while free-floating exchange rate regime is the ultimate destination for any sustainable economy. Bangladesh should have the readiness to embrace it and all the hit on the economy to be taken eventually. Discouraging import has improved Current Account

balance but the slow pace of the economy will be an outcome of it. Hence, both export proceeds and inward remittance require monetary and non-monetary stimulation.

- Bangladesh Bank should carry out comprehensive financial health check through qualified Audit Firm on the companies having non-performing loans. Based on the report of the Audit Firm, adequate measures to be taken to safeguard depositors' money. Borrowing exceeding a threshold level should require the borrower (both Public and Private) to appoint Independent Directors in their Board. Such Independent Directors will submit regular report in prescribed format to the Lender and Central Bank. That's how, Lender can be informed about the safety of their investment.

If discipline or good governance is not evident everywhere in financial system right now, economy will be falling into deeper crisis in future. Authority cannot pick and choose who they want to punish and who they don't.

# CFO's Role: Archetype is Shifting

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**C**hief Financial Officer (CFO), as the name depicts, is the one who leads the finance function of the organisation. His main functions, among other things, include accuracy and reliability of financial reporting, effective financial planning, safeguarding of assets, risk management, strengthening control environment, enrichment of governance structure and ensuring high-quality financial health of the organisation. As the time is passing by and we are witnessing tremendous changes in almost all spheres of our lives, CFOs role is not an exception.

The traditional image of a CFO is considered to be numbers steward or financial gatekeeper, whose primary responsibility is restricted to the financial statements, sound governance and compliance only. However, rapid globalisation of businesses, the impact of technological advancements, changing business and organisational structures, and a new focus on value creation has challenged this traditional role. They are expected to participate in driving the organisation towards achieving its objectives. It is now part of their responsibility to read and anticipate market trends, lead the quest for business innovation, identify commercial opportunities and create efficiency.

Today CFOs are expected to shoulder much greater responsibility for value addition in business and for this they have to work beyond traditional parameters and take on a role that is more proactive towards sustainable value creation. Their roles as business leaders have been rewritten in the context of constantly evolving business environments, which demand continuous adjustments and adaptations in the way organisations are managed. They have to position themselves as primary drivers of corporate strategy along with CEOs and play a vital role in ensuring inexorable business growth. As part of the leadership, they are expected to increase their support in strategic and operational decision making in a business partnering capacity in addition to fulfilling traditional stewardship responsibilities. They have to use their financial acumen and insights to drive business strategic decisions and elevated levels of business.

This transformation of role demands distinctive qualities in order to meet changed stakeholders expectations who look forward to enormous things from him. The following are the additional skills set that CFOs of today are expected to be equipped with in order to be more competitive and congregated augmented expectations:



### Strategic Advisor

CFOs role in supporting strategic growth is increasingly valued. Strategy formulation and execution is identified as the most important area in which they have to gain more expertise. They need to take the holistic view in order to understand the implications of problems and opportunities in different parts of the business. They need to have the ability to form and execute organisational strategies. CFOs have to operate as strategists rather than tacticians to ensure the financial health and sustainability of their organisations.

### For CFOs to Create Value in this Market, they need to Focus on Business Model Transformation Rather than Solely Cost Management

#### Increased Customer Focus

The customer is the most important stakeholder for any business and needs special attention and care. Traditionally, the sales team or the front end people only are assumed to take care of customer and its needs. But time has changed and increased emphasis is being placed on customer care across all the departments including finance. The finance people will

need to be attuned to the needs of different consumers and develop a culture which is customer centric. This will be important in achieving transition from back to front office for them. CFO needs to be more knowledgeable about customer and taking roles which provide greater customer understanding.

#### Translator

The CFO is an organisation's chief visionary and lead strategist. It is critical for the CFO to translate the capabilities and performance measures of the organisation into useful information for the CEO and, in turn, translate the CEO's strategy into a measurable action plan. Once the translation is complete, the CFO continues to communicate the strategy throughout the organisation and the results back to the CEO and other members of the leadership team.

#### Leadership Skills

The CFOs, like CEOs, must motivate the people in the organisation to achieve its mission. CFO must motivate people to execute the company's strategy against stiff deadlines while maintaining quality standards and anticipating the company's future financial needs. People's attitudes, fears and preparedness are critical variables that must be predicted and managed. As an effective leader and key member of

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<p>senior management, the CFO needs to facilitate the delivery of sustainable value creation and preservation.</p> <p><b>Human Capital Development</b></p> <p>The CFO uses key individuals within their organisation as transformation champions, and equips those with the training and tools needed to understand the agenda and rally support across the business. They require highly skilled, engaged finance team, and as such they need to keep staff, specifically top talent, in mind at all times; doing what it takes to acquire, develop, retain and build a</p>	<p>cohesive, informed and engaged finance organisation.</p> <p><b>Innovative</b></p> <p>A CFO needs to be more creative and innovative. Innovation is an essential driver of excellence. They must play a leading role in accelerating strategic growth across the enterprise. They need to provide meaningful insights to their organisation's current and future investments plans and participate in the broader corporate vision and advocate and produce strategic transformation.</p>	<p><b>Communication Proficiency</b></p> <p>Interpersonal communications are extremely important. The finance people are normally considered less proficient in skills like communication, managing people, thinking outside the box, big picture thinking etc. The CFO should be a good communicator to the board on the performance of the business and the issues it is facing, to his peers in getting across key information and concepts to facilitate discussion and decision making and to his subordinates so that they are both efficient and motivated. These skills are very important.</p>
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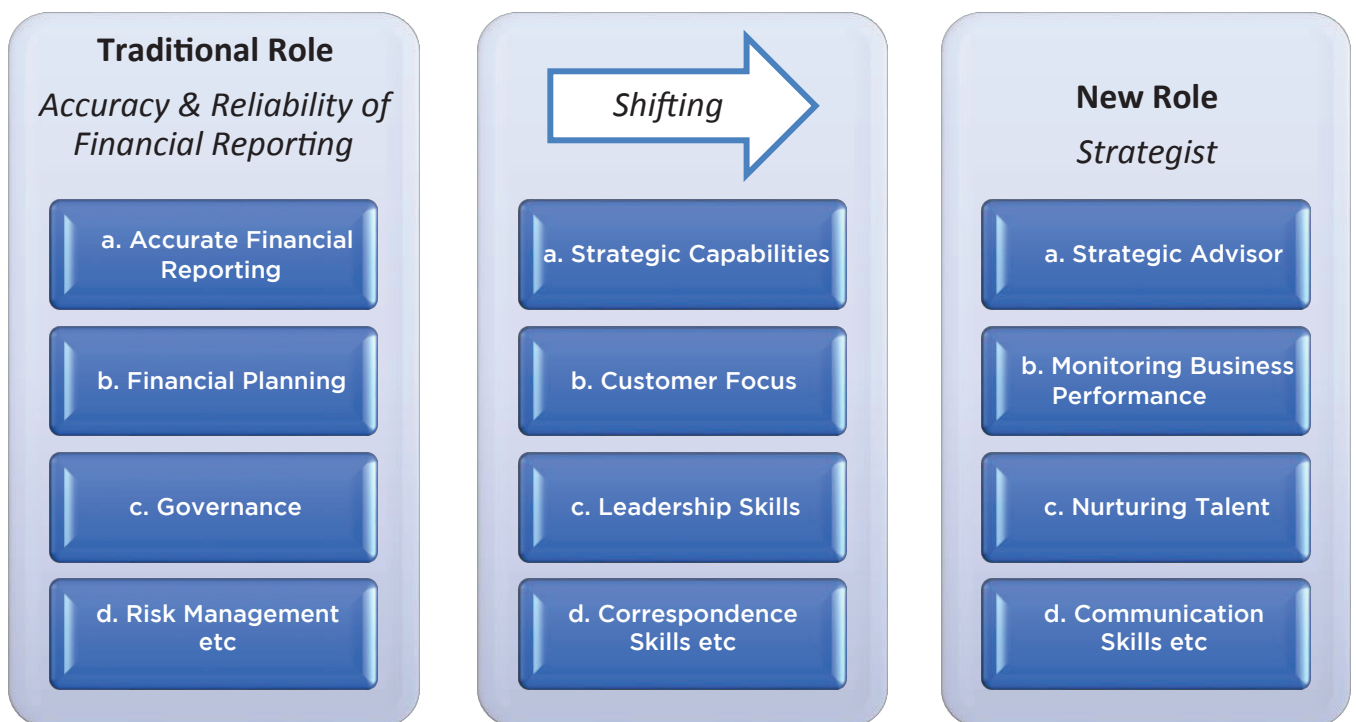


Chart: Depicts what new skills or role should consider in addition to traditional role to meet future challenges by a CFO

in today's dynamic working environment and they should be very proficient in order to enable them to manage their changed role efficiently and effectively.

### **Vision & Insights - The Evolving and Changing Role of CFO**

The changing role of the CFO also has profound implications for the global accounting profession and the skills that will be needed in the future; we can expect the traditional career paths of CFOs to evolve in new directions. The changing structure of global finance operations and the changing demands placed on the role will simply necessitate different types of experiences and skills and behavioral capabilities; in short, a much broader finance outlook and capability. This future environment presents enormous challenges for CFOs. The nature of the risks that organisations face is changing, requiring more effective risk management approaches and increasingly CFOs have a role to play in ensuring an appropriate corporate ethos.

### **Six Principal Activities fairly Represent the Contribution of CFO:**

1. Ensuring business decisions are grounded in solid financial criteria;
2. Providing insight and analysis to support the CEO and other senior managers;

3. Leading key initiatives in finance that support overall strategic goals;
4. Funding, enabling and executing the strategy set by the CEO;
5. Developing and defining the overall strategy for the organisation; and
6. Representing the organisation's progress on strategic goals to external stakeholders.

There is a clear sense from CFOs that all these growing pressures and issues are keenly felt. This brings the question of how CFOs can best allocate their resources and time in the face of the huge and increasing responsibilities. The challenges include prioritisation and balancing short-term/long-term tradeoffs as businesses seek to reduce cost and also plan for longer term growth.

### **It is Clear that the CFO Role is Evolving to an Enabler of Strategic Business Initiatives**

The importance for the CFO in performing a more integrated and proactive 'strategic' and 'value creation' role is widely accepted. However, the transformation in role requires a considerable shift of capabilities in areas that may seem itchy for many. The ability to demonstrate leadership beyond finance is not something in which most are well versed. The

key insight is the need for CFOs to expand their non-technical skills (i.e. soft skills) to build a stronger level of trust with the stakeholders. With their broad perspective of the organisation and the environment in which it operates, they need to help their organisation navigate through the processes and challenges of strategy development, management, and execution.

These are challenging times in which to be a CFO at any company. But those CFOs who reap true, meaningful, personal and professional satisfaction from this role undoubtedly will be the ones who lead the business in adapting to whatever changes lie ahead. The CFO role will primarily be focused on finance but the context and environment will continue to shift.

# Empowering Bangladesh: The Multifaceted Impact of Microfinance on Socio-Economic Development and Sustainability

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## Executive Summary

In the heart of Bangladesh, the land that has transformed the global conversation on poverty alleviation, lies the epicenter of microfinance. The very fabric of our nation is interwoven with this financial innovation that has become a beacon of hope for the marginalized. Imagine the hands of a rural woman, uplifted not just by loans but by the prospect of a future she can shape. Picture the sprouting businesses in congested urban landscapes, democratizing prosperity. This isn't mere finance; it's a national movement! But like any epic tale, it has its trials—crippling over-indebtedness and daunting operational costs that threaten to tarnish its revolutionary sheen (Ahmed, S., & Chowdhury, M., 2009; Schicks, J., & Rosenberg, R., 2011). Yet, human's indomitable spirit is finding new pathways: the advent of digital technology and diversification in loan types offer glimpses of what could be a brighter, more inclusive future (Maurer, B., 2015; Tsai, K., 2017). As we wrestle with aligning our strides in microfinance with the UN SDGs, let us remember: This isn't just about Bangladesh, it is a vivid demonstrating statement to the world that Bangladesh could & can innovate, lead, and rise.

## Introduction

Microfinance, a financial service model that provides modest

loans and other financial services to individuals and small enterprises has been acclaimed as a revolutionary model worldwide emanating from Bangladesh. Microfinance has the potential to reduce if not eliminate poverty & its severity for many people. Microcredit, when combined with other creative initiatives that release people's potential, is a crucial sailor in the quest for a poverty-free society. Economist Jeffrey Sachs has underlined the relevance of microfinance in poverty eradication. "Microfinance is a critical tool in our fight against global poverty," he said. It gives the underprivileged the financial wherewithal to invest in their future and break the cycle of poverty" (Sachs, 2005). Furthermore, former UN Secretary-General Kofi Annan acknowledged the effects of microfinance on socioeconomic development when he stated, "Microfinance stands as one of the most promising and cost-effective tools in the fight against global poverty" (Annan, 2003). Microfinance with its plan of financial inclusion has helped not just to poverty reduction but also the country's overall socioeconomic growth. The significance of microfinance in Bangladesh cannot be overemphasized. The World Bank noted that microfinance has lifted approximately 5 million people out of poverty in Bangladesh between 2000 and 2020 (World Bank, 2021).



## Background of Microfinance in Bangladesh

In Bangladesh, microfinance has transcended its original scope to become a transformative force in the nation's socioeconomic architecture. Much of this can be attributed to the robust participation and active involvement of the government. Initially rooted in the urgent needs brought about by the 1974 famine, the government seized the opportunity to institutionalize and effectively regulate the burgeoning microfinance sector. Through policies, frameworks, and a conducive regulatory environment, the government has been consistently instrumental in expanding the impact and reach of microfinance across diverse demographics and geographic boundaries.

The state's commitment to microfinance is also evident in its successful collaborations with multiple stakeholders. While NGOs like BRAC, ASA, and BURO Bangladesh have made pivotal contributions, their effectiveness has often been magnified by a stable regulatory environment and financial avenues facilitated by the government. These NGOs could innovate and scale their models, precisely because they operated within a framework shaped by governmental vision and collaboration.

Moreover, the government has adeptly navigated international waters to secure partnerships and financial aid aimed at bolstering the microfinance ecosystem. By aligning the sector's objectives with global agendas like the UNSDGs, Bangladesh has attracted international funding and expertise. These resources,

channeled through governmental agencies, not only augment domestic microfinance initiatives but also introduce a variety of best practices from around the world.

The government's multifaceted role in microfinance made a far-reaching impact on the nation. It has catalyzed employment, simplified the market access for the marginalized, offered more reasonable interest rates in comparison to traditional moneylenders, and generated positive effects on sectors like agriculture. In sum, the story of microfinance in Bangladesh is not just a narrative of financial inclusion but a testament to national achievement under the aegis of insightful governmental leadership.

## Microfinance and Rural Development

### Case studies of microfinance's impact on rural communities

#### A. Governmental vs Non-Governmental Microfinance

Mazumder's 2022 study was a critical research project that sought to separate the effects of governmental and non-governmental microfinance initiatives on rural living in Bangladesh. This extensive study discovered a lot of information through rigorous procedures incorporating both

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qualitative and quantitative data collected from 300 microfinance recipients and 200 control respondents. It was discovered that, while both governmental and non-governmental microfinance projects had a favorable impact on numerous aspects of rural life, from education to health, non-governmental programs had a more significant impact. Accordingly, NGO-based microfinance programs have a 30% higher success rate in skill acquisition compared to government-based programs. The NGO-based initiatives displayed regional competence, flexible repayment terms, and stronger community contacts, making them more effective in achieving their goals.

**B. Micro Financing Management**

The 2019 Hassan and Islam study was a landmark piece of research that went thoroughly into the managerial practices and structural features of microfinance in Bangladesh, rather than merely the financials. The study revealed the enormous effect that well-managed microfinance programs may have by surveying a wide range of variables such as leadership, governance, and stakeholder involvement. The researchers presented a persuasive case that good management might dramatically improve results in a variety of industries. These vary from poverty reduction and healthcare to raising societal standards and assisting women in entrepreneurship. The report

essentially outlined how, when handled successfully, microfinance efforts may serve as a cornerstone for diversified economic and social growth in Bangladesh.

**C. Grameen Bank's Impact**

Hassan and Islam examined the Grameen Bank's activities in Bangladesh's Tangail area in their ethnographically driven 2019 study. This extensive research included conducting in-depth interviews with 120 female borrowers and 12 bank workers in order to gain a more nuanced picture of the organization's impacts. Women reported not just improved financial circumstances, but also increased personal autonomy and financial literacy abilities. This has a knock-on effect on their families' quality of life. However, this was hardly a rosy assessment; the study also raised some concerns. Notably, several borrowers experienced stress as a result of the Bank's high interest rates and rigorous repayment requirements, which occasionally strained family finances and relationships, adding another layer of complication to the Bank's overall social effect.

**D. Rural Development Schemes**

Rao's comprehensive 2020 research intended to give a



macro-level assessment of how rural development programs, such as microfinance, impacted the lives of Bangladesh's rural poor. The study discovered a considerable favorable movement in several economic metrics by interviewing over 1,020 individuals who had firsthand experienced these programs. These enhancements ranged from simple measures like food security to more complicated indicators like kid enrolment in school and community health data. Rao's analysis was essential in pushing for the continuous evolution and refinement of rural development initiatives due to its data-driven approach. It proved conclusively that when these programs are well-designed, they can be significant levers for broad-based economic growth and social development.

### E. Sylhet Study

The microfinance research in Sylhet was more than just a local evaluation; it was an investigation into how such financial models may affect a whole region's economic environment. The survey, which involved a diverse range of community members, discovered that an amazing 73% of respondents experienced notable changes in their economic situations as a result of involvement in microfinance programs. Many reported huge increases in small company investments, dramatic gains in personal and communal savings, and even the development of new job prospects. Sylhet acted as a case study for the transformative impact of microfinance in supporting regional economic growth, throughout Bangladesh.

## Role of Microfinance in Agricultural Development in Bangladesh

- In Bangladesh, the importance of microfinance in promoting agricultural growth cannot be emphasized. According to Ahmad's 2020 study, microfinance is more than just a loan facilitator; it also acts as a foundation for increased employment and agricultural productivity. This is critical in a country where agriculture is not just a sector but the backbone of the economy, employing a sizable portion of the people. According to Khalily's 2020 report, microfinance has been a vital tool in propelling the country's economic growth, particularly in agriculturally reliant communities.
- Another important factor to consider is the role of Microfinance Institutions (MFIs) in fostering financial inclusion. According to Khalily's 2020 report, approximately 43% of all households in Bangladesh now have access to critical financial services as a result of MFIs' broad reach compared to only 20% in 2010. Given that many of these households formerly operated outside of the official financial system, this is a tremendous achievement.
- In Bangladesh's loan market, there is a clear division between conventional banks

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and microfinance institutions. According to Khalily's research, although banks are mostly concentrated in urban areas, MFIs are significantly more concentrated in rural areas of the country. This regional concentration has enabled MFIs to tailor their services to the specific requirements of rural areas, resulting in a more inclusive financial environment.

- In the future, a growth in the reach of microfinance, as well as an increase in the size of loans supplied, is expected to have far-reaching and significant consequences. According to Khalily's research, these changes are expected to not only alleviate poverty but also increase food security. Furthermore, the ripple effects of these improvements are predicted to benefit the nation's wider economic growth criteria.

- The conclusions of Khalily's 2020 research are more convincing when data from Bangladesh's northwestern areas is considered. The study found that when microfinance is supplemented with a range of non-financial services, the outcomes increase dramatically. The study shows that this multifaceted strategy has achieved significant progress in promoting financial inclusion, improving food security, and successfully decreasing multidimensional poverty in these locations.

**Microfinance and Urban Development in Bangladesh**

**Role of microfinance in supporting small businesses in urban areas**

**A. Access to Finance**

Microfinance has played a transformational role in

enhancing financial inclusion in Bangladesh's urban environment. Rahman's 2006 study showed that approximately 40,000 small businesses in Dhaka gained access to microloans. Further, these loans led to a 30% increase in employment and a 25% improvement in the living standards of loan beneficiaries. Moreover, the study reported a 22% increase in business sustainability and a 24% expansion in business size among recipients (Rahman, A., 2006).

**B. Gender Empowerment**

In Bangladesh, traditional banking often fails to address the financial needs of women. Grameen Bank, however, has initiated change. Yunus' 2007 research indicated that as much as 80% of microloans were given to women. These loans had an astounding 98% repayment rate. The same study found that the businesses started or expanded with these loans witnessed a 20% annual growth, a 10% boost in income, and an 18% increase in women's participation in decision-making at the family level (Yunus, M., 2007).

**C. Scaling Businesses**

Beyond the initial investment, small businesses in urban areas require additional resources for

growth. Siddiqi's 2004 study revealed that businesses with good repayment histories secured loans 25% larger than their initial ones. The consequent growth included a 20% increase in production, a 15% surge in revenue, and a 12% rise in employment. Also, 18% of these businesses entered new markets, and 16% improved their technology or equipment (Siddiqi, M. W., 2004).

#### D. Skills Development

Microfinance institutions like ASA offer more than financial assistance; they provide skill training programs as well. Rahman's 2006 study found that 55% of loan beneficiaries participated in skills training, resulting in a 20% higher profit margin, a 15% growth in customer retention, and a 14% improvement in market reach. Additionally, these businesses had a 21% reduction in operational costs and a 17% increase in inventory turnover (Rahman, A., 2006).

#### E. Affordability

The economic rationale behind opting for microfinance is also worth noting. According to Chowdhury and Bhuiya (2004), there was a 15% decrease in overall indebtedness among urban small business owners. As many as 70% of the borrowers switched from

local moneylenders to microfinance institutions. The study also indicated an 18% growth in business sustainability and a 20% reduction in bankruptcy rates due to lower interest rates (Chowdhury, A. M. R., & Bhuiya, A., 2004).

#### F. Innovation

Finally, innovation is paramount in overcrowded urban marketplaces. Research by Imai and Azam (2012) reported that businesses utilizing microloans observed a 10% annual growth in diversified product lines, a 12% increase in market reach, and an 8% rise in customer satisfaction. Moreover, there was an 11% increase in innovation and a 9% increase in operational efficiency. The same study also pointed out that businesses saw a 13% growth in overall competitiveness and a 7% rise in exports (Imai, K. S., & Azam, M. S., 2012).

#### Impact on urban poverty reduction

##### A. Immediate Impact on Households

Microfinance has had an undeniable impact on individual households, particularly among women in urban areas of Bangladesh. Rahman's 2006 study illustrated this impact, revealing that 72% of women in Dhaka who received

microloans experienced a 20% rise in household income. Furthermore, 80% reported improved nutrition and 65% could afford better education for their children. Even more compelling, the study reported a 30% decrease in gender-based violence and a 45% increase in women participating in household decision-making (Rahman, A., 2006).

##### B. Economic Upliftment in Communities

Beyond the individual benefits, microfinance has a broader economic ripple effect on communities. Islam and Maitra's 2012 study suggested a 25% increase in local GDP in communities where microfinance programs were actively implemented. The study also noted a 17% decline in poverty rates, a 20% increase in school enrollment rates, and a 23% uptick in public health indicators, thereby reflecting an overall economic upliftment in urban communities (Islam, A., & Maitra, P., 2012).

##### C. Employment Generation

The economic benefits of microfinance in urban Bangladesh aren't just theoretical; they result in tangible job creation. According to Yunus in 2007, 150,000 jobs were created in Dhaka alone due to small businesses fueled by



microloans. These businesses were responsible for a 20% drop in local unemployment rates. Furthermore, the study indicated a 25% wage increase among employees of these microloan-funded businesses and a 30% increase in non-family labor participation (Yunus, M., 2007).

#### **D. Empowering Women**

Women's empowerment has been a central theme in Bangladesh's microfinance programs. Khandker's 2005 study showed that 85% of women who received microloans attained some level of financial independence. This autonomy translated into a 40% increase in women's say in family healthcare decisions and a 35% increase in school attendance rates among girls in the

household. Moreover, the study found a 33% improvement in maternal health and a 30% reduction in child malnutrition rates (Khandker, S. R., 2005).

#### **E. Financial Inclusion**

Chowdhury and Bhuiya's 2004 study illuminate the critical role microfinance plays in financial inclusion. The study showed that 90% of loan recipients had no prior access to formal financial institutions. Post-loan, there was a 60% increase in these individuals using additional banking services. Moreover, the study indicated a 25% improvement in financial literacy among loan recipients, a 15% increase in asset accumulation, and a 20% reduction in local crime rates due to economic stability (Chowdhury, A. M. R., & Bhuiya, A., 2004).

## **Challenges and Opportunities**

### **Challenges faced by MFIs in Bangladesh**

#### **A. Over-Indebtedness**

The issue of over-indebtedness stands as a primary challenge for MFIs in Bangladesh. The proliferation of such institutions, as a result of their initial successes, has led to borrowers taking loans from multiple sources. This not only heightens the credit risk but also increases the default rates, thereby affecting both the borrowers and the long-term viability of MFIs (Schicks, J., & Rosenberg, R., 2011).

#### **B. High Operational Costs**

Another challenge for MFIs in Bangladesh is the high operational expenses, largely owing to manual and labor-intensive processes required for microloan management. Frequent collections and small loan amounts add to the operational inefficiency. This necessitates higher interest rates, which in turn partially undermines the purpose and benefits of microfinance (Ahmed, S., & Chowdhury, M., 2009).

#### **C. Urban vs Rural Focus**

MFIs have typically centered their activities on rural communities. As urban regions in Bangladesh

rapidly expand, MFIs find it increasingly difficult to adapt their models to the intricate economic conditions of urban living. The movement of people from rural to urban areas creates a disconnect between MFIs and their traditional customer base (Khan, M., & Rahaman, M., 2007).

#### D. Regulatory Issues

The regulatory framework in Bangladesh has been inconsistent, often leaving MFIs in a precarious situation. This unstable regulatory environment adversely affects investor confidence, a critical element for scaling up operations (Rahman, A., 2006).

#### E. Criticisms and Social Conflicts

Despite the potential benefits, microfinance in Bangladesh faces criticism for its high borrowing rates, which, although lower than traditional moneylenders, are considered exploitative (Morduch, J., & Haley, B., 2002). Additionally, the group-lending model often used by MFIs can lead to social conflicts. The co-responsibility for loan repayments creates a pressure-cooker environment, potentially causing tension and conflict among community members (Rahman, A., 1999).

#### F. Lack of Long-term Development

Critics further argue that the loans offered by MFIs are often not sufficient to bring about meaningful, long-term economic development. Many borrowers use these loans for consumption rather than productive investment, perpetuating a cycle of debt without significantly improving their standard of living (Karim, L., 2008).

#### Opportunities for MFIs in Bangladesh

##### A. Digital Technology

One avenue for overcoming some of these challenges lies in embracing digital technology. The adoption of digital platforms can reduce operational costs, enhance transparency, and possibly bring down interest rates. The success of mobile financial platforms like bKash offers a promising blueprint for digital transformation (Maurer, B., 2015; Tsai, K., 2017).

##### B. Diversification of Loan Products

Another promising direction is the diversification of loan offerings. Specialized loans in sectors like education, healthcare, or housing could not only cater to various economic activities but also significantly lower the risk of over-indebtedness (Ahmed, S., & Chowdhury, M., 2009).

#### C. Focus on Urban Poor

Expanding services to include the urban poor offers an untapped market for MFIs. Tailoring financial products to the economic realities of urban living can be a significant area for growth (Khan, M., & Rahaman, M., 2007).

#### D. Collaborations

Partnerships between governmental and non-governmental organizations can be instrumental in overcoming challenges. Such collaborations can help in talent development and training, thereby adding value to the financial services provided by MFIs (Rahman, A., 2006).

#### Microfinance and Sustainability in Bangladesh

Microfinance made more visible contributions to SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth). It is yet expanding into areas such as climate resilience (SDG 13) and Education (SDG 4).

Poverty alleviation (SDG 1) is a critical area of influence. Grameen Bank's concept of giving microloans with no collateral has had a significant influence on poverty alleviation (Yunus, M., & Weber, K., 2007). Other organizations, in addition to Grameen Bank, have embraced this objective,

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including ASA (Association for Social Advancement) and BRAC. These organizations provide specialized microcredit programs aimed at certain industries such as agriculture, aiding impoverished farmers to increase production, secure livelihoods, and, as a result, battle hunger (SDG 2) (Sinha, S., & Matin, I., 1998).

Microfinance institutions have achieved remarkable progress in the field of gender equality (SDG 5). Microloans are frequently made to women, boosting female entrepreneurship and helping to gender equality. BRAC's many

initiatives, which include vocational training as well as credit, empower women both socially and economically (Mahmud, S., & Johnstone, J., 2011).

Furthermore, by extending financing to small businesses, microfinance actively supports decent labor and economic growth (SDG 8). Case studies show that microloans frequently result in job creation, as small enterprises become stable enough to hire more employees (Ahmed, S., & Chowdhury, M., 2009).

Furthermore, because

Bangladesh is very vulnerable to climate change, the emphasis is moving to environmental sustainability (SDG 13). MFIs such as BURO Bangladesh are beginning to offer 'green loans' in order to encourage sustainable agricultural practices and the implementation of climate-resilient housing solutions (Haque, M., & Burzynska, K., 2019).

Looking ahead, the microfinance business in Bangladesh has enormous development potential, particularly by aligning itself more closely with environmental aims. One of the most promising areas is digital money. Microfinance might go paperless with the development of mobile financial services such as bKash, lowering its environmental footprint (Maurer, B., 2015). This digital change may also improve accessibility, therefore achieving SDG 10 (Reduced Inequality).

A rising focus is now being placed on impact investment, which leads us to SDG 17 (Partnership for the Goals). New alliances are forming among MFIs, government agencies, and foreign funders to pursue projects with social and environmental consequences rather than merely financial returns (Schicks, J., & Rosenberg, R., 2011).

Furthermore, as urbanization in Bangladesh accelerates, there is an increasing demand for financial products designed for urban environments. Working

on affordable housing loans connects microfinance to SDG 11 (Sustainable Cities and Communities).

Finally, as some institutions are beginning to do, microfinance may contribute to lifelong learning opportunities (SDG 4). These loans can have long-term positive effects on communities by guaranteeing that more youngsters attend school rather than work (Rahman, A., 2006).

## Conclusion

Microfinance has arisen as nothing less than a transforming phoenix in Bangladesh. It formerly confronted insurmountable & mammoth amounts of poverty and social inequity. Its spectacular ascent since Grameen Bank's pioneering start in 1983 is a monument to the tenacious spirit of a people that overcome poverty and not succumbed to hardship. Grameen Bank, BRAC, ASA, and BURO Bangladesh are not simply organizations; they are dream architects and destiny sculptors. They've composed such powerful financial symphonies that their echoes can be heard from far beyond Bangladesh, resonating through the halls of global socioeconomic thought. But this is no ordinary domestic dispute. No, Bangladesh has left the world with a model—a golden paradigm that incorporates financial inclusion, poverty eradication, and even the high principles of gender equality and environmental sustainability outlined in the

UNSDGs. But, if history has taught us anything, it is that setbacks should be viewed as stepping stones to reach higher heights overcoming hurdles. The sky is ablaze with the colors of creativity and collaboration as we gaze into the sparkling future. This isn't just about numbers or measurements; it's about Bangladesh's heartbeat becoming stronger as days pass over. Microfinance is no longer just a business; it is at the heart of a national revival. Let it be known that the microfinance miracle is not a passing fad; it is Bangladesh's everlasting symphony—a victorious homage to a nation's persistent pursuit of a more egalitarian, sustainable, and prosperous destiny.

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## Evolverment of Fintech: Fintech Compliance can Play a Strong Role in Combating Fraud and Corruption in Banks and Financial Institutions

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### I ntroduction

Fintech is a combination of financial transaction and technology. It refers to any app, software, or technology that allows people or businesses to digitally access, manage, or gain insights into their finances or make financial transactions swiftly. Over the last decade, as consumers increasingly adopted digital tools, fintech arose as a means to help consumers to address financial challenges and make progress toward financial goals. In turn, consumers have come to rely on fintech for a range of uses—from banking and budgeting to investments and lending, from increasing efficacy to combating corruption—as well as for its tangible multifarious usage benefits. The modern digital world is advancing at supersonic speed with billions of financial transactions in banks and financial institutions. With the increase of volume of financial transactions, the banks and financial institutions (FIs) are encountering risks, frauds and corruptions. Financial technology (Fintech) has been emerged to speed up transactions accurately, to increase efficiency and also to combat and encounter corruptions and frauds.

Prevent, detect and manage fraud and combat corruption across the finance industry, viz., banks and financial institutions (FIs), making smarter decisions, increasing return on capital and

driving business performance are the key indicators that are thriving management. Banks and FIs are likely to become exposed to diverse frauds and corruptions involving various squatters like: employees, customers, fraudulent hackers and those with whom it has business dealings. Smart-alecky criminals make use of latest sophisticated skills and advanced technologies to perform unlawful activities in the financial sector. Such activities are often associated with money laundering, embezzlement, evasion of sanction, and illegal transfer of funds for tax avoidance and financing terrorism. Fraud and corruptions can be engineered by the outsiders, with or without connivance by the employees or by the management. Involvement amongst the employees in committing a fraud constitutes a more serious threat as banks' records and vouchers are tempered with rendering fraud detection difficult. This can expose a financial institution to various risks in terms of operations, legal affairs, regulations and reputations. In order to prevent any fraud or any corruption, banks and FIs should establish sound and prudent practices in Good governance, Risk management & Compliance (GRC) and management by developing a strategy, approving a policy and implementing procedures of Fintech. Fintech compliance can play a significant role in

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detection and prevention of corruptions in banks and FIs.

Fintech holds the key to unlocking new and better approaches to compliance. With technology at their core, fintech can leverage their expertise to develop new processes, procedures and controls that drive efficiency, maximize resources and focus on precipices. Some technology giants already have announced their own anti-corruption and transparency initiatives, often leveraging tools such as cloud computing, data visualization, AI and machine learning, among others, are to detect and deter corruption. In addition, the use of data can illuminate hidden patterns and relationships that may be of fright. Similarly,

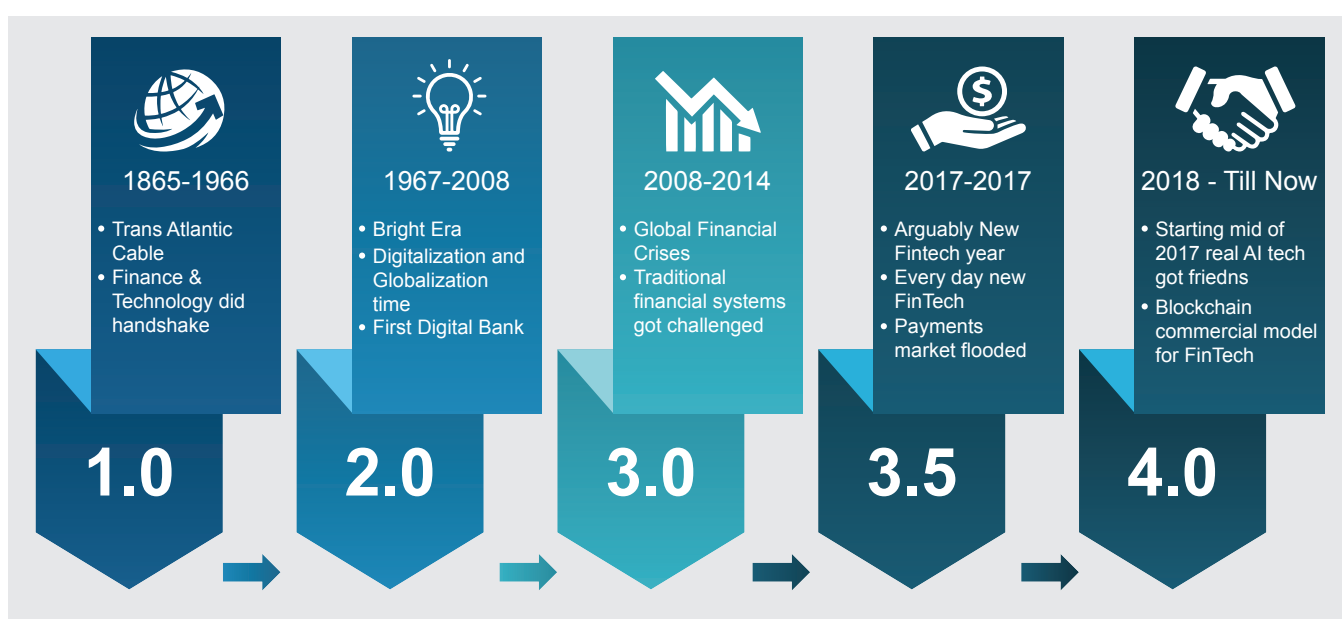
employing cloud computing, data visualization, AI and machine learning can help aggregate and analyse enormous and complex amounts of data, exposing red flags that would have otherwise gone unnoticed with traditional methods.

#### Brief History of Fintech

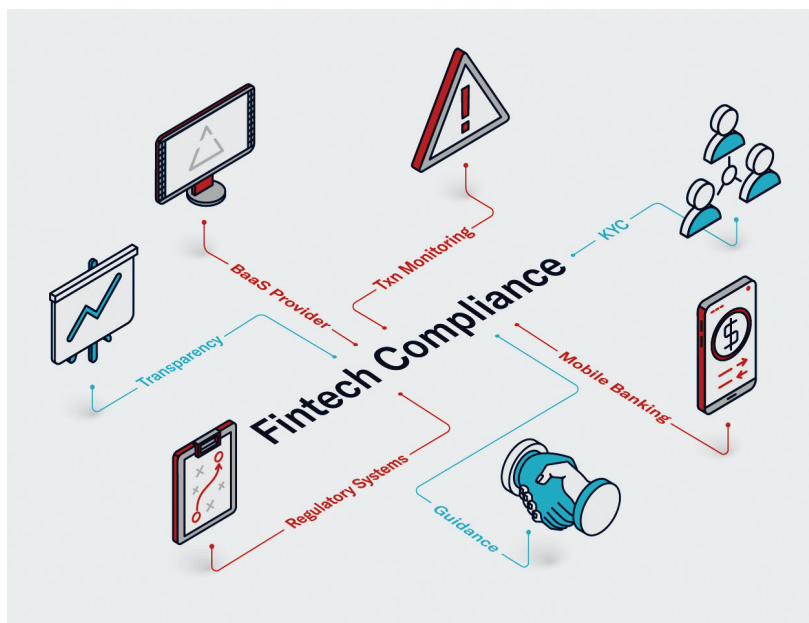
Fintech history (Fintech 1.0) started back in the 19th century and even before that. In 1860, a stratagem called PENTELEGRAPH was established to verify signatures by banks. Historians admit 1866 as the first valid fintech footprints. This was the year the transatlantic cables were setup leading to an era of creating network infrastructure and

connections around the world. Setting up of electronic fund transfer through Telegraph & Morse code in 1918 by Fedwire led to first opening step in digitalization of money. This was followed by introduction of Credit Card by Amex in 1958. With introduction of Screen based stock data by Quotron in 1960, the financial market took the huge gait, one major successful implementation of early fintech thoughts.

Fintech 2.0 is well-thought-out to begin with the introduction of ATM machine by Barclay's in 1967. Just the year before in 1966, Telex had replaced Telegraph for transferring information across the world; thus, heralding an era of



(Source: AILabPage)



connected financial transactions and communication. The major fintech growth came in 1971 with setup of NASDAQ as the first electronic stock market. It changed the way bidding is done and modernized the IPO process significantly. This is considered as one of the most important Fintech developments of all times. This was followed by introduction of SWIFT in 1973, another revolutionary service standard. The 80's saw the development of electronic trades and online banking systems. Tradeplus (E-trade) introduced the E-trade for the first time in 1982 for its clientele. This was trailed by NBS /WF offering online banking to their customers by 1983/1985.

Fintech 3.0 had emerged to tackle the 2008 crisis due to

recession. These requirements and developments led to a new era of financial services and to FINTECH as we know it today. Two major events were development of Bitcoin in 2009 as the first cryptocurrency and P2P payment systems in 2011. The western world has been churning new developments and hundreds of new unicorns since then. BaaS, RegTech, Digital Lending, InsurTech, Wallets and many more segments are seeing growth and innovations on a daily basis. 3.5 started in the year 2014 onwards saw a non-linear rise of two most populous countries in Fintech; namely China & India. Devoid of large chains of complex physical banking infrastructures, these two countries saw a very fast paced growth in the Fintech sector.

This along with Fintech developments in Africa is considered as the growth engine for 2014-2017. This is led by SaaS developments like financial software by Indian IT companies, m-Pesa in Africa, Payment banks in India, Alipay in China to name a few. Fintech 4.0 started in the year 2018 with AI techniques and Block Chain and continuing till now.

### What's Fintech Compliance?

Fintech compliance refers to the obligation of financial service institutions, mainly banks and FIs, to adhere to regulatory laws regarding data privacy, consumer safety, security, protection from fraud, corruption and the use of financial technology in general. Ultimately, these laws protect consumers and investors in the financial services industry to a great extent. Most of the developed, developing and under developed countries have specific laws and regulations to ensure and enforce Fintech compliance, Laws, regulations and guidance's change from region to region, from country to country under different government jurisdictions. Different regions have their own regulatory bodies that manage the legislation and enforcement of laws in regards to Fintech solutions. Typically, these laws protect consumers, and set out rules for how supervision and regulation will be conducted.

**Evolution of Fintech:**

**Fintech Compliance can Play a Strong Role in Combating Fraud and Corruption in Banks and Financial Institutions**

# FINTECH COMPLIANCE CHECKLIST



1

## PREPARATION

- Assess company vulnerabilities ✓
- Develop, implement and enforce compliance program in accordance with relevant regulations ✓
- Appoint a dedicate compliance officer to provide oversight and manage the compliance program ✓

2

## MEASURES TO BE IMPLEMENTED

- Customer due diligence ✓
- Sanction screening solution ✓
- Suspicious activity reports process ✓
- Transaction monitoring screening ✓

3

## CONTINUOUS COMPLIANCE MONITORING

- Upskilling/training employees on relevant regulatory measures ✓
- Integrating automated processes with company operations ✓
- Managing and scaling compliance programs in line with regulations ✓

Source: Comply Advantage

(Source: CFTE February10, 2022)

### How Does Fintech Combat Frauds and Corruptions?

**Know Your Customer (KYC) and Know Your Business (KYB) Financial Regulations to Squelch Fraud**

KYC is an integral part of fintech. The KYC check is a process for all financial institutions and other financial service organizations to assess, monitor, check and verify the identity, source of income, nature of business of customers. It helps

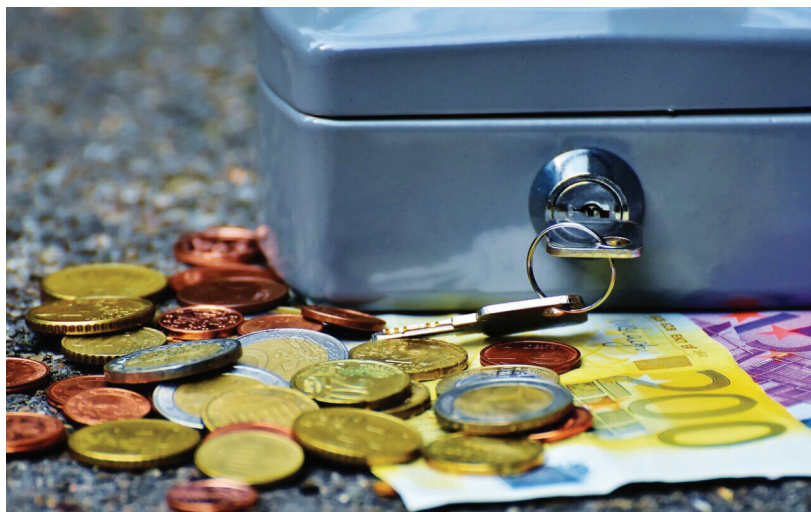
protect and safeguard customers and business partners from fraud. To comply with KYC, customers need to provide government-issued credentials such as National Identity Card that verifies their identity and official documents for proof of address. Credentials eligible for identity verification include ID card verification, face verification, biometric verification, and document verification. Compliance with KYC regulations helps prevent money laundering, terrorism financing, and more run-of-the-mill fraud schemes. By authenticating a customer's identity and intentions when the account is opened initially and then monitoring transaction patterns, financial institutions can more accurately pinpoint suspicious and distrustful activities.

Bangladesh Financial Intelligence Unit of Bangladesh Bank (BB) issued guidelines for the financial institutions including banks, non-bank financial institutions, insurance companies, capital market intermediaries, MFS, DFS and the other companies licensed by the Bangladesh Bank. This is in accordance with the power conferred in the Section 23(1)(d) of the Money Laundering Prevention Act, 2012 and the Section 15(1)(d) of the Anti-Terrorism Act, 2009 on eKYC. Compliance of BB's guidelines will act as a strong deterrent to fraud and corruption in banks and FIs.



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that were previously impossible to challenge. One of these issues is to combat corruption. Financial fraud methods are becoming more sophisticated and the techniques to combat such attacks also need to evolve. Financial institutions have been investing on preventing and combating fraudulent attacks but the extent and nature of financial fraud continues to change. While eliminating financial frauds is not a practical goal, there's a need to grow the ways fraudulent attacks are dealt with. Clearly, the paradigm needs to change and big data, it appears, is a novel and potentially an effective weapon. Big data has brought with its novel fraud detection and prevention techniques such as behavioural analysis and real-time detection to give fraud-fighting techniques a new perspective. Analytics allow financial institutions to gain a

deeper understanding of suspicious activities, reap patterns and locate unusual transactions that are helpful in preventing fraud. Financial institutions are slowly waking up to the new ways of fighting fraud.

#### **A Future Without Malfeasances: The Latest Accelerations in Fintech that Keep Money Safe in Finance Industry**

According to the advisory firm Aite-Novarica Group, 47% of the American population experienced some form of financial identity theft in 2020. CNBC recently reported that \$5.8 billion was lost to fraud in 2021 — a 70% jump from 2020. And it's not just an American issue — nearly half of the respondents in a Canadian study claimed to have been victims of financial fraud at some point in their life. Luckily,

technology is advancing in various active ways, letting banks, credit card companies and other financial institutions to better defend our funds and our identities.

Here's a glimpse at a few types of Fintech advances being implemented for security purposes in the finance industry globally:

#### **Artificial Intelligence (AI) and Financial Security: Credit Card's Premeditated as Personal Monetary Shield**

Artificial intelligence (AI) is one of the strongest tools of Fintech. Credit card companies have been using AI to help sense and prevent cases of fraud. Hackers and fraudsters target credit cards on a regular basis — it's one of the most commonly targeted areas for cybercriminals — but implementing AI allows the card companies and card holders receive immediate alarms at the slightest sign of unfamiliar activity. As an example, in 2019 Visa used AI to identify fraudulent activity by examining more than 500 transaction attributes — in real-time. About \$25 billion worth of fraudulent transactions were identified that year, thanks to AI paraphernalia.

American Express has been using AI technology since 2010, going so far as to turn all of its risk management systems over



to AI in 2015 — much earlier than most others. Amex's VP for risk management has said that their digital resolution rate for fraud has improved by 100% since they implemented their AI-based fraud solutions in 2014. The quicker we and the credit card companies are alerted to any signs of fraud, the faster we can block the criminals responsible and work to set things straight. Plus, the more information we add to the AI algorithms, the better equipped we are to detect fraud in the future. AI is the weapon we need to fight fraud and corruption. As time goes on, the better the algorithms become — with every passing day — customers of banks and FIs can feel innocuous in the unsafe world of financial swindle.

### **Biometrics is de facto Now, It's no Longer Space-Age**

Of course, biometrics is a system of AI, but it warrants individual attention here. Biometrics is an area that uses our biological measurements, physical characteristics and physical traits for purposes of identification. Examples of how this is used in security system include: voice recognition, fingerprint scans, facial recognition, iris recognition, vein pattern authentication, and heart rate sensors. There are many sectors, companies and products that use biometric security, including the banking and credit card industries. These methods are especially helpful for ensuring identification and

fighting fraud in the financial industry at before-hand while opening accounts, making ATM transactions, mobile banking, and online banking.

Many banks and FIs have been using biometrics for their customers. For example, TD Bank is encouraging its customers to register for its speech recognition technology, TD VoicePrint, which will enable software to identify the speaker who calls to chat with a customer service representative. The technology works in the background as the customer and service rep converse. Wells Fargo uses something similar. In 2015, The Royal Bank of Scotland ditched the passwords and launched a service that uses fingerprint

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scans to log customers into their accounts. And there's a British bank that trialled a technology that used customers' unique heartbeat rates for identification, it'll be thought-provoking to see where the advances in this field will take us, but it's benign to say biometrics will endure to be an effective device for financial security.

### Cybernetic Credit Cards are Allegiant

Cybernetic credit cards are already known as an important gadget. These unique credit card numbers can be used online or in-person through the digital wallet. And we don't even have to apply for a new credit card in order to use this technology. Frequently, we can

just add our current credit or debit card to our digital wallet and it will automatically be transformed into a virtual card. Some card companies offer the ability to generate a one-time-use virtual credit card, so you can trash the information once you've made a purchase. This adds a whole new level of security to online transactions. Based on this information alone, it's easy to understand why many financial experts predict that we'll all be using cryptocurrency in the not-too-distant future.

### Euphoria in the Future of Financial Security

Fintech is only a small sample of the mind-boggling technological advances being used for security purposes in

the finance industry. As time goes on, financial security technologies will continue to grow and expand, with new knowledge and systems being put in place to make our finances and future safer and more protected. There's always a bit of worry when it comes to the safety of our money, but as each year goes by, we move exponentially quickly in discovering something new in Fintech.

We advanced so far in AI, virtual currency and biometrics in the past 20 years, just imagine where we will be 20 years down the road. We can now convincingly imagine a world where we are financially secured and well-protected and a world where our children and grand-children fear very little about fraud. It might be time to imagine a world without any fraud and corruption in Finance Industry at all due to acute compliance of fintech. The success, however, greatly depends on the use of fintech compliance,

### Huge Bank Scams in Bangladesh Due to Non-compliance of Fintech Guide Lines

"That the bank and non-bank financial sector of Bangladesh has long been devilled by scandalous corruption in the form of deliberate loan default, swindling, and money laundering is now common knowledge. While the latest

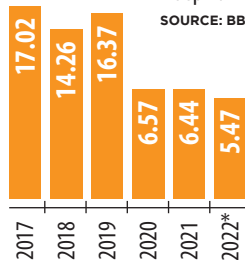


### EFFECTS OF FEEBLE RECOVERY

- Reduction of profit
- Erosion of capital base
- Deterioration of financial health

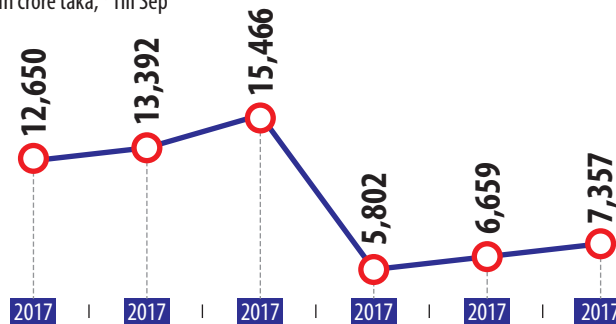
### CASH RECOVERY OF DEFAULT LOAN

In % of total classified loans; \*Till Sep 2022



### CASH RECOVERY FROM DEFAULT LOANS

In crore taka, \*Till Sep



### WHY LOAN RECOVERY DECLINES

- Rising scams
- Business slowdown amid global crises
- Relaxed loan repayment rules

(Source: The Daily Star)

revelation of massive embezzlement at the Islami Bank, together with at least three other banks, may have shocked and awed observers, it is just the tip of the iceberg and only one of the numerous such dirty games of collusive fraud that have been allowed over the years to become a part of the country's bank loan culture.

Like the case of the Islami Bank, the ones involving the Social

Islami Bank and First Security Islami Bank, the earlier scandals involving the Oriental Bank, Farmers Bank, Union Bank, BASIC Bank, Janata Bank, Rupali Bank, and non-bank financial institutions like International Leasing and Financial Services, People's Leasing and Financial Services, FAS Finance and Investment and Bangladesh Investment Finance Company have two things in common. One, none of

the kingpins of the scandals has been brought to account, and two, in almost every scandal, the use of fake and anonymous entities has been the key enabler." (Source: Daily Star, 01 February 2023).

Some fraudulent customers, according to few local dailies, availed loans of billions of Taka from 3 private Islami Banks by providing false information on address of business in recent

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times. These loans are expected to be Non-Performing Loans (NPL) in the near future. Non-compliance of Fintech guidelines of BB by the 3 banks has enabled and abetted the fraud by the fraudulent customers and corrupt management of the concerned banks. Fintech experts opine that simply complying strictly the KYC and KYB requirements as stated in this article, could chaperone the above-mentioned banks from frauds to a great extent.

### Conclusion

From insignia to transfer, there's risk at every phase of the user journey. Successful fintech businesses need end-to-end fraud deterrence that supports

belligerent growth and unlocks actionable insights from a global network of businesses fighting the same battle. Banks and FIs are likely to become exposed to various frauds involving countless intruders like: directors, senior managers, employees, customers and those with whom they have business dealings. Present-day criminals make use of sophisticated skills and advanced technologies to perform unlawful activities in the financial sector. So, banks and FIs need to ensure strict fintech compliance especially while sanctioning loans to customer.

In order to prevent any fraud, banks and FIs need to establish sound and prudent practices in

good governance, Risk management & Compliance (GRC) and management by developing a strategy, approving a policy and implementing a procedure in addition to fintech compliance. The banks and FIs can easily minimize fraud risks within its integrated risk management framework. It should be compulsory to identify, assess and quantify such risks and implement the risk mitigation measures in order to minimize the possibility of occurrence of any event that may affect the banks and FIs. Stake-holders of banks and FIs and central bank need to ensure fintech compliance at every level of activities.

# Comparative Analysis of Cost Efficient, Revenue Growth and Non-Financial Benefit Performance of Green Banking: Evidence from Commercial Banks of Bangladesh

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## Abstract

Green banking is crucial for fighting against the vulnerability of environment. Commercial banks of Bangladesh disclose green banking performance to comply with regulatory requirement of central bank which generally maintains average level of performance. The aim of the study is to find the status of three key green banking initiatives-cost efficient activities, revenue growth activity, and non-financial benefit performance. The study includes state owned and private commercial banks in Bangladesh. All public information regarding green banking activities is considered for data analysis. The study has found that the overall green banking disclosure is not satisfactory and highly concentrated in revenue growth performance

## Keywords

Green Banking, Climate Change, Global Warming, Revenue Growth.

## Introduction

Green banking (GB) has attained worldwide attention since it plays a vital role in financing economic activities in attaining the objectives of sustainable growth and development for the economy (Nabi et al., 2016). Bangladesh, a country of emerging economy with high growth potential is facing numerous economic,

social-political and environmental challenges, like air pollution, water pollution, land degradation, loss of bio-diversity, unplanned urbanization, poor waste management, coastal erosion, natural disasters, deforestation which are now in alarming stage (Belal et al., 2015), and which made Bangladesh vulnerable already. This study examines the extent of disclosures of GB performance for ensuring efficiency, income growth and external engagement for environmental protection and has high implication in Bangladesh. The study contributes new knowledge in several dimensions. It has used regulatory setting for measuring extent of disclosure of GB activities & focuses on GB implications on both internal operations and external engagement.

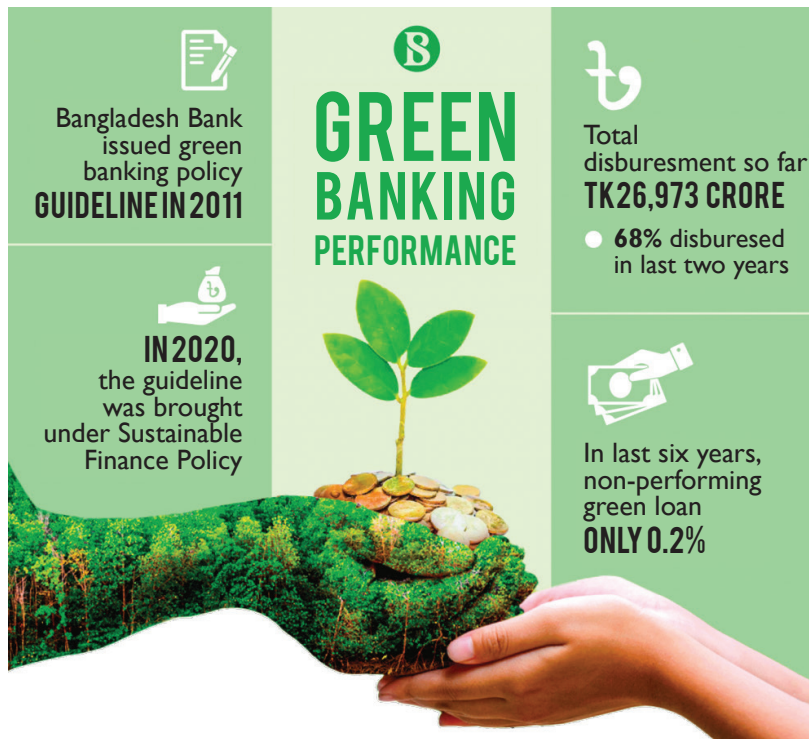
Next parts of the study provide literature from prior studies on this issues, sample collection and data analysis, findings and future space for research.

## Literature Review

Banking sector of Bangladesh after the launching of green banking policy in 2011, is required to incorporate green financing practices in both in-house and external operations. Bangladesh Bank (BB) is committed to providing consistent support and guidelines to all commercial banks to ensure environmentally friendly practices (Khan, 2012; Khatun et al., 2021).

**Comparative Analysis of Cost Efficient, Revenue Growth and Non-Financial Benefit Performance of Green Banking:**

**Evidence from Commercial Banks of Bangladesh**



All schedule banks have formed sustainable finance unit as well as sustainable finance policy. According to BB green banking policy, all banks need to take effective measures to conduct environment friendly banking activities in Bangladesh. BB has also issued a common format to report GB activities in an uniform way and regularly submit GB report to Bangladesh in every quarter. (BB, 2012)

The prior studies on GB highlights environmental regulation, green banking performance and benefits of green banking. According to Porter & Van der Linde, (1995a,1995b) perfectly designed environmental policy

enables firms to embrace innovation in products, process and services. Higher green performance can reduce operation cost and increase efficiency (Ambec & Lanoie, 2008). Improved green performance leads to revenue growth and provide various non-financial benefits such as positive stakeholder perception. Green banking depicts environmental sustainability by modifying internal activities and business models. Such alteration and modification in operation lead to cost saving, energy saving, reduction in environmental pollution, improved efficiency, growth in revenue and customer satisfaction, positive

stakeholders' perception (Bose et al., 2021).

The GB activities serves three key purposes for banks- cost efficiency, revenue growth and non-financial benefits. GB introduces efficient energy usage, lower consumption of paper, water, gas and electricity, which lead to cost efficiency and savings. GB also introduces green financing, online banking, SMS banking, ATM cards, which leads to decrease cost and increase revenue. On the other hand, GB performance will not only directly affect revenue growth but also create positive stake holder image such as plantation, beautification, networking and award winning. Surprisingly a very few numbers of studies have been conducted highlighting these benefits following GB guidelines. Bose et al. (2021) has highlighted three key performances in their study. Bose et al. (2018) found that issuance of green banking guidelines by central bank positively influence green banking disclosure in Bangladesh and become a routine process for commercial banks. In a very limited study on corporate social and environmental disclosures conducted by Islam (2013) documented that 60% financial institutions disclose information below 60%, only 5% firms disclose 90% of environmental and social issues. The Financial Express (2021) reported that, in recent year the situation is gradually improving, between 2018 and 2019, the number of Bangladeshi companies

producing sustainability reports increased by 36 per cent, which is very encouraging. Masud et al. (2018) found level of environmental disclosures were satisfactory in listed banks regarding green policy, green product and corporate social responsibility expenditures, they also revealed that banks disclosed less information on environmental appreciation, waste management, climate change and global warming issues.

The objectives of the study are to analysis the extent of GB performance by commercial banks under the three key indicators-cost saving, revenue growth and non-financial benefits. The study also provides comparative analysis amongst different banks. The analysis highlights on disclosure rate of different performance, and individual banking disclosure performance.

## Research Design

### Data and Sample

The study covers 32 commercial banks of Bangladesh from 2013 to 2022, of which 4 are state owned and 28 are private commercial banks. So, the study has a sample of 320 bank-years (32x10=320) without any missing annual report. In the total sample 12.50% comprises state-owned commercial banks, and 87.50% of total sample comprises private commercial banks.

### Measures of Green Banking Performance

The study has developed checklist consisting of 13 items for data collection contains three types of environmental issues include cost efficiency, revenue growth and non-financial benefit performance for the purpose of preserving environmental resources. These items are sourced from BB green banking guidelines. Cost efficiency consists of performance relating to a banking firms' cost saving due to undertaking GB activities. Revenues growth comprises performance items that helps banks to generate more revenue and non-financial benefits consisted of performance items from which banking firms derive indirect benefits other than cost saving and revenue growth.

Data has been collected from multiple sources. The study has reviewed Bangladesh bank's circulars and periodicals relating to green banking and sustainable disclosures. The sample in this study covers data from websites, CSR disclosures, directors' report, chairman's statement as contained in the annual report of scheduled bank in Bangladesh Bank.

The study has employed content analysis to quantify sustainability performance disclosures in the annual report of banks. Performance can be measured by using weighted or unweighted approach (Khan et al., 2020; Bose et al., 2021). In unweighted index method -

equal score is assigned for complying with related issues included in checklist, as every performance in the index is considered equally important (Bose et al. 2021). Prior Studies of Ghazali (2007); Muttakin et al. (2018); Muttakin and Khan (2014); Rashid and Lodh (2008) followed this method for measuring the extent of disclosures. The study employs content analysis technique to measure GB practices from the commercial banks' annual report, this procedure is followed by Bose et al. (2017); Bose et al. (2021). A firm is awarded 1 if one item of sustainability was reported in annual report or in separate report and score 0 if it was not reported. The total GB performance score was then calculated by adding the score of all individual items. Ultimate index score was calculated as a ratio of total disclosure score achieved to maximum possible performance disclosure for the firm. A higher score index indicates higher level of disclosures. The study includes 13 items from three categories those are practiced in banking industry. The index formula can be expressed in the following equation:

$$GBD = \sum_{i=1}^n x_{ij} / n_j$$

where, GBD= Green Banking Disclosure Index for i<sup>th</sup> firm

$n_j$  = Number of items expected for j<sup>th</sup> firm, where  $n \leq 13$

$X_{ij}$  = if j<sup>th</sup> items are disclosed for firm i, otherwise

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### Analysis and Findings

The findings of the study are presented through the following tables.

**Table 1: Overall Disclosures of Green Banking Performance**

No. of the banks	Total no. of the items required to disclose by sample banks	Total No. of items disclosed by sample banks	Percentage
32	4160	1861	44.74%

Table 1 presents the overall level of disclosures for all banks for 13 indicators is found 44.74%. Among 4160 items 1861 items are disclosed.

**Table 2: Percentage of Disclosures on Cost Efficient, Revenue Growth and Non-financial Benefit Performance Activities**

GB Performance	Percentage	Mostly disclosed indicators particulars	Percentage
Cost efficient activities	42.58%	Reduction in paper usage	38.72%
		Reduction in gas and water	38.16%
Revenue growth activities	80.94%	Investment in green project	36.68%
		Launching green banking product and marketing	33.84%
Non-financial benefit performance	28.07%	Establishment of Environmental policy	51.95%
		Internal training regarding green banking such as education program for employee	23.00%

Table 2 tabulated that 42.58% of cost-efficient activities were performed and disclosed. within 4 initiatives reduction in paper usage and reduction in gas and water have higher disclosure. It is also found that overall, 80.94% of revenue creating activities are disclosed. Among the three initiatives investment in green projects (36.68%) and launching green product and marketing (33.84%) provide higher level of disclosures. This table also tabulated that overall non-financial benefit performance has disclosed 28.07%. Establishment of green policy and employee training regarding green banking have higher disclosures among 6 initiatives.

Table 3 has tabulated State owned and commercial banks disclosure level. Only 12 banks (37.5% of the sample banks) disclose more than 50% of GB disclosures. Bank Asia scores the highest, which is 64.62% of overall disclosures. IBBL (60%) and Shahjalal Islami bank (59.23%) score second and third respectively. Here Bank Asia has presented 82.50% of disclosures of cost efficiency activities. In revenue growth activities, Social Islami Bank Limited and Standard Bank Limited achieved higher level of disclosures (96.76%). In case of non-financial benefits Islami Bank has scored higher among the sample banks (50%). AIBL

has the lowest disclosure score (14.62%). In case of state-owned banks Agrani Bank provides higher disclosures (43.08%) and Sonali Bank has lower disclosures (15.38%). Table 3 has also presented comparative analysis of GB disclosures of private commercial and state-owned commercial banks. The table results that private banks have higher level of disclosures in line with Bangladesh Bank green banking guidelines. Both categories of banks have showed higher level of disclosure in revenue growth activities, i.e. 82.38% and 74.17%, respectively.

Table 3: Percentage of Disclosures of Sample Banks

Types of Banks	Particulars	Overall Disclosure	Cost Efficiency Activities	Revenue Growth Activity	Non-Financial Benefit Performance
State Owned Banks (SOCBs-4)	Base disclosure	520	160	120	240
	Total disclosure found	204	51	89	64
	Sonali Bank Ltd.	15.38%	0.00%	43.33%	33.33%
	Janata Bank Ltd.	40.00%	35.00%	83.33%	21.67%
	Agrani Bank Ltd.	43.08%	47.50%	86.67%	18.33%
	Rupali Bank Ltd.	30.00%	25.00%	63.67%	16.67%
	<b>% of total disclosures</b>	<b>39.23%</b>	<b>31.87%</b>	<b>74.17%</b>	<b>26.67%</b>
Private Commercial Banks (PCBs-28)	Base disclosure	3640	1120	840	1640
	Total disclosure found	1656	494	692	470
	Bank Asia	64.62%	82.50%	80.00%	45.00%
	AB Bank Ltd.	37.69%	42.50%	66.67%	20.00%
	Al-Arafah Islami Bank Ltd.	14.62%	2.55%	30.00%	15.00%
	BRAC Bank Ltd.	56.16%	37.50%	96.67%	48.00%
	Dhaka Bank Ltd.	54.62%	55.00%	86.67%	38.33%
	Dutch-Bangla Bank Ltd.	40.77%	45.00%	73.33%	21.67%
	Eastern Bank Ltd.	53.85%	62.50%	86.67%	31.67%
	EXIM Bank Ltd.	50.00%	40.00%	80.00%	41.67%
	First Security Islami Bank Ltd.	30.00%	17.50%	56.67%	25.00%
	IFIC Bank Ltd.	30.77%	12.50%	86.67%	15.00%
	Islami Bank BD Ltd.	60.00%	52.50%	90.00%	50.00%
	Jamuna Bank Ltd.	56.15%	65.00%	96.67%	30.00%
	Mercantile Bank Ltd.	49.23%	65.00%	90.00%	18.33%
	Mutual Bank Ltd.	47.69%	75.00%	90.00%	23.33%
	National Bank Ltd.	54.62%	42.50%	93.33%	28.33%
	NCC Bank Ltd.	47.69%	45.00%	93.33%	28.33%
	One Bank Ltd.	28.46%	30.00%	53.33%	15.00%
	Premier Bank Ltd.	41.54%	50.00%	86.67%	13.33%
	Prime Bank Ltd.	41.54%	61.11%	76.67%	21.67%
	Pubali Bank Ltd.	31.54%	17.50%	46.67%	16.67%
	Shahjalal Islami Bank Ltd.	59.23%	57.50%	93.33%	43.33%
	Social Islami Bank Ltd.	56.14%	67.50%	96.67%	28.33%
	Southeast Bank Ltd.	55.35%	55.00%	93.33%	36.67%
	Standard Bank Ltd.	54.62%	65.00%	96.67%	26.67%
	City Bank Ltd.	40.77%	22.50%	93.33%	26.67%
	Trust Bank Ltd.	36.92%	15.00%	83.33%	28.33%
United Commercial Bank Ltd.	40.00%	0.35	86.67%	20.00%	
Uttara Bank Ltd.	38.46%	32.50%	70.00%	26.67%	
<b>% of total disclosures</b>	<b>45.50%</b>	<b>44.12%</b>	<b>82.38%</b>	<b>27.98%</b>	

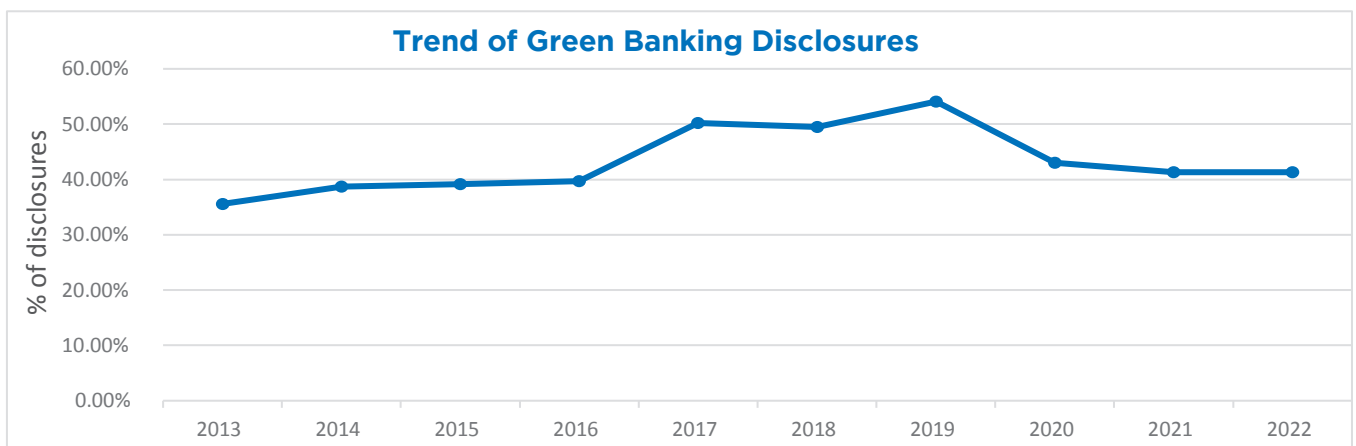
**Comparative Analysis of Cost Efficient, Revenue Growth and Non-Financial Benefit Performance of Green Banking:**

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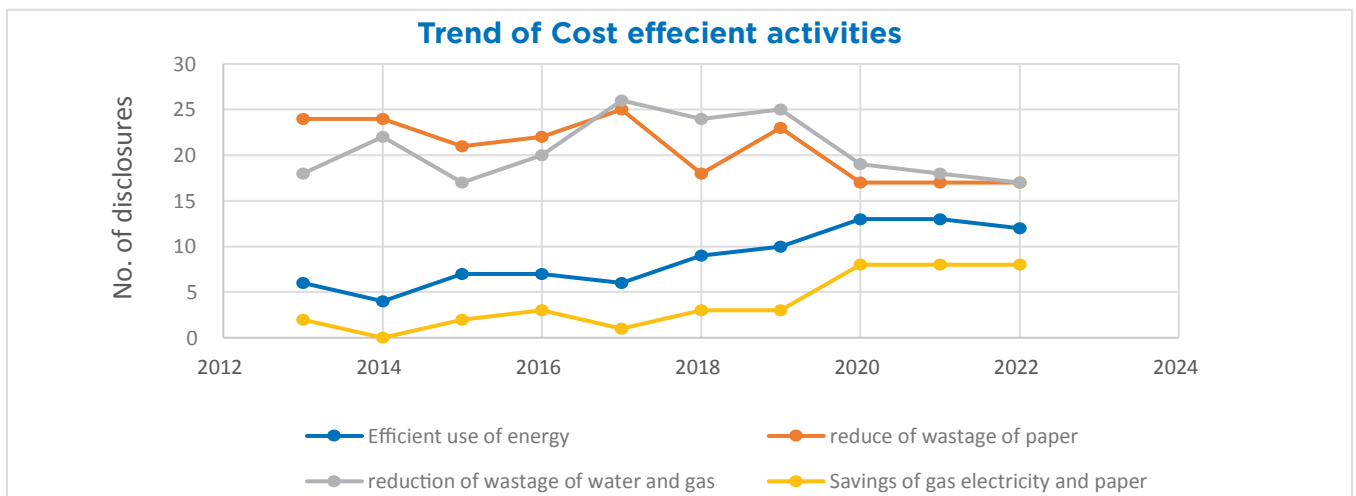
In Graph-I yearly trend of overall disclosure level is presented. In the last ten-years, 2019 had the highest level of disclosures, 54.09%. After 2019 the level of disclosures diminished every year, may be because of pandemic and weak financial conditions of banks. Yearly trend of disclosures of three primary GB initiatives have displayed in graph II, III and IV;

respectively. Among cost efficient activities disclosure, the reduction of wastage of water and gas has achieved highest score in 2017. In case of revenue growth activities, financing in eco-friendly projects and establishment of green banking unit is largely disclosed up to 2019; after that the disclosure regarding green banking unit has sharply

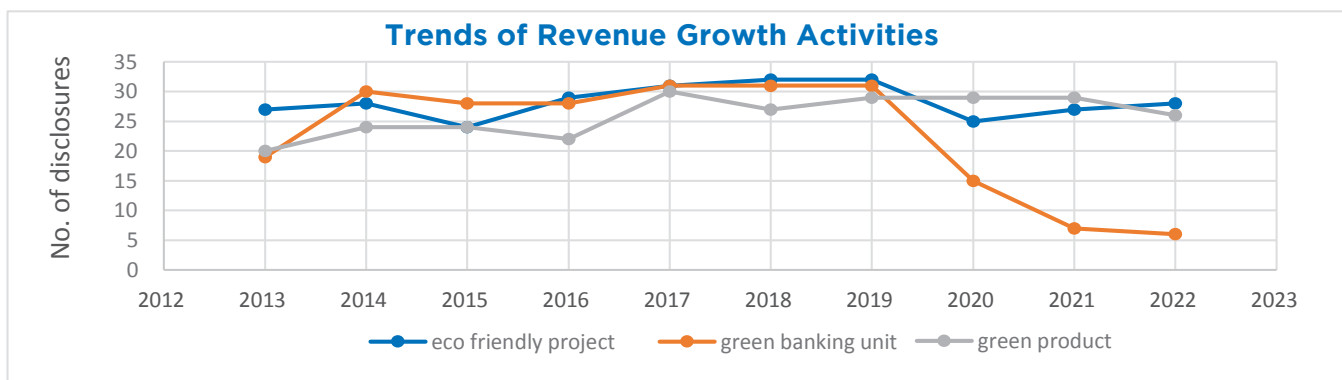
declined. In non-financial benefit performance banks policy and commitments for environmental issues have higher level of disclosures. Disclosures regarding internal training and employee educational program in environmental issues has increased after 2017.



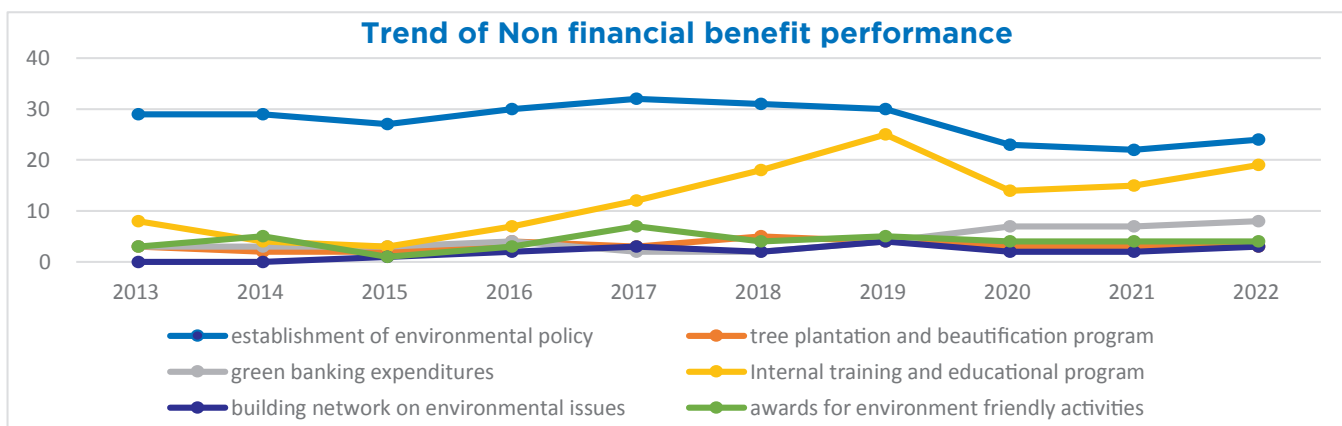
(Graph: I - source: Author's calculations)



(Graph: II- source: Author's calculations)



(Graph: III -source: Author's calculations)



(Graph: IV-source: Author's calculations)

### Conclusion and Recommendations

The study proves that State Owned Banks comparatively disclose less information than private commercial banks. Banks are usually willing to disclose cost efficient and green financing activities, particularly financial benefit performance. This is mainly because bank can relate these activities with their financial performance directly. Green banking activities and disclosures show a diminishing

tendency after 2019. The vulnerable economic condition of banks might have led to such situation. In a regulatory setting this level of disclosure is average and minimal compliance with central bank's GB regulations. The study has also found the disclosures are just a routine work and the information is mostly qualitative. Disclosures related to new mode of financing and innovation is very limited. The overall findings indicate that the GB performance is not satisfactory,

and banks of Bangladesh need a lot of improvements in GB performance especially in efficient use of energy, measuring the result of savings, tree plantation and increasing banks engagement in building network on environmental issues. The study has left space for future study. Future study can consider environmental issues of other business sectors like paper, ready-made garment factory. Further study may consider the reason behinds low level of disclosures.

**Comparative Analysis of Cost Efficient, Revenue Growth and Non-Financial Benefit Performance of Green Banking:**

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**Appendix**

Sl. No.	Green Banking Disclosures Indicators
<b>A</b>	<b>Cost saving benefit</b>
1	Efficient use of energy through adoption of energy saving bulbs, use of solar power system
2	Initiative to reduce wastage of paper through encouraging internal communication by email, using double sided printing and recycling paper, issuance of online bank statement
3	Reduction of wastage of water and gas in banks internal operations-use of water saving taps, sensors and others
4	Result of saving gas, electricity and paper (quantitative)
<b>B</b>	<b>Revenue growth</b>
5	Increasing revenue through financing eco-friendly projects for example bio gas plant, CNG station, brickfield and monitoring clients' environmental initiatives for example ETP, recycling facility, a smoke and gas arresting unit.
6	Establishing green banking unit and green branches for attracting new client.
7	Launching new green product-online banking, ATMs, mobile banking and green loans.
<b>C</b>	<b>Non-financial benefits</b>
8	Information on development of the bank's policies on preservation of the natural environmental, or the bank's awareness of and initiatives for preserving natural environment, the bank's policy addressing climate change.
9	Sponsoring of facilities and different Programs harmonious with environment such as undertaking beautification program, tree plantation, restoring and preserving heritage buildings.
10	Increased Bank's commitment with regard to the actual amount spent on different green banking activities
11	Engaging and empowering employees through Internal training regarding green banking such as education program for bank employees
12	Bank's initiatives and engagement in building networks on environmental issues, for example relationship with government and non-government organizations.
13	Information on whether the bank has been awarded either for its environment friendly activities or its contributions to environmental improvements and for excellence in environmental reporting practices

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# Paradox of CAPM and Stock Price Valuation in Context of Emerging Countries

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## Abstract

The intersection of CAPM applicability and stock price valuation within emerging economies has become a focal point for scholarly investigation and industry discourse. This study seeks to advance comprehension of the CAPM-stock price relationship by articulating a conceptual framework centered on the CAPM paradox. Drawing from the Efficient Market Hypothesis (EMH) and Markowitz's Portfolio Theory as foundational pillars, this research endeavors to elucidate this intricate paradox. Central to this exploration is the utilization of robust scientific methodologies, including an extensive review of scholarly literature and industry-specific factor analysis. The study strives to delineate a paradoxical relationship between CAPM and stock prices, specifically tailoring this conceptual framework to the context of emerging economies, with a primary focus on Bangladesh. Through a meticulous examination of existing theories and empirical data, this research identifies and proposes a novel paradox and model germane to these markets. This novel contribution aims to augment the body of academic scholarship by introducing a new perspective on the relationship between stock prices and CAPM within emerging economies. Moreover, this study aspires to offer practical utility by serving as a

reference point for prospective investors, furnishing valuable insights to aid in informed decision-making within the dynamic landscape of the stock market

## Keywords

CAPM, Stock price, Efficient Market Hypothesis (EMH), Risk and Return, Market Risk, Markowitz's portfolio theory

## JEL Classification

E31, G12, G21, G32, L11, M21

## Introduction

Accurate stock prices play a pivotal role in determining the worth of a firm. Investors, including managers, analysts, and researchers, rely on specific information about stock prices to make well-informed investment decisions. These stakeholders thoroughly analyze businesses, searching for equities that offer attractive investment opportunities at reasonable prices. Company executives, in turn, depend on reasonable stock prices to enhance shareholder wealth and drive the overall value of the firm. To assess the worth of shares in the Dhaka Stock Exchange (DSE), individuals utilize financial information and employ various forms of valuation techniques. One widely recognized and commonly applied approach for determining the discount rate and calculating the value of an investment, as per financial



theory, is the capital asset pricing model (CAPM). The CAPM takes into account factors such as the risk-free rate, market return, and beta to determine an appropriate discount rate for evaluating investment value (Krištofik, 2010).

The CAPM (Capital Asset Pricing Model) is a widely used method for measuring the risk and determining the risk premium of securities. It takes into account the sensitivity of an asset and the overall market risk, represented by the beta coefficient. The model was developed by Treynor, Sharpe, Lintner, and Mossin, and it forecasts the return of multiple assets based on specific variables. The CAPM is particularly well recognized in the open market. It compares the risk-free return to the expected return of a stock, using market returns as a determinant of the stock's price. This makes the CAPM a popular and frequently applied model for assessing the risk-to-return

ratio of an asset. Overall, the CAPM provides a framework for evaluating the risk and expected return of securities by considering market risk and sensitivity. Its widespread use is attributed to its ability to assess the risk premium associated with different assets, making it a valuable tool in investment analysis and portfolio management. The use of CAPM in investment decision-making and stock pricing is widely recognized by scholars and experts in the field (Damodaran, 2007; Fernández et al., 2002; Magni, 2009). Researchers, such as Rahman et al. (2006), have even analyzed the applicability of the Fama-French methodology to test the effectiveness of CAPM in predicting asset prices in Bangladesh.

Despite being an emerging market, CAPM has gained significant attention and acceptance in countries like Bangladesh. The Dhaka Stock Exchange, despite facing challenges associated with the

country's developing economy, has managed to maintain its presence and importance in the financial market. Indeed, the economy of Bangladesh has been experiencing steady growth, positioning it as one of the emerging economies. However, the volatility of the stock market has been a limiting factor for economic expansion. As the number of listed companies on the Dhaka Stock Exchange (DSE) increases and the market size expands, there is a growing need for sophisticated models like the CAPM.

CAPM can play a crucial role in predicting market dynamics and performance. By utilizing this model, investors and market participants can assess the risk and expected return of their investments, helping them make informed decisions in the DSE. Additionally, in the development of appropriate models for investors willing to take risks in the DSE, the analysis of well-known models like CAPM and APT (Arbitrage Pricing Theory) becomes significant. Finding effective ways to evaluate investor risk is essential in building market confidence. The application of robust models such as CAPM allows for a more systematic and informed assessment of risk, enabling investors to make well-founded investment decisions. This, in turn, contributes to the overall development and stability of the stock market in Bangladesh.

## Paradox of CAPM and Stock Price Valuation in Context of Emerging Countries



Despite facing criticism, the CAPM remains one of the most significant pricing models in modern finance. It focuses on determining the expected return of a security, providing valuable insights for investors. Two key aspects that investors should consider are the risk premium of the overall equity or portfolio and the security's beta, which are essential for calculating the expected return and intrinsic value of stocks. By utilizing the CAPM, investors can effectively identify suitable stocks from the Dhaka Stock Exchange (DSE) and make more accurate predictions regarding their value. The model serves as a valuable tool for investment decision-making. Furthermore, companies also recognize the importance of the CAPM for research purposes, as it helps in understanding the pricing dynamics of their stocks and the factors influencing their value.

This article suggests the utilization of CAPM to identify undervalued or cheap stocks from the DSE, offering insights for building a portfolio. The main objective of the study is to provide guidance for investment decisions across 18 sectors under the DSE, utilizing the CAPM as a framework.

### Literature Review

The testing and application of CAPM continue to be of significant interest to researchers worldwide. The Capital Asset Pricing Model (CAPM) originated from the capital assets pricing theory developed by William Sharpe and John Lintner in 1964 and 1965, respectively. Sharpe's contributions to the CAPM were recognized with the Nobel Prize in 1990. Over the years, the CAPM has demonstrated its potential in estimating the cost of capital and evaluating the performance of managed

portfolios (Fama & French, 2004). The literature in this field offers a comprehensive review of the CAPM and its practical applications.

Rutkowska-Ziarko et al. (2022) conducted research on the stock price and highlighted the contention surrounding its evaluation. They proposed the semi-difference relationship as an alternative approach in portfolio analysis, taking into account the lower weight assigned to positive deviations from the mean compared to negative deviations. Additionally, they introduced the LPM-based beta coefficient, also known as the "Downside beta coefficient," as another formula for beta. This coefficient focuses on downside risk. The Downside CAPM (D-CAPM) is derived from this approach, and it aids in determining the risk-return relationship and describing the cost of capital by analyzing financial statements. Chowdhury (2021) conducted a study to assess the validity of the Capital Asset Pricing Model (CAPM) in the context of the Dhaka Stock Exchange (DSE), both at the individual security level and the portfolio level. By analyzing 102 stock data over a five-year period, the study revealed that the CAPM did not hold true for the DSE, both at the individual company level and the portfolio level. This suggests that the traditional CAPM may not adequately capture the risk-return dynamics of the DSE.

The effectiveness of the Bangladesh Securities Market, particularly the Dhaka Stock Exchange (DSE), has been called into question due to the high cost of random risk and the limitations of using beta as a measure of investment risk. Rutkowska-Ziarko et al. (2022) conducted research in the Polish capital market and found evidence of risk premiums associated with co-asymmetry and negative beta through abnormal regressions. They argued against the validity of the CAPM in this context. Research exploring the relationship between risk and return has shown that it depends on the status of the stock. Hoque and Low (2020) suggested that investors may face penalties for exposure to certain risk factors, aligning with the expectations theory of risk appetite.

Atilgan et al. (2019) re-examined the relationship between various measures of low risk and stock market returns across 26 developed markets. They found that systematic risk's centrality to stock market returns is often not statistically significant and, in many cases, has a negative relationship. Additionally, they observed a negative relationship between low risk and future returns at the portfolio level but stability at the stock index level. Ali (2019) discussed the significance of risk in asset pricing within the Chinese stock market and found a positive relationship between

risk factors, long-term returns, and long-term volatility. Rutkowska-Ziarko et al. (2019) conducted a study on 27 listed Polish construction companies on the Warsaw Stock Exchange, examining the impact of book betas and low risk on the average rate of return on capital. Their research revealed that investors in the Polish construction sector exhibited a favorable risk appetite associated with book betas and low risk.

Ayub et al. (2020) tested a new 6-factor downside beta CAPM by incorporating an acceleration factor and replacing beta with a 5-factor model that utilized downside beta as an indicator of downside risk. Using data from the Pakistan Stock Exchange (PSX-100), they found that the 6-factor beta model provided better results compared to the traditional 6-factor model based on asset pricing models within specific sectors. Fama and French (2018) conducted a study using a sample of five developed markets and six developing markets to examine the impact of integration period length on reducing losses in both market types. Their findings suggested that historical data periods of five to ten years are more accurate for predicting expected returns using the CAPM in developed markets, while a shorter-term plan of three years is preferable for developing markets.

Elshqirat and Sharifzadeh (2018) conducted a study on the

Jordanian stock market, analyzing the implications of multifactor pricing models. Their observation period spanned from 2000 to 2015. The findings of the study revealed that only operational leverage had a significant impact on the expected exchange rate.

Pramanik (2020) proposes the utilization of optimization techniques to enhance marketing efficiency, although the specific context and details of this recommendation are not provided. Regarding the Egyptian market, Sakr conducted a study and found that the CAPM does not hold true in this market. The study concluded that beta alone is not the sole source of risk, and the application of CAPM does not align with the risk-free rate in the Egyptian market. However, the results did confirm the presence of a positive relationship between risk and return. In the context of the Dhaka Stock Exchange (DSE), there have been studies examining the application of CAPM at both the individual stock and portfolio levels. However, the specific details and findings of these studies are not provided in the given information.

Rasool et al. (2018) examined the empirical validity of the downside risk-based CAPM in four South Asian equity markets: Bangladesh, India, Pakistan, and Sri Lanka. The results partially supported the downside risk-based CAPM,

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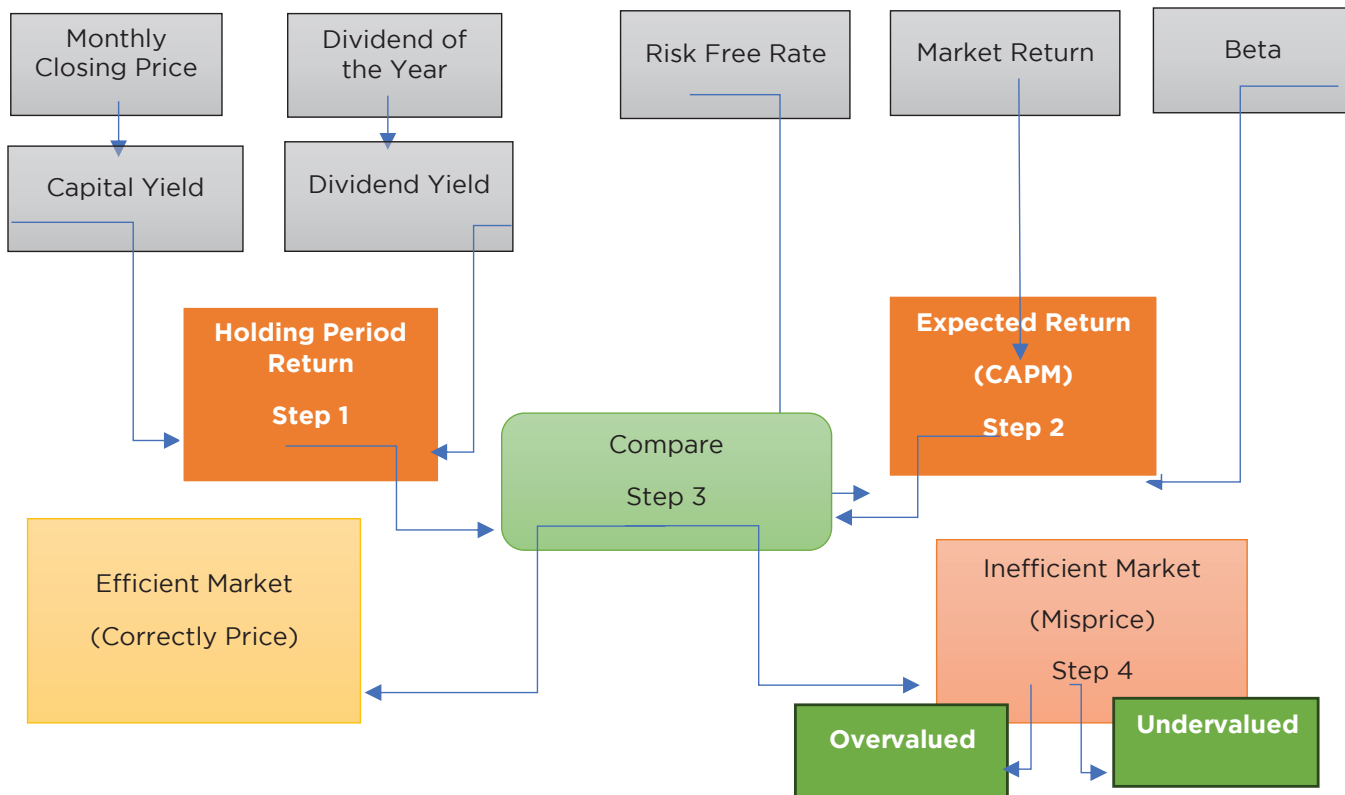
although some sub-sample periods showed inconclusive results and insignificant intercepts, indicating potential mispricing of securities in the respective stock exchanges. Syed et al. (2011) conducted a study on the validity of the Assets Pricing Model in the Karachi Stock Exchange. Their findings showed that the CAPM effectively predicted the return of short-term investments compared to long-term investments.

**Conceptual Framework**

The conceptual framework is the visual descriptive explanation of a phenomena (Creswell & Poth, 2016). The development of a conceptual framework is based on a literature survey and an analysis of a problem. It assists in developing a testable hypothesis (Sekaran & Bougie, 2016). There are five main steps in this model to valuation a share, these are 1) Estimating Holding Period Return of each

stock 2) Estimating Expected Return of each stock 3) Compare between their Returns 4) Identifying the suitability of this Model 5) Suggest the Undervalued or Overvalued stocks for Investment using this model.

The valuation model outlined consists of five key steps. The first step involves estimating the Holding Period Return for each stock. This calculation typically considers factors such as stock price appreciation and dividends



**Figure 1: Paradox of CAPM and Stock Price Valuation**



received over a specific holding period. The second step involves estimating the Expected Return for each stock using the valuation model, such as the CAPM. The Expected Return is based on factors such as the risk-free rate, market risk premium, and the stock's beta. The third step entails comparing the Holding Period Return and the Estimated Return for each stock. This comparison helps assess the alignment or disparity between the actual and expected returns. The fourth step involves evaluating the suitability of the valuation model. This assessment considers factors such as the model's accuracy in predicting returns and its relevance to the specific market and investment context. The final step involves using the valuation model to identify undervalued or overvalued stocks. By comparing the Estimated Return to the Holding Period Return,

stocks that are deemed undervalued or overvalued can be recommended for investment.

### Research Methodology

The primary objective of this study is to conduct an assessment of securities' valuation and explore the application of the Capital Asset Pricing Model (CAPM) in aiding investment decision-making among investors. The dataset utilized for this analysis comprises monthly closing prices of shares, dividend information, and the monthly closing index values of the benchmark market index, specifically the DSE All Shares Price Index. Spanning from January 2015 to June 2023, this comprehensive dataset was sourced from multiple reputable platforms including the official website of the Dhaka Stock Exchange, Amarstock.com, and Investing.com.

Focusing on a subset of the market, the study concentrates on 277 actively traded companies listed on the Dhaka Stock Exchange (DSE) that have demonstrated consistent trading activity over the preceding five years. Given the nature of the study involving historical analysis of financial data, secondary data sources were predominantly employed. The risk-free rate, a crucial component in the CAPM framework, was estimated by utilizing the average auction rate of 10-year Treasury bonds obtained from the 'Bangladesh Bank. To ensure methodological consistency and precision, all calculations involving financial tools such as the CAPM and statistical tools including Beta were executed using MS Excel 2019 software. For comprehensive clarity, the forthcoming Table 1 will elucidate the measured variables pertinent to this study.

The initial step involves conducting a quantitative comparison between the Holding Period Return and the Expected Return calculated using the CAPM. The Expected Return is derived through the application of CAPM calculations on the data. This allows for a comparison between the Expected Return and the actual Holding Period Return of the observed stocks. This comparison serves as a basis for making investment decisions.

**Paradox of CAPM and Stock Price Valuation  
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**Table 1: Variable Measurement**

Variables	Formula	Explanation
<b>The holding-period return</b>	<p><i>Holding Period Return, <math>E(r) = \frac{[E(D1) + (P1 - P0)]}{P0}</math></i></p> <p>Annualized HPR = <math>((1 + HPR)^{\frac{1}{t}}) - 1</math></p>	<p>Where,</p> <p><math>E(r)</math> is referred to as the stock's expected holding period return.</p> <p><math>E(P1)</math> represents the expectation today of the stock price one year from now.</p> <p><math>E(P0)</math> represents the expectation today.</p> <p>It is the sum of the expected dividend yield = <math>(E(D1))/P0</math>, and the expected rate of price appreciation, the capital gains yield = <math>([E(P1) - P0])/P0</math></p>
<b>Expected Return</b>	<p>The CAPM method is a value pricing model to calculate risk and return (Fama, 2004) using the following formula:</p> <p><i>Expected Return, <math>k = rf + \beta[E(r_m) - rf]</math></i></p>	<p>Where:</p> <p><b>Rf</b>: Represents the time value of investment, which is the rate of return that investors receive for their investment over time.</p> <p><b>β</b>: Investors are also compensated for the additional risk associated with their investment, determined by calculating β multiplied by the difference between the market return (rm) and the risk-free rate (rf)</p> <p><b>Rm</b>: is the market return, derived from the market index.</p>
<b>Beta</b>	$\beta = \frac{\text{Covariance}(r_{\text{market}}, r_{\text{stock}})}{\text{Variance}(r_{\text{market}})}$	<p>Where,</p> <p><b>Rm</b>= The return on the overall market</p> <p><b>Rs</b>= The return on an individual stock</p> <p>Covariance= How change in a stock's market returns are related to changes in the market's returns</p> <p>Variance= How far the market's data points spread out from their average value</p>

The subsequent step entails decision-making. In an efficient market with normal market behavior, where the Expected Return (CAPM) matches the Holding Period Return, investors can consider investing in highly risky or high-beta stocks.

Conversely, in an efficient market with abnormal market behavior, investors may opt for low or moderate risk or beta stocks. However, when the Expected Return (CAPM) does not align with the Holding Period Return, indicating market

inefficiency, investors have an opportunity to generate arbitrage profit by analyzing the market. Consequently, technical analysts can leverage market inefficiencies using CAPM to earn abnormal profits.

## Analysis, Findings and Discussion

In order to assess the suitability of the Capital Asset Pricing Model (CAPM) within the context of the Dhaka Stock Exchange (DSE), a sample consisting of 277 companies listed on the exchange was specifically chosen. The primary market index under consideration for this study is the DSE All-Share Price Index. To conduct the analysis, the monthly closing prices of these securities were meticulously collected, encompassing the time frame from January 2015 to June 2023. These data sets were directly procured from the Dhaka Stock Exchange (DSE).

In calculating the expected return employing the CAPM framework, the risk-free rate utilized stands at 7.55% per annum. This rate is derived from the average return observed on the 10-year Treasury bond, sourced from the 'Bangladesh Bank.' Table 1 indicates a total of 357 companies, among which 277 were included in this study due to the availability of requisite data within the stipulated timeframe of January 2015 to June 2023. This dataset encapsulates approximately 77.59% of the total data, indicating a substantial coverage that is deemed adequate for making informed investment decisions

Table 2 & 3 illustrates an assessment across 277 companies spanning 18 sectors, revealing that 223 companies are observed to be in an overvalued position, while 54 companies are deemed undervalued. Interestingly, the analysis does not identify any companies categorized as fair priced within the dataset. This assessment extends across 18 distinct sectors, each showing a prevailing tendency toward overvaluation based on their average conditions.

This research uses the CAPM (Capital Asset Pricing Model) method to determine whether a company's stock is unfair. The CAPM method is a value pricing

**Table 2: Sector-wise Percentage of Data Coverage**

Name of the Sector	Total Number of the Companies	No. of sample companies	Data Coverage (%)
Bank	35	28	80.00%
Cement	08	08	100.00%
Ceramics	05	04	80.00%
Engineering	42	27	64.29%
Financial Institutions	23	22	95.65%
Food & Allied	21	18	85.71%
Fuel & Power	23	17	73.91%
Insurance	57	45	78.95%
IT-Sector	11	06	54.55%
Jute	03	03	100.00%
Miscellaneous	14	12	85.71%
Paper & Printing	06	03	50.00%
Pharmaceuticals & Chemicals	34	26	76.47%
Services & Real Estate	04	04	100.00%
Tannery Industries	06	06	100.00%
Telecommunication	03	02	66.67%
Textile	58	44	75.86%
Travel & Leisure	04	02	50.00%
Total	<b>357</b>	<b>277</b>	<b>77.59%</b>

Source: Authors calculation

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**Table 3: Sector-wise Performance** Overall performance

Sectors	Overvalued Stocks	Undervalued Stocks	Fair Price	Total Stocks
Bank	28	0	0	28
Ceramics	2	2	0	4
Cement	8	0	0	8
Engineering	20	7	0	27
Financial Institutions	20	2	0	22
Food & Allied	10	8	0	18
Fuel & Power	16	1	0	17
Insurance	37	8	0	45
IT Sector	3	3	0	6
Jute	1	2	0	3
Miscellaneous	9	3	0	12
Paper & Printing	3	0	0	3
Pharmaceuticals & Chemicals	17	9	0	26
Services & Real Estate	4	0	0	4
Tannery Industries	3	3	0	6
Textile	38	6	0	42
Travel & Leisure	2	0	0	2
Telecommunication	2	0	0	2
<b>Total</b>	<b>223</b>	<b>54</b>	<b>0</b>	<b>277</b>

**Source:** Authors calculation

model to calculate risk and return (Fama, 2004) using the following formula: *Expected Return*,  $k=rf+\beta[E(rm)-rf]$ . The risk-free rate for risk assets typically relies on government securities, commonly considered as the benchmark for a risk-free return. In the context of Bangladesh, the historical yield of the Bangladesh Government 10-year treasury serves as a suitable proxy for the risk-free rate, with an average yield calculated at 7.55%. As for estimating the expected return

of the overall capital market in Bangladesh, this study adopts the DSEX index, which serves as a measure of the collective performance of the country's capital market. Historical data analysis indicates an average return of approximately 12.97% for the DSE (Dhaka Stock Exchange), assuming a continuation of past average patterns into the future.

To derive these figures, the study primarily relies on collecting recent monthly closing price data spanning 102

months for both the market (DSEX) and individual stocks. Utilizing this dataset, the study computes the returns for both the market and individual assets over the 102-month period. For the calculation of asset-specific risk measures, Microsoft Office 2019 software, particularly Excel, is employed. For instance, the beta coefficient for a specific asset such as Bata is determined using the SLOPE function in Excel, yielding a sample beta value of 0.14.

## Conclusion and Recommendation

The Capital Asset Pricing Model (CAPM) has undergone numerous empirical investigations across diverse economic scenarios. Its applicability extends to emerging or rising nations, where the need for a more precise model to estimate stock values is evident, aiding investors in creating optimal portfolios and facilitating sound investment decisions. Anticipated future applications of this research encompass decision-making, forecasting investments, and enabling academics to ground their work in empirical data. This paper proposes recommendations for investors utilizing the CAPM model in investment decision-making. Firstly, when the expected return (CAPM) matches the holding period return, it suggests market efficiency and normal market behavior. Investors may consider high-risk or high-beta stocks under such circumstances. However, if the market is deemed efficient yet exhibits abnormal behavior, investors might lean towards low or moderate risk/beta stocks.

Secondly, if the expected return (CAPM) deviates from the holding period return, indicating market inefficiency, investors could identify opportunities for arbitrage and potential abnormal profits through

careful market analysis using CAPM. This could particularly benefit technical analysts who can exploit market inefficiencies detected through CAPM assessments. Thirdly, when the expected return (CAPM) of a stock surpasses the holding period return, signaling overvaluation, investors might anticipate a forthcoming decrease in the stock price. Conversely, if the expected return falls below the holding period return, indicating undervaluation, investors might foresee a potential increase in stock prices in the near future. These recommendations, while grounded in the principles of CAPM, should be used with caution. Real-world markets are complex and multifaceted, influenced by various factors beyond CAPM's scope. Investors should supplement CAPM-based decisions with comprehensive market analysis and consider other pertinent factors before making investment choices.

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# Unveiling the Powerhouse: SMEs in Bangladesh - Credit Challenges and Growth Strategies

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## Introduction

This article delves into the Small and Medium-sized Enterprises (SME) sector in Bangladesh, highlighting its pivotal role in regional development, poverty alleviation, innovation, and employment generation. Credit emerges as a critical enabler of SME growth, facilitating investments in technology, market expansion, and job creation. Within this context, we explore 15 strategies to overcome credit obstacles in Bangladesh's SME sector, fostering sustained growth and contributing significantly to the nation's economic success.

## What is SME

Small and medium-sized enterprises (SMEs) constitute the manufacturing sector's backbone in Bangladesh. SMEs, which are often described as enterprises with a small number of employees and a low turnover, account for around 45% of value addition and employ almost 80% of Bangladesh's industrial workforce. These SMEs account for over 90% of all industrial units and employ a quarter of Bangladesh's entire work force. Furthermore, they play a significant part in the country's export revenues, accounting for 75% to 80% of total.

Bangladesh has 7.9 million SMEs, with 93.6% classified as small and 6.4% as medium-sized. These businesses employ around 24.5

million people, with men accounting for 83.5% of the workforce (Markedium, 2022). SMEs in Bangladesh, on the other hand, present a substantial barrier to growth and development: access to formal finance. According to a 2013 research, more than 40% of SMEs did not have access to formal finance (Future Startup, 2022). The World Bank predicts a \$2.8 billion funding deficit in Bangladesh's SME sector (World Bank Group, 2019). Financing costs and credit availability are important issues, prompting many SME entrepreneurs to seek alternate sources of funding, such as microfinance institutions, local traders, informal lenders, or support from friends and family (Future Startup, 2022).

## Contributions of SMEs to the Economy of Bangladesh

Small and medium-sized enterprises (SMEs) are vital to Bangladesh's economic landscape, contributing significantly and diversely to the country's growth. This debate will present an in-depth examination of the many contributions of SMEs to Bangladesh's economy, backed up with pertinent references.

## Employment Generation

Small and Medium-sized Enterprises (SMEs) in Bangladesh are a powerful engine of job creation, playing a critical role in lowering unemployment rates by

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employing a sizable share of the labor force. According to the SME Foundation, SMEs employ more than 70% of the country's non-agricultural labor force (SME Foundation, 2021). This job creation is especially important in rural regions, where major businesses are sparse, as it contributes greatly to poverty reduction and improves general living standards.

The importance of SMEs in terms of employment cannot be emphasized. In a country like Bangladesh, where a large majority of the population lives in rural regions and relies on agriculture, the role of SMEs in absorbing surplus agricultural labor is critical. Many people in rural regions would have restricted work choices if these businesses did not exist, resulting in income inequality and economic instability.

#### Contribution to GDP

SMEs wield significant influence on Bangladesh's GDP, comprising nearly 99% of all firms. They engage in diverse economic activities, spanning manufacturing, services, and agriculture, cementing their role as key GDP drivers. These enterprises contribute to GDP by delivering value through their goods and services, catering to both domestic and international markets. Their adaptability ensures stability and resilience in dynamic economic scenarios.

Furthermore, SMEs play a pivotal role in dispersing economic growth. They extend their reach to rural areas, where larger corporations often struggle to establish a presence. This geographical diversity fosters balanced and inclusive economic growth, mitigating regional disparities and enhancing socioeconomic equity.

#### Export Earnings

A significant portion of Bangladesh's Small and Medium-sized Enterprises (SMEs) actively engage in export-oriented activities, with the textile and garment sector standing out as a prime example. These SMEs make substantial contributions to foreign exchange earnings, bolstering the country's balance of payments. The importance of this contribution to export revenues cannot be overstated; it is the lifeblood of the nation's economy, ensuring not only its stability but also solidifying Bangladesh's position as a global exporter.

- The textile and garment industries, in particular, have become driving forces in Bangladesh's export success, relying heavily on SMEs embedded in their supply chains. These SMEs are involved in all stages of textile and garment manufacturing, from fabric production to garment assembly. Thanks to their involvement, Bangladesh has risen as one of the world's leading clothing exporters.
- Export earnings nourish foreign exchange reserves, vital for economic stability and international trade. The World Bank recognizes the critical role of SMEs in export-oriented businesses, underscoring their contribution to bolstering foreign currency reserves (World Bank, 2021).

- Moreover, the success of SMEs in export-oriented endeavors extends beyond financial gains. It enhances Bangladesh's global reputation as a reliable and competitive exporter, attracting foreign investments and partnerships, further promoting economic growth and diversification.

### Innovation and Entrepreneurship

Bangladesh's Small and Medium-sized Enterprises (SMEs) foster an entrepreneurial and innovative culture. Their small size allows them to operate with agility and adaptability, making them ideal for experimenting with new ideas, technology, and business models. This flexibility positions SMEs as innovation incubators, propelling Bangladesh's overall innovation ecosystem.

The World Bank recognizes the pivotal role of SMEs in driving innovation and competitiveness in Bangladesh (World Bank, 2021), underscoring their significant contribution to the nation's economic landscape, including GDP growth, job creation, and shaping the innovation landscape.

### Rural Development

Small and medium-sized enterprises (SMEs) commonly start operations in rural areas, contributing significantly to the development of these communities. Aside from job creation, SMEs play an

important role in improving rural infrastructure, such as roads, power, and communication networks. These expenditures improve not just the efficiency of their own operations, but also the overall quality of life in rural areas.

### Women's Empowerment

In Bangladesh, Small and Medium-sized Enterprises (SMEs) greatly empower women, notably in industries such as the textile and garment industry, where women make up a sizable workforce. Their involvement promotes female equality, economic self-sufficiency, and societal progress.

Women's participation in SMEs, in particular, increases their economic autonomy. SMEs provide a platform for women to find work, earn money, and contribute financially to their families, breaking traditional conventions that have limited women's economic options. This improves not just individual well-being but also women's responsibilities in homes and communities.

### Importance of Credit for SMEs in Bangladesh

Access to financing is critical to the development and growth of Bangladesh's Small and Medium-sized Enterprises (SMEs). These businesses account up a sizable amount of the country's economy, and loan availability is critical to their growth. This article focuses on

four major characteristics of credit's importance in the SME sector.

- For starters, credits operate as a financial stimulant, giving SMEs with the necessary capital for expansion. Access to financing is critical for supporting business growth, whether SMEs aim to invest in new machinery, expand production capacity, or enter new markets (Khan & Ahmed, 2018). Expansion frequently stimulates economic development by boosting output, market reach, and income creation.
- Second, keeping a strong cash flow is critical for the day-to-day operations of SMEs (Bhattacharjee, 2018). However, cash flow can be volatile due to changes in payables and receivables. Credits bridge this gap, allowing SMEs to pay their financial responsibilities while continuing to function successfully (Khan & Ahmed, 2018). With a steady working cash position, SMEs can respect contracts, pay workers, and invest in necessary resources.
- Third, in order to remain competitive in today's changing business climate, SMEs must embrace contemporary technology (Bhattacharjee, 2018). However, purchasing and utilizing these technologies

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sometimes involves a substantial financial expenditure. Credits are critical in allowing SMEs to invest in technological improvements that improve productivity, product quality, and competitiveness (Khan & Ahmed, 2018). Staying current with industry standards requires technological progress.

- Finally, SMEs are big employers in Bangladesh, and they contribute considerably to employment creation (Bhattacharjee, 2018). Credit enables them to grow businesses and recruit more employees, lowering unemployment rates and improving incomes (Khan & Ahmed, 2018). This job growth not only enhances the labor market, but it also boosts economic activity by

increasing consumer spending.

### Trends in Credit Growth in Bangladesh

Recent trends in credit growth for SMEs in Bangladesh indicate several noteworthy developments:

- **Government Initiatives:** Bangladesh's government has taken aggressive efforts to improve SMEs' access to finance, recognizing their critical role in the country's economic progress (Bhattacharjee, 2018). The Credit Guarantee Scheme has emerged as a game changer among these approaches. This strategy protects lenders by efficiently minimizing the risks associated with SME financing. It instills trust in financial institutions, enabling them to extend

- much-needed loans to SMEs. Furthermore, the One-Stop Service Act has expedited and simplified the loan application procedure, removing previously encountered bureaucratic impediments for SMEs (World Bank, 2021). This streamlining has made it easier and less time-consuming for SMEs to get finance, hence supporting their growth ambitions.

- **Digital Financing:** Bangladesh has seen a tremendous increase in digital finance in recent years, supported by the spread of online lending platforms (Bhattacharjee, 2018). These platforms have transformed the landscape of SME financing availability. They provide SMEs with loan access methods that are efficient, user-friendly, and quick, greatly decreasing the time and effort necessary to receive money.

- **Microfinance Institutions:** Microfinance institutions have emerged as critical participants in providing financial services to SMEs, particularly in rural areas where traditional banks have difficulty reaching out to distant locations (World Bank, 2021). These organizations provide specialist financial products and services that are targeted to the specific needs of SMEs.



## Setbacks in Credit Growth for SMEs in Bangladesh: A Multifaceted Challenge

Bangladesh's Small and Medium Enterprises (SMEs) sector is confronted with a number of difficult hurdles that have hampered loan expansion. Access to credit, excessive borrowing rates, collateral constraints, poor infrastructure, regulatory impediments, and the devastating consequences of the Covid-19 outbreak are all part of this multidimensional setback. This article delves into these difficulties and their ramifications for Bangladesh's SME industry.

- Increased Lending Portfolio:** Banks and financial institutions have acknowledged the SME sector's critical role in Bangladesh's economic growth and have taken purposeful initiatives to cater to SMEs (Bhattacharjee, 2018). The increase of their loan portfolios reflects this strategic change. Institutions today provide a wide range of financial products and services tailored to the specific demands and difficulties of SMEs.
- Access to International Markets:** Bangladeshi SMEs are gradually gaining access to worldwide markets through trade and export (Hossain, 2019). They are involved in worldwide supply networks and export

a wide range of items, from clothing to agricultural products. Credit has been critical in allowing SMEs to achieve international quality requirements and expand their export activity.

- Support for Innovation:** Another rising trend is the increased emphasis on supporting SMEs' innovation (Bhattacharjee, 2018). SMEs are encouraged to invest in R&D, embrace innovative technology, and experiment with new business strategies. Credit availability has aided these activities by providing the financial resources required for experimentation and innovation. This inventive attitude boosts SMEs' competitiveness and aids in economic diversification (Khan & Ahmed, 2018).

- Access to Finance:** A significant proportion of Bangladeshi SMEs face the hard reality of restricted access to formal finance (Future Startup, 2022). Surprisingly, a 2013 survey found that more than 40% of the country's SMEs lacked access to formal loans. Even among those who have access, there is a significant credit gap, resulting in unfulfilled demand for formal credit. According to the World Bank, the financing deficit for Bangladesh's SME sector is a whopping \$2.8 billion (Future Startup, 2022). This financing limitation stifles the potential for growth and development of numerous SMEs, limiting their contribution to the national economy.

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- **High Interest Rates:** SME entrepreneurs frequently seek financial assistance from microfinance institutions, dealers, loan sharks, and family (Future Startup, 2022). These sources of finance, however, usually come with astronomical interest rates, with some reaching as high as 30-40%, according to estimates. High borrowing rates impose a significant burden on SMEs, affecting their profitability and financial viability.
- **Lack of Collateral:** Women-owned SMEs, in particular, face a harsh reality: almost 60% of them are refused access to funding owing to a lack of collateral (World Bank, n.d.).
- **Poor Infrastructure:** SMEs have highlighted inadequate physical infrastructure and expensive transportation expenses as important

impediments (Jahangirnagar University, n.d.).

- **Bureaucratic Procedures:** SME entrepreneurs must navigate a maze of governmental procedures, which may be scary and time-consuming (Future Startup, 2022). These processes frequently dissuade potential borrowers, limiting finance availability and stifling SME growth.
- **Covid-19 Impact:** The Covid-19 pandemic has exacerbated existing SME sector challenges, such as limited access to finance, non-tailored financial products, capacity deficits, limited market linkage, a lack of skilled labor, and a lack of export opportunities (Lightcastlebd.com, 2022). The pandemic's economic turmoil has exacerbated the financial troubles of SMEs, making them more susceptible.

- **Limited Market Opportunities:** SMEs in Bangladesh suffer barriers to market access, limiting their development potential and ability to repay loans (Jahangirnagar University, n.d.). Their expansion and financial viability are hampered by limited market prospects.
- **Lack of Skilled Manpower:** The lack of trained labor is a significant barrier for SMEs in Bangladesh (The Business Standard, 2021). The lack of competent labor stifles corporate development and expansion, reducing their ability to repay debts.
- **Limited Access to Technology and Expertise:** Another serious issue for SMEs in Bangladesh is a lack of access to current technology and skills (Jahangirnagar University, n.d.). Without these resources, SMEs struggle to compete in the market, limiting their development and ability to repay loans.
- **Inflation:** In Bangladesh, rising inflation has become a ubiquitous impediment to credit development, hurting not just the SME sector but also the entire economy (World Bank, 2023). Inflation reduces the actual worth of money, raising borrowing costs and decreasing borrowers' repayment capacities.

## Strategies to Overcome Credit Growth Setbacks

Access to capital, on the other hand, is a chronic barrier for many SMEs, impeding their expansion and development. A diversified strategy is necessary to overcome these loan development hurdles and increase the resilience of SMEs. We offer 15 ideas in this section, which include diverse funding sources, creditworthiness development, simplifying procedures, financial education, risk reduction, digital transformation, industry collaboration, government support, and more. By using these tactics, SMEs in Bangladesh may better navigate the financing market and fuel their growth.

- **Diversified Financing Sources:** Microfinance institutions, credit cooperatives, government-backed programs, venture capital, angel investors, and peer-to-peer lending platforms should all be actively pursued by SMEs in Bangladesh.
- **Building Creditworthiness:** SMEs must concentrate credit history development using a diverse strategy. Adopting strong financial management procedures, making regular repayments, maintaining accurate financial records, and aggressively exploring possibilities to create credit lines with suppliers and get

trade credit are all part of this.

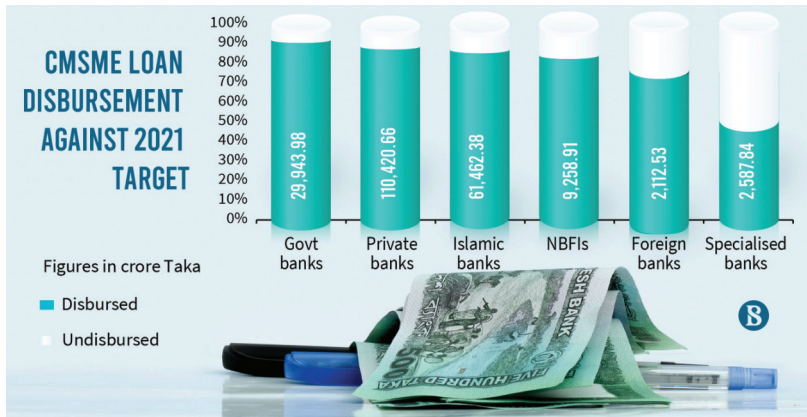
- **Streamlined Bureaucratic Procedures:** It is critical to simplify and digitize loan application processes in order to improve SMEs' access to financing. Reducing bureaucratic barriers, digitizing paperwork needs, and introducing online application systems all help to make the credit application process go much more smoothly. This streamlining expedites loan application acceptance, allowing SMEs to access finance quickly and effectively (Bhattacharjee, 2018).
- **Access to Financial Education:** It is critical to provide comprehensive and specialized financial education and training programs for SME owners. These programs provide SMEs with the information and skills they need to effectively navigate the financial landscape. Financial planning, budgeting, risk management, and credit use methods may be discussed.
- **Risk Mitigation:** SMEs should actively investigate and apply effective credit risk mitigation solutions. These solutions include loan guarantees, credit insurance, collateral

optimization, and currency and market risk hedging.

- **Digital Transformation:** Adopting digital technology and e-commerce platforms is critical for SMEs aiming to increase operational efficiency and market reach. Establishing a strong online presence, including e-commerce websites and social media platforms, may assist SMEs in reaching a larger consumer base, increasing income streams, and eventually improving repayment capability.
- **Industry Collaboration:** Strategic cooperation and alliances within their respective sectors have the potential to result in joint ventures, pooled resources, collective bargaining power, and the exchange of best practices.
- **Access to Government Grants:** Small and medium-sized enterprises (SMEs) should aggressively seek government grants, subsidies, and incentives to help them develop without incurring extra debt.
- **Supplier Credit:** Supplier credit arrangements that allow for delayed payments or variable credit limits can be negotiated by SMEs. These mutually beneficial collaborations can greatly reduce cash flow difficulties and increase SMEs' financial stability (Bhattacharjee, 2018).

## Unveiling the Powerhouse:

### SMEs in Bangladesh - Credit Challenges and Growth Strategies



## Conclusion

Small and Medium-sized Enterprises (SMEs) are pivotal in Bangladesh's economic landscape, driving job creation, GDP growth, and innovation. To empower SMEs, 15 strategies must be adopted, including diversified funding sources, creditworthiness enhancement, streamlined processes, financial education, and digital transformation. These measures, coupled with industry collaboration, government support, and robust supplier relationships, promise to help SMEs navigate the credit landscape effectively. In doing so, they will continue to fuel Bangladesh's prosperity.

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- Crowdfunding:** Using crowdfunding platforms allows SMEs to raise funds from a varied set of investors interested in their products or services.
- Export Financing:** Exploring export finance possibilities is critical for SMEs involved in export-oriented operations. Engaging with export credit agencies and trade finance organizations is one of these choices.
- Peer-to-Peer Lending:** Investigating peer-to-peer lending platforms can give SMEs with access to alternative finance sources from individual investors. These platforms connect SMEs in need of capital with investors prepared to offer money (World Bank, 2019).
- Invoice Financing:** SMEs can utilize invoice finance to free up capital that has been trapped in unpaid bills. In this financing strategy, SMEs sell their outstanding invoices at a discount to

financial institutions or invoice financing firms in return for quick cash (Bhattacharjee, 2018).

- Supply Chain Finance:** Collaboration with bigger organizations within their supply chain might make supply chain finance agreements easier. In such cases, SMEs can obtain low-cost loans based on their position in the supply chain (World Bank, 2019).
- SME Associations:** Joining SME groups may give networking opportunities as well as access to useful information on financing possibilities, grants, and tools dedicated exclusively to small firms.

By implementing these multifaceted strategies, SMEs in Bangladesh can effectively diversify their financing sources, mitigate credit growth setbacks, and facilitate sustainable economic growth within the country.

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# Determinants of Consumers' Recycling Intentions and Behavior

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## Abstract

This study seeks to identify the variables that affect customers' recycling behavior in the Bangladeshi setting. The authors addressed the theory of planned behavior (TPB framework) to understand the effects of attitude, subjective norm and perceived behavioral control on recycling intention. Additionally, the link between consumer behavior and recycling intention is revealed. The analysis is based on a qualitative approach. Thus, various secondary sources like peer-reviewed journals and web-based materials were reviewed to examine the situation. This paper contributes to filling a vacuum in the literature by proposing a novel model to forecast consumers' recycling intention and behavior in Bangladesh. In addition, the findings of this study will contribute to raising public awareness of the harm that informal garbage disposal causes to the environment and human health. Finally, a pathway for future researchers has also been identified.

## Keywords

Theory of Planned Behavior, Recycling Intention, Recycling Behavior, Environment, Bangladesh

## Introduction

The improper management of garbage is projected to lead to

environmental degradation and a shortage of natural resources in all nations, either developed or developing (Pawaskar, Raut, & Gardas, 2018; Ahmed, Ahmed, & Najmi 2018; Hameed, Waris, & Ul-Haq, 2019). Large populations, growing urbanization, and rising living standards all contribute to developed nations generating notably more waste than they did previously (Khan, Ahmed, & Najmi, 2019). The World Bank estimates that the production of municipal solid trash worldwide reached 1.3 billion tonnes annually in 2010 and will rise to 2.2 billion metric tonnes annually by 2025 (Khan et al., 2019). Given the rise in plastic consumption, plastic trash in household waste poses a concern to both human and wildlife health (Latif et al. 2018). If major action is not taken to address the global plastics disaster, 104 million metric tons of plastic pollution will enter the world's ecosystem in 2030, according to a report on the issue (World Wildlife Fund, 2019; Thoo et al., 2022). Similar to how clothing and textile waste, which contributes significantly to landfills and ultimately leads to environmental deterioration, has been recognized as a serious problem on a global scale (Noh, 2021). The improper disposal of e-waste causes resource losses, environmental risks, health problems, and environmental toxicity because it contains several toxic substances. However, the global rate of e-waste recycling is only



17.4% (Forti, Balde, Kuehr, & Bel, 2020; Lou, 2022) and 57 billion dollars worth of recoverable resources are discarded or burned (Forti et al., 2020).

Precisely, the region of Asia is specifically struggling with ineffective garbage management because a sizeable amount of the world's population lives in nations like China, India, Pakistan, and Bangladesh (Pandey, Surjan, & Kapshe, 2018; Najmi et al., 2019). Notwithstanding being one of the most heavily populated nations in the world, Bangladesh has seen tremendous progress in socioeconomic indices over the past 20 years. As a result of these enhanced lives, people in Bangladesh become more environmentally conscious day by day (Islam, 2021). However, during the past few years, as urbanization has accelerated and people's living standards have grown, the environment of Bangladesh has been drastically deteriorating. Unfortunately,

Bangladesh does not enforce any rigorous regulations on how to dispose of waste, therefore the issue of waste management gets worse every year (Khan et al. 2019).

Recycling is among the key measures that may be taken right now to lessen the impact of waste on the environment through efficient waste management (Thoo, Tee, Huam, & Mas'od, 2022). People can recycle or reuse their unwanted garbage in a more cost-effective and environmentally friendly way rather than tossing it away, which is better for the environment because it can extend the lifespan of products and materials (Najmi, Kanapathy, & Aziz, 2021; Noh, 2021).

Research from countries around the world, including Australia (White & Hyde 2012), India (O'Reilly & Kumar 2016), China (Ramzan et al. 2019), and

Malaysia (Latif et al. 2018) are focusing on investigations on recycling intentions and behavior. But inadequate research has been done internationally on consumer recycling habits to sustainably protect the environment (Khan et al. 2019; Najmi, Kanapathy, & Aziz, 2021; Thoo et al., 2022). Therefore, this study tries to eliminate this discrepancy by identifying the variables that affect customers' recycling behavior. The theory of planned behavior, which included three pillars—attitude, subjective norm, and perceived behavioral control—could also influence people's intentions to recycle, resell, or donate waste as well as their behavior (Ajzen, 1991; Cho, 2019; Thoo et al., 2022). However, only a small number of studies on the impact of the TPB framework on consumer recycling, reselling, and donating behavior have been conducted. Therefore, using customers' recycling intentions in the Bangladeshi setting, we employed this theory to examine the effect of attitude, subjective norm and perceived behavioral control on recycling behavior.

Notably, there are multiple merits to the current research. By helping customers comprehend the advantages and hazards of recycling, this study may help environmental authorities and other interested parties to better understand why consumers should engage in recycling behavior. The

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current study will contribute to a deeper comprehension of consumer attitudes, subjective norms, and perceived behavioral control, which may help shape behavioral outcomes to manage waste disposal and lay the foundation for further studies that could validate the findings on a larger scale. Thus, the current study offers the following unanswered research questions that have not yet been looked into:

*RQ1: Does attitude, subjective norms, and perceived behavioral control trigger consumers' recycling intentions?*

*RQ2: Does consumers' intention to recycle result in their actual recycling behavior?*

### Literature Review

#### Waste

Our daily activities generate a variety of waste, including industrial waste, municipal waste, and waste from healthcare institutions. Decomposing plastic garbage takes years, which poses a danger to the health of ecological systems (Talpur, 2018). Ten percent of the 260 million tons of plastic generated worldwide each year are dumped into the ocean (Weyler, 2017; Thoo et al., 2022). When plastic is burned in the air or submerged in the soil, harmful compounds are produced, contaminating both the soil and the air (Ilyas, 2018). Unfortunately, just 9% of all plastics (8.3 billion metric tons)

are recycled, and 90% of all waste is plastic (Parker, 2018; Thoo et al., 2022). Additionally, according to the Environmental Protection Agency (2019), 11.2 million tons of textile and apparel trash were landfilled in 2017, accounting for 8% of all municipal waste deposited. Sharps, non-sharps, blood, body parts, chemicals, medications, medical equipment, radioactive materials, and other items produced by healthcare facilities are included in the category of healthcare waste (WHO, 2018). At the moment of generation, all medical waste items must be separated, properly handled, and safely disposed of (WHO, 2018). Batteries, plugs, mobile phones, laptops, refrigerators, and other discarded items are included in e-waste and are either kept at home, disposed of with domestic rubbish, or sold to second-hand dealers and unofficial recyclers (Zhang et al., 2019; Fort et al., 2022). It includes priceless recyclable commodities like gold, silver, copper, and platinum as well as dangerous substances (Corsini et al., 2020, Lou, 2022). Global production of electrical and electronic garbage increased to 53.3 million tons in 2019 and is anticipated to reach 74.7 million tons by 2030. (Forti, Balde, Kuehr, & Bel, 2020). This astounding rate of e-waste generation (4% annually, or 21% in five years) increases three times as quickly as other waste streams, which ultimately has negative effects such as raising



earth's temperature, deteriorating air quality, destroying the ozone layer, destroying both land and marine life, and so forth (Najmi, Kanapathy, & Aziz, 2019; 2021; Forti et al., 2020; Corsini, Gusmerotti, & Frey, 2020). As a result, the problem in waste management due to the presence of polychlorinated naphthalene in electronic items poses a risk to human health as well as aquatic life and wildlife (Kumar, Holuszko, & Espinosa, 2017; Fort et al., 2022). The World Bank estimated that by 2025, there will be 2.2 billion metric tonnes of municipal solid waste produced annually (Khan et al., 2019). In the city of Dhaka, around 40% of the daily garbage production is dumped on the streets, and just the tanneries alone discharge 7.70 million liters of liquid waste and 88 tons of solid waste per day (Reza, 2017; Islam, 2021).

### Recycling

Recycling is one of the most efficient strategies to manage waste since it diverts waste with economic value, lowering waste production and helping to preserve the value of resources by turning waste into resources. Household garbage, plastic, textiles, electrical equipment, and other recyclable materials are examples of discarded products that have a market value and can be recycled or saved for reuse. Three steps make up the recycling process: collecting (via drop-off locations, curbside pickup, door-to-door pickup, and in-store pickup), sorting, and cleaning and preparation for recycling (Noh, 2021). However, recycling rates for garbage are said to range from 1% to 3% in many poor nations, compared to an average of 22% in OECD countries (Thoo et al., 2022). In

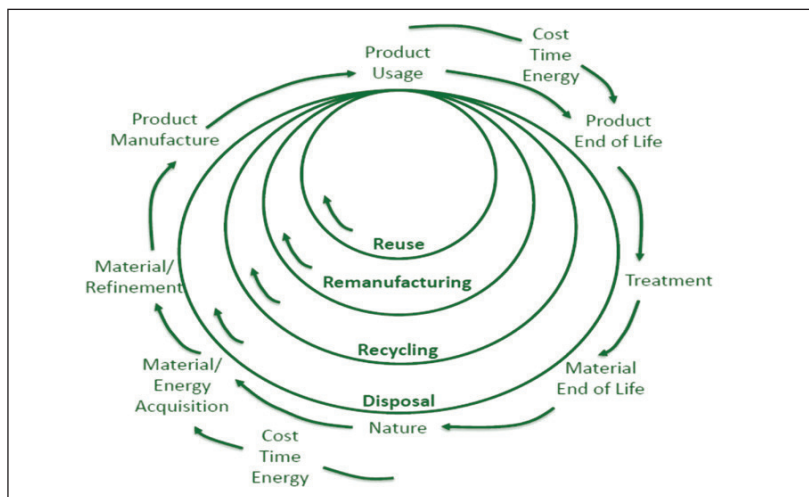
our country, only 15% of the waste generated, or 475 tons per day in Dhaka (the capital city of Bangladesh), is recycled, saving Bangladesh's metropolitan areas US\$15.29 million each year (Waste Concern, 2018). It is desirable to establish a circular economy implementation of the 3R idea (reuse, resale, and recycle) on a community scale to enable the local community to reduce and manage trash effectively. This will aid in mitigating the effects of climate change and lessen the impacts of garbage disposal. According to Fig. 2.1, goods are preferably recycled, remanufactured, and reused, and end-of-life materials are transformed back into useful products with the least amount of trash released into the environment.

### Theory of Planned Behavior (TPB Framework)

A comprehensive and useful framework for understanding recycling behavior is provided by the theory of planned behavior (Thoo et al., 2022). The TPB framework proposed three pillars as the major factors that influence and regulate an individual's behavioral intention: attitude, subjective norm, and perceived behavioral control (Ajzen, 1991; Cho, 2019). (Figure 2.2). Numerous empirical types of research on recycling using the TPB framework have been conducted (Fang & Ju, 2010; Oztekin et al., 2017; Cho, 2019). The present study offers a

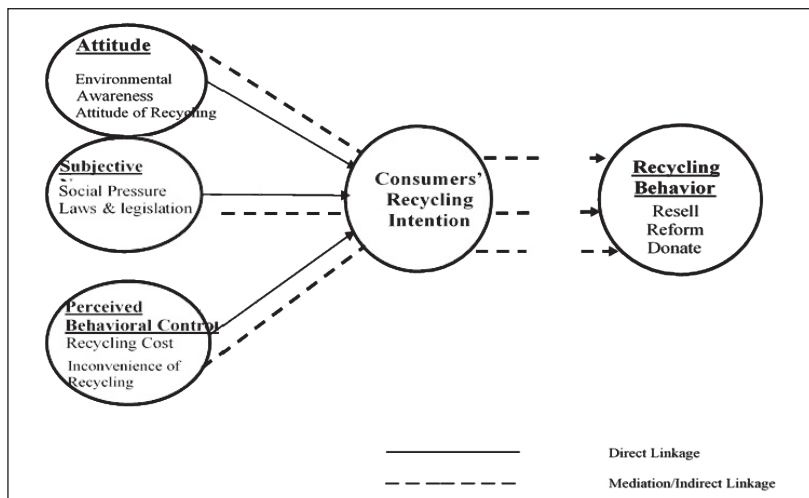
## Determinants of Consumers' Recycling Intentions and Behavior

**Figure 1: Managing Waste**



Source: Korhonen, Honkasalo, and Seppä "la" (2018)

**Figure 2: Research Model**



Source: Authors' Contribution, 2023

holistic framework, showing the influence of the theory of planned behavior (attitude, subjective norm, and perceived behavioral control) on consumers' recycling intention and behavior (Figure 2.2).

### Research Methodology

A qualitative approach has been adopted to carry out the research converging on secondary data. Data were accumulated from numerous internal and external sources by

following proper documentation techniques. Furthermore, many secondary data sources like newspapers, national and international journals, and conference papers were reviewed to conclude the analysis. In this research, the researcher addresses the relevance of the TPB framework in explaining recycling behavior from one of the developing market contexts, Bangladesh.

### Discussion

#### Attitude and Recycling Intention

One of the important essential elements that affect intention toward waste separation is attitude (Thoo et al., 2022). The degree to which a person views a particular behavior favorably or unfavorably is known as their attitude (Ajzen, 1991; Yuzhanin & Fisher, 2016). It is represented as a person's desire to engage in a behavior, whether it be positive or depressing (Ajzen, 1991; Poskus, 2015; Nguyen, Hung, & Lee, 2019). Whether a person's attitudes are positive or negative, fair or unfair, beneficial or not beneficial, suitable or unsuitable, good or awful, pleasurable or unpleasant, and optimistic or pessimistic depends on how they see the activity (Ramayah, Lee, & Lim, 2012; Cho, 2019). Previous research has shown that attitude influences pro-environmental behavior in a good way (Thoo et al., 2022). In addition, attitude affects



residents' intentions to practice household trash separation and recycling behavior (Pakpour et al., 2014). (Chan & Bishop, 2013).

According to Wan et al. (2012), behavioral intention to recycle is favorably connected with attitude. Noh (2021) looked into how students' subjective norms, attitudes, intentions, and conduct are impacted by information that is recycled. The findings demonstrated that learning about recycling helped students develop a positive attitude, which in turn positively influenced their intention to recycle and their behavior to recycle while learning about recycling also positively influenced their intention to recycle by inducing either positive subjective norms or positive subjective norms and subsequently attitude. With the aid of minimal alteration, Khan et al. (2019) demonstrated that

consumer attitudes influence behavior that results in the reuse of plastic garbage even after the product's whole life cycle. According to the TPB framework, behavioral intention is mostly predicted by attitude (Chen & Hung, 2016). Greaves, Zibarras, and Stride (2013) point out that a positive assessment, such as "recycling is responsible/pleasant," tends to increase one's intention to engage in a particular behavior, but a negative appraisal tends to decrease that intention. According to Tonglet et al. (2004), attitude is the key factor influencing recycling intention and practice. In addition, Tiew et al. (2019) discovered that mindset is one of the crucial variables influencing whether a society will adopt recycling practices in daily life. Cho (2019) discovered that attitude significantly and favorably influences college

students' inclination to participate in campus recycling.

### Subjective Norm and Recycling Intention

A subjective norm is a social pressure or influence that persuades someone to engage in an activity (Ajzen, 1991; Yuriev, Dahmen, Paille, Boiral, & Guillaumie, 2020). The term "norm" can be characterized as cohesive glue that can inspire an individual to be actively engaged in a community to participate, take part, and take responsibility for his or her behavior in the group, as noted by Minton, Spielmann, Kahle, and Kim (2018). Generally speaking, a person's intention to carry out a particular action with the expectations of others is referred to as a perceived norm. This subjective standard can be influenced by one's social circle and immediate surrounding society (Kochan et al., 2015; Singh et al., 2018).

Previous research on recycling behavior concluded that subjective norm plays a crucial part in the TPB framework and improves perceived attitude, sustainable behavior, and recycling intention (Mahmud and Osman, 2010; Ramayah et al., 2012; Kumar, 2019; Oztekin et al., 2017; Wan et al., 2012). According to Wan et al. (2012), social pressure and subjective norms both have a favorable impact on recycling behavior, particularly when it comes from family, friends, and the local

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community. In the TPB model, subjective norm plays a significant role in predicting waste reduction behavior (Li et al., 2018). In addition, a limited handful of studies discovered that individuals' intentions to engage in household waste separation activity are influenced by participation from family or peers (Nguyen et al., 2015). University students' intentions regarding recycling on campus are highly influenced by subjective norms, as Wan et al. (2012) noted. According to Khan et al. (2019), behavioral intention is favorably correlated with actual behavior, including reuse, resale, donation, and disposal. Cho (2019) discovered that self-determined motivation and recycling intention are the best indicators of college students' recycling behavior. According to Khan et al. (2019),

subjective norm attracts more attention to the reuse and resell behavior, both of which are determined to be statistically significant.

### Perceived Behavioral Control and Recycling Intention

A person's assessment of their level of control over the execution of a specific activity and how simple it is to carry out the conduct of interest is known as perceived behavior control (PBC) (Ajzen, 1991). In other terms, PBC assesses a person's belief that a behavior is possible as well as the degree of control they have over whether or not they choose to engage in it. PBC, according to Cho (2019), is the most significant predictor of college students' propensity to participate in campus recycling. Additionally, research has revealed a connection between

PBC and behaviors and intentions linked to sustainable consumption, including recycling intentions (Oztekin et al., 2017). As highlighted by Wan et al. (2012) PBC is significant in predicting customers' recycling intention.

Numerous studies have demonstrated a favorable relationship between PBC and actual behavior (Botetzagias, Dima, & Malesios, 2015; Lizin et al., 2017). Furthermore, Fang and Zhang (2019) found that PBC has a considerable impact on lurkers' intention to continue participating. However, prior research has emphasized the significance of PBC in behavioral intention, such as recycling behavior (Wang et al., 2019). Cho (2019) reports that the results revealed that PBC is the greatest predictor among TPB variables and has a substantial impact on college students' propensity to recycle on campus. According to Kan et al. (2019), PBC causes people to donate or resell products after they have served their purposes successfully; it does not cause people to reuse such commodities (Lizin, Dael, & Passel, 2017; Oztekin, Teksoz, Pamuk, Sahin, & Kilic, 2017; Tiew, Basri, Deng, Watanabe, & Zain, 2019; Cho, 2019). Additionally, they demonstrated that actual recycling behavior was significantly influenced by recycling intention. The findings are consistent with earlier empirical research (Khan et al., 2019a; Cho, 2019).

## Recycling Intention and Actual Behavior

The intention is described as a person's willingness to put up a lot of effort and the level of that effort, which directly influences behavior (Ajzen, 1991). Previous research demonstrates that the TPB is one of the most commonly used models for analyzing people's intentions to engage in recycling behavior (Ajzen, 1991; Li, Zuo, Cai, & Zillante, 2018). The relationship between attitude, PBC, recycling intention, and recycling behavior was examined using the TPB framework by Cho (2019), who found that TPB had a larger significant impact on students' intentions to participate in campus recycling. The TPB model was also used by Oztekin et al. (2017) to examine the recycling practices of the Turkish university community from a gender perspective. It was discovered that recycling intention and the factors that influence recycling behavior are significantly correlated with the three pillars of TPB frameworks attitude, social norm, and PBC (Fang & Ju, 2010). Wan, Cheung, and Shen (2012) noted that TPB is essential in understanding the individual's behavioral intention of recycling habit. Recycling intention and behavior are favorably correlated with the TPB and past behavior (Oztekin et al., 2017). Thoo et al. (2022) found that recycling intention mediates the relationship between attitude and recycling

behavior, between subjective norm and recycling behavior, as well as between perceived behavioral control and recycling behavior.

## Conclusions

### Research Implications

This paper contributes to filling a vacuum in the literature by proposing a novel model to forecast consumers' recycling intention and behavior in Bangladesh. This research provided a strong theoretical framework to forecast consumers' recycling intention and behavior in Bangladesh, this study makes a theoretical contribution to the literature on recycling. The findings of this study will contribute to raising public awareness of the harm that informal garbage disposal causes to the environment and human health. The results of this study can also be used by various businesses, including those in the automobile, electronics, and other sectors, to practice social responsibility by fostering consumer attitudes that are favorable toward recycling or changing behavior through the creation of social pressure or some sort of incentive or reward system. This can be used as input by the government and other important decision-makers, who will help create a strategic plan, recycling programs, and communication campaigns. Likewise, this study aims to influence customer behavior by

creating efficient strategies for recycling, reselling, and donating. Furthermore, this inquiry was led concerning a developing nation like Bangladesh which fills up the absence of survey needs in the Asian setting as a large portion of the prior exploration is done in the European setting.

### Limitations and Recommendations for Future Studies

Several limitations in this study should be taken into consideration in subsequent research. The present study is constrained by a few independent variables that affect the dependent variable, including attitude, social norms, and PBC. To gain a better understanding of customers' recycling behavior, the model could also include many other significant aspects, such as community factors, rewards for discarded products, ease of return, and moral norms. In addition, it is advised that future studies undertake and implement the TPB framework in various institutions across nations with various economic positions and cultures.

To some part, the goal of this research is to offer recommendations to local government officials, environmentalists, and humanitarian experts to help them comprehend the diverse views of end users regarding recycling. Authorities should

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therefore suggest specific programs that encourage people to recycle, reuse, or give their unwanted goods, such as offering them incentives or rewards like discount coupons, chances to win prizes, or social recognition. In addition, social pressure helps prevent consumers from throwing away waste too soon. To achieve the desired results, the government may adopt communication and advertising techniques that strengthen social norms among domestic consumers of such products. Once more, it is advised to educate consumers about the detrimental impacts of informal trash disposal on environmental degradation and human health.

### Disclosure of Conflict of interest

The authors affirm that there is no conflict of interest in this article.

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# Corporate Tax Reform through a Document Verification System (DVS) in Bangladesh: Perception of the Key Stakeholders

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## **A**bstract

This study explores the perception of the regulators, auditors and their clients regarding the Document Verification System (DVS), a digitalised mechanism introduced in Bangladesh for corporate tax governance. The DVS is expected to eliminate financial delinquency, such as falsification of audited financial statements. Using in-depth interviews, this study reveals that the stakeholders recognised the importance of DVS in bringing financial governance to Bangladesh. However, there are several contextual hindrances to curb the DVS's benefits, and the stakeholders are unsure whether it will improve the financial reports' quality and audit quality. It may contribute to the regulators and practitioners to assess the early-stage realities of the DVS and to determine further action.

## Keywords

DVS, Corporate Tax, NBR, Statutory Audit, Financial Governance.

## Introduction

Financial statements that are accurate and complete are crucial for the economic growth of a country. Investors and creditors rely on these statements to make important financial decisions. However, financial reporting has a

downside. Some organizations may try to gain illegal advantages by creating fake financial statements, giving fraudulent information, or omitting objective information in their financial reports. The Bangladesh Fraud Audit Manual states that dishonestly falsifying accounting records and providing misleading or deceptive information in financial reports are considered fraudulent activities (OCAGB, 2016). In this regard, 'the statutory auditor has an essential role in providing credibility to financial statements because users of financial statements consider the audit report as a guarantee of their reliability' (European Commission, 1998).

However, several corporate and audit failures, such as Enron, WorldCom, and Satyam, have raised a myriad of questions regarding the ethical conduct of statutory auditors and the reliability of the accounting and auditing practices of the organisations (Satava, Caldwell, & Richards, 2006). As a result, the world has seen a drastic change in the regulations of statutory auditing. For example, enacting the Sarbanes-Oxley Act in 2002 caused substantial changes in the regulatory structure for statutory auditing in the USA, and such legislative reform was decoupled by countries such as France and Canada (Baker, Bédard, & Prati dit Hauret, 2014). The reputation of the public audit firms had



been severely damaged due to the involvement of big audit firms (e.g., Arthur Andersen) in the financial scam of the corporations. The financial market stakeholders, e.g., regulators and investors, recognised a fundamental problem in the traditional statutory audit system, i.e., the ineffectiveness of tertiary monitoring of the audit system and the auditor (Alles, Kogan, & Vasarhelyi, 2004).

In Bangladesh, it is a legal requirement for companies to submit their tax returns annually, accompanied by audited financial statements. According to the requirement of the Companies Act 1994, companies must appoint a chartered accountant (CA) to conduct audit and provide reasonable assurance to the financial statements. The penalties for submitting a fraudulent report to the income tax authorities are severe, including fines up to BDT.

100,000, imprisonment for 6 months to 5 years, or both. Unfortunately, despite regulatory measures, non-compliance and fraudulent reports have been an ongoing issue. Some individuals and firms have misrepresented themselves as CAs, deceiving stakeholders and perpetuating fraudulent financial reports. To address this problem, the Institute of Chartered Accountants of Bangladesh (ICAB) and the National Board of Revenue (NBR) have developed a Digital Verification System (DVS) to authenticate audit reports and ensure their legitimacy.

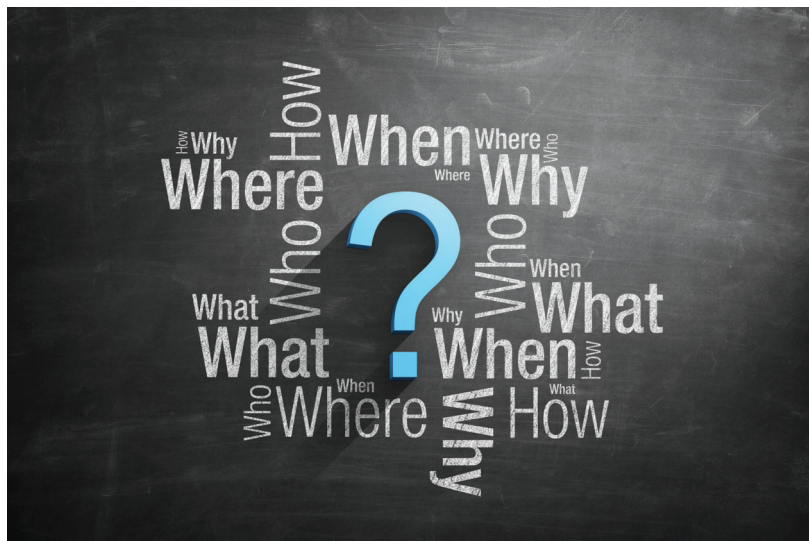
This article examines how chartered accountants, practitioners, and top management in Bangladesh perceive the challenges of using DVS to prevent tax non-compliance and financial misreporting. The study's results could have significant implications for policy and

practice. The country's financial sector lacks transparency, which can lead to corruption. DVS was introduced in Bangladesh in 2020, but it's unclear if regulators are satisfied with how the system is being implemented and how stakeholders are responding to it. This study's findings may aid regulators in creating new policies or adjusting the current framework.

### Background of DVS

There is a long-standing demand to ensure transparency in Bangladesh's tax and audit administration. It has been a common practice for companies to avoid tax returns (The Daily Star, 2022). Table 1 shows that nearly 82% and 81% of corporate taxpayers failed to submit their income tax returns for the year 2020-21 and 2021-22, respectively. Corporate tax submission has remained stymied despite the economy has grown significantly over the last decade. The number of corporate TIN holders has gone passed 160,000, whereas the number of return submission have staggered around 30,000. It is surely a dismal condition of corporate tax compliance. The other form of non-compliance is the submission of fake audit reports. It is not uncommon in Bangladesh to submit manipulated audited reports to different authorities to gain illegal advantages. For example, a company may produce two or more sets of reports for multiple

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purposes. A higher profit report is submitted to financial institutions to get loans, whereas another report with a lower profit or loss to NBR to evade taxes. There was no single source for verifying the audit report.

To tackle the problem, the ICAB and the NBR decided to work together to curb the scope of submitting fake financial statements. They launched a

digital system called DVS to prevent unruly firms from submitting falsified or multiple audited financial statements that hide their actual income from the NBR.

DVS is an application under which a Document Verification Code (DVC) will be generated by the system after the submission of some specific information by the auditor. Income tax officials will consider

an audit report fake if the report does not contain any such code. This system is the introduction of an audit and tax control and coordination mechanism on an ongoing basis. According to the ICAB, each auditor will have a separate code number for submitting their reports to a database. Through the DVS, the NBR, banks, and Registrar of Joint Stock Companies and Firms (RJSC) will be able to access an auditor’s report for a company, so there will be no more than one audit report for a company, and if there are several reports for a company, interested agencies will be able to compare them. As a result, no one can submit fake audit reports if they want to.

**Research Question**

The research question of this study is -how do the auditors, regulators, company executives, and the tax practitioners perceive a new digitalised system to monitor the fraudulent reporting and auditing practices in Bangladesh.

**Table 1: Number of TIN Holders, Return Submission and Tax Collection**

Fiscal Year	TIN Holders	Returns Submitted	Tax Collection (in BDT Billion)
2013-14	21,498	21,799	432.07
2014-15	43,768	23,011	483.53
2015-16	51,483	21,839	523.47
2016-17	58,038	29,215	538.12
2017-18	64,757	27,286	623.40
2018-19	71,193	27,680	702.01
2019-20	77,820	25,250	725.82
2020-21	167,047	29,785	852.24
2021-22	167,135	30,600	-

Source: NBR

## Methodology

This study interviewed three groups of participants who are important stakeholders of corporate taxation practices in Bangladesh. The first group contains the key executives and tax lawyers involved in financial reporting, tax calculation and submission of a company's tax returns. The second group consists of statutory auditors or chartered accountants involved in providing audit report for a company's financial statements. The third group comprises of

the officials of the regulatory bodies such as NBR and Bangladesh Bank. The respondents are segregated as follows:

Based on the availability and accessibility, the authors interviewed twelve respondents (four from each group) guided by some semi-structured questions. The interviews were conducted for 25-45 minutes. Fifty per cent (six out of twelve) of the interviewees were recorded after obtaining consent from the participants. In

the rest of the interviews, the interviewees did not allow tape recording. The authors took notes of all interviews in detail. The recorded interviews were transcribed verbatim. The transcriptions and the notes of the unrecorded interviews were thematically analysed by using Nvivo software. To maintain confidentiality, the names of the participants and their institutions were replaced by codes. The details of the interview participants are as follows:

**Table 2: Details of the Research Participants**

<b>Group A: Practitioners</b>	2 executives involved in the preparation of financial reports and tax calculation and payment for the public and private limited companies.	2 corporate tax lawyers
<b>Group B: Auditors</b>	2 chartered accountants	2 CA Final Level Students involved in conducting audit on behalf of the audit firm.
<b>Group C: Regulators</b>	2 executives (Commissioner, Additional/ Joint/ Deputy/Assistant Commissioner) of the NBR. The respondents serve at different range and circles involved in corporate tax collection.	2 executives (Additional/ Joint/ Deputy Director) involved in Bank Inspection.

**Table 3: Details of the Interview Participants**

Interviewee	Position	Code
Practitioner 1	Chief Accounts Officer of a private limited company. (M.Com, CA Course Complete), CMA (partly qualified))	P1
Practitioner 2	Chief Accounts Officer of a private limited company. (MBA, CA Course Complete.	P2
Practitioner 3	Corporate Tax Practitioner (M.Com, LLB, LLM)	P3
Practitioner 4	Corporate Tax Practitioner (MBA, ITP, LLB)	P4
Auditor	CA, Partner of a Chittagong-based audit firm (MBA, FCA)	A1
Auditor	CA, Partner of a Chittagong based audit firm (M.Com, FCA)	A2
Auditor	CA Advanced Level Students (MBA)	A3
Auditor	CA Advanced Level Students (MBA)	A4
Regulator	Assistant Commissioner, NBR (B.Sc, BCS)	R1
Regulator	Joint Commissioner, NBR (M.Com, BCS)	R2
Regulator	Deputy Director, Bangladesh Bank (MBA)	R3
Regulator	Joint Director, Bangladesh Bank (MBA)	R4

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### Perception of the Key Stakeholders Regarding DVS

The objective of the study is to make an in-depth field investigation into the opinions of the regulators, auditors, financial report preparers and tax practitioners on different issues of digitalised auditor monitoring and tax governance system in Bangladesh. The interviews carried out and the findings presented in this section is categorically divided into four areas- importance of DVS, challenges of implementation, and implications on financial reporting and audit quality.

#### Importance of DVS

The DVS is surely an important addition in financial governance in Bangladesh. For ICAB, DVS is a 'landmark project... that has

already attracted huge attention from regulators, media and Government' (Farooq, 2020, p. 28). The ICAB understood that, as a regulator, it cannot fully control the financial reporting and audit environment. For example, the number of tax returns in 2019-20 was more than 35,000, out of which the chartered accountants audited and signed only 17,000, which is less than half of the total submission. Thus, it is evident that a significant percentage of the financial reports submitted to the tax department are fake and forged. These reports are unaudited and prepared by counterfeiting an auditor's signature and seal. The initiative is likely to increase the revenue of the audit firm substantially. An auditor commented:

We are getting more clients now. In the past, customers who used to manage audit reports in

different illegal ways cannot do it now. They are coming to us. (A2)

DVS has become an obligatory passage for companies to comply with the tax rules. Previously, the clients had the option and power to bypass the auditor and pay them a very poor audit fee. The auditors also could not employ sufficient resources to accomplish the audit properly due to the audit fee constraints. Now, the controlling power is shifted from the clients to the auditors to perform their statutory duties in exchange for a justified audit fee.

Auditing requires a certain amount of time and resources. Previously, the clients used to offer us an insufficient audit fee, and we had a tendency to serve a larger number of clients to maintain our income at the desired level. Now, we have the bargaining power. (A3)

The practitioners reiterate the view of the auditors. The audit fee has increased substantially after the implementation of the DVS.

Previously, some of my clients (i.e., companies) instructed me to produce different reports. I knew a few audit firms could do produce the reports as desired by the companies at a cost of BDT 5,000-20,000 each. Now those audit firms are charging much higher fees (BDT 30,000 or more) for issuing an audit report. (P1)



The report preparers accepted the importance of DVS in driving out the tax corruption. The practice of tax avoidance and evasion is deeply ingrained in our culture. A significant portion of the publicly traded and privately owned companies are dominated by the family-owners. The directors and top management of those family-owned companies direct the managers and accountants to prepare report not to reflect the actual financial condition of the firm but to give them undue tax evasion and credit facilities. The DVS is a challenge for those corrupted companies. An accountant welcomed the system:

In my long career, I served several companies for financial report preparation and tax filing. The top management in my previous company encouraged the practices of income

downsizing for tax avoidance and asset overvaluation for bank loans. The current company management discourages these malpractices. (P3)

Similar to auditors, the regulators warmly accepted the DVS. For them, DVS will serve two key purposes. Firstly, it will act as a monitoring device to detect tax-related fraud. Secondly, DVS is more likely to improve corporate tax revenue.

Obviously, DVS is a groundbreaking move. It will single out the practice of producing altered reports. It will also help the regulators such as BB, RJSE, NBR to coordinate their activities. (R3)

Another regulator commented

Now, it is possible to verify the authenticity of a financial report submitted to the NBR. If an

audited report in our hands is not available in the ICAB DVS database, we will start inquiring about the company. (R1)

The NBR is under constant pressure to meet the tax collection target to support the expanding and ambitious budget of the government. DVS is a type of institutional support the NBR seeks to bring all the companies under the tax net and collect an appropriate amount of tax.

The DVS will bring discipline to the financial market. A transparent financial market is more likely to develop the capital market. Moreover, good governance and transparency in financial reporting will substantially increase the revenue collection of the government and contribute to socio-economic development. (R2)

### Key Obstacles

Government projects relating to digitalisation have high failure rate in both developed and developing countries (Bassy et al 2022). Though DVS is an important addition to the tax governance and auditor monitoring mechanism in Bangladesh, its benefits cannot be taken for granted. This article explored the obstacles and contextual difficulties relating to the implementation of DVS in Bangladesh. All groups of respondents opined that there are several reasons for which

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DVS may not produce the expected result.

The auditors considered the mindset of the investors and managers as a stumbling block to improve tax governance. The culture of tax evasion and avoidance is rooted in the corporate affairs of many companies of Bangladesh. The report preparers and the tax lawyers often ignore the importance of scope and process of auditing to ensure governance and transparency.

Most of the clients do not understand the value of audit. They try to reduce the audit cost as much as possible. Due to DVS, the auditors become concerned about their reputation and are doing detailed scrutiny before signing a report. So, the audit cost and fee also increased substantially. Now, the clients are keen to

recover the additional audit fee by paying a lower amount of tax. (A1).

According to some respondents, the audit fee is a big concern for some companies. They may be unable, reluctant or unwilling to bear the audit fee.

The audit fee is a big concern for some companies. According to the ICAB's prescribed schedule, the minimum audit fee for private limited companies and NGOs is Tk.50,000, and for microfinance institutions is Tk.100,000. Considering the poor economic condition over the last few years, many companies are not able to bear the audit fee. (P1)

An auditor reiterated the practitioner's comment.

Several clients request us to reduce the audit fee. Based on

the client's business condition, we sometimes have to take audit fees lower than the minimum fee schedule. Sometimes we accept lower fees due to personal acquaintance and social connection with the clients. (A1)

The practitioners are doubtful whether DVS will act as an instrument to provide excessive regulatory power to the auditors and regulators and ultimately create an imbalance in corporate taxation practices. They mentioned the auditors' and the regulators' opportunistic tendencies as the obstacles to getting the full benefits from DVS.

Now, the auditors know that the companies have no other option. Sometimes, the auditors refuse the client to conduct an audit or charge an excessive amount of audit fee. Pressure for producing audited financial report surge before the return submission deadline. Some audit firms take this opportunity and charge a huge amount (more than Tk. 300,000) to get a DVC. (P2)

The sufferings do not end even if you get an audited report with a DVC. Sometimes, we need to bribe the NBR officers to submit your return and avoid further audit. (P3)

The auditors and their clients must come forward to reap the expected benefits from the DVS. The clients should consider the value of audit in financial

governance and posit a positive frame of reference regarding the DVS. The auditors also should not use the mechanism for any vested interest.

### Improvement in Audit Quality and Reliability of the Financial Report

All groups of respondents generally agreed that there will be an increase in the audit quality and reliability of the financial report. The auditors believe that the audit quality will substantially improve due to DVS. Previously, it was not possible to check whether the auditor followed the due diligence and audit procedure before signing an audit report. Unlike the previous years of dependency on CA firms' annual audit return data from the ICAB, the FRC now directly monitors how many annual reports a CA firm passes in how much time. So, the auditors are bound to conduct audits more accurately.

We are now under fear of punishment if any misconduct is done by us knowingly or unknowingly. The FRC is pressuring the ICAB to be stricter on the auditors regarding maintaining audit quality. (A2)

However, the practitioners and the regulators differed slightly from the auditors. According to them, the culture of professional misconduct by the auditors is not very rare in our culture.

For some auditor, auditing means preparing and signing an audit report and financial statements in exchange of a certain amount of money. There is neither verification of documents nor any audit process to follow. I am not quite sure whether these malpractitioners would change their mentality and practices. (A1)

In 2022, FRC suspects at least 42 firms for compromising auditing standards, and the ICAB suspended the auditing licence of eight CAs. One of the regulators commented:

It is only a tip of the iceberg. There are many more cases of professional misconduct that are either unidentified or overlooked by the ICAB.

The practitioners and the regulators are also sceptical regarding the improvement in the reliability of the financial report. For them, DVS may increase the number of tax returns and revenue but not the credibility of the financial report. Submission of audited financial reports is more like a box-ticking exercise. The investors don't rely on those. The market price of the shares does not reflect the financial outcome of a company. (P1)

The use of audited reports in financial decision-making is not much. The users perhaps doubt its credibility. (R2)

Overall, the findings indicate the importance of DVS in Bangladesh and some contextual implementation difficulties.

### Discussion and Conclusion

The DVS is undoubtedly a pioneering move by the NBR and the ICAB regarding financial governance in Bangladesh. Financial sector reform in Bangladesh is usually done according to the prescription of donor agencies or foreign investors. For instance, western models for corporate governance and audit sector reform have been adopted in Bangladesh despite the fact that those models do not properly address the local peculiarities and produce the desired result. DVS is an initiative that local regulator takes to address the prevailing problem properly. It also aligned the interests of the professional accountants and the tax administrators. Auditors must act under an effective enforcement system to make statutory auditing effective. DVS seemingly provides a solution to detect the non-filers, the non-compliant taxpayers and the delinquent auditors.

The importance of the DVS in bringing financial transparency and governance is evident from the findings of this study. However, the regulators and the practitioners are also sceptical about the effectiveness of DVS

**Corporate Tax Reform through a Document Verification System (DVS) in Bangladesh: Perception of the Key Stakeholders**

in improving the audit quality and the creditability of the financial reports. The interview participants have doubts about whether high-quality and credible audit reports are used in financial decision-making by various parties in Bangladesh. So, DVS may be a very important first move towards financial governance, but its impact on improving financial reporting quality may not be immediate.

To the best of our knowledge, this study is the first to explore the perception of the stakeholders on DVS in Bangladesh. It included only three stakeholders, namely, the regulators (NBR and Bangladesh Bank), the auditors, and the practitioners (the accounts preparers and tax practitioners). Further study may include more stakeholders such as FRC, IRDA etc. to explore whether and how DVS is useful to different regulators and whether coordination among the regulators will yield further benefits from the system. This study only relied on in-depth interviews and documentary evidences for data collection. Future studies may conduct surveys and one or more in-depth case studies on how the firms, auditors and the regulators are adapting DVS.

DVS is implemented in Bangladesh very recently and all the companies are yet come under this umbrella. Future studies may examine the impact on DVS on audit fee and tax expenditure of the companies, revenues of the audit firms and tax revenue of the government.

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# The Rise of the Metaverse: Financial Frontier

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## Abstract

The metaverse, a virtual world where users can create, trade, and monetize virtual assets, has the potential to revolutionize the way we think about finance and investment. As the metaverse continues to evolve and mature, it is opening up new opportunities for financial innovation, including virtual currencies, virtual marketplaces, virtual insurance, and virtual financial education. By examining these and other key trends, this article provides a comprehensive overview of the metaverse's impact on finance and investment and offers insights into the future of finance in the virtual world.

## Keywords

Metaverse, finance, Virtual realities, NFTs

## Introduction

The Metaverse, a term first coined by sci-fi author Neal Stephenson in his novel Snow Crash, refers to a virtual world that is inhabited by millions of people, often in the form of avatars. The Metaverse has been a topic of discussion and speculation for decades, but with recent advancements in technology, its reality has come closer to fruition. Through the use of virtual, augmented, and extended reality technology, the metaverse has the potential to expand the real world.

The emergence of cutting-edge technologies has transformed people's lives and given the digital ecosphere new life. Individuals no longer only form social relationships through face-to-face interaction. Around blockchain, immersive technology, artificial intelligence, and other topics, a new phase of the computer revolution is emerging. By bridging the gap between the actual and virtual worlds, these technologies' applications have helped to digitise the real world more and more. The focus of people's attention has also shifted to include interactivity, autonomy, immersion and multiple perceptions.

In the Metaverse, users can interact with each other, participate in virtual economies, and engage in virtual experiences. The Metaverse is not just a single virtual world, but rather an interconnected network of virtual worlds, each with its own unique rules, culture, and economy.

The Metaverse has the potential to completely change the way we live, work, and transact, and its impact on finance is no exception. In this article, we will explore the ways in which the Metaverse is changing the financial landscape, including new opportunities for investment, new forms of currency and payment systems, and the challenges that must be addressed to ensure the stability and security of virtual economies.

## The Rise of the Metaverse: Financial Frontier



### New Opportunities for Investment

The Metaverse represents a new frontier for investment, offering a range of opportunities for investors to get involved. These opportunities can be divided into two categories: investments in virtual assets, and investments in the technology and infrastructure that enables the Metaverse.

Virtual assets, such as virtual real estate, virtual collectibles, and virtual currency, have already become a lucrative market for investors. The value of virtual assets is determined by their scarcity and uniqueness, as well as their perceived utility and desirability. Virtual real estate, for example, can provide a space for businesses to establish a virtual presence, or a place for users to live and socialize. Virtual collectibles, such as virtual art and virtual fashion, can also provide investors with a way to profit from their investment.

Investments in the technology and infrastructure that enable the Metaverse also provide opportunities for investors. This includes investments in companies that develop virtual reality (VR) technology, companies that create and operate virtual worlds, and companies that provide security and management services for virtual assets. These investments provide investors with a way to profit from the growth of the Metaverse, as the demand for VR technology and virtual experiences continues to increase.

### Research Objective

The research objective of article on the topic of "Financial Frontier: The Rise of the Metaverse" is to understand and analyse the impact of the metaverse on finance and investment, and to identify the opportunities and challenges associated with using the metaverse as a platform for

financial innovation. The research will aim to evaluate the potential of the metaverse as a platform for virtual currencies, virtual marketplaces, and virtual financial instruments.

### New Forms of Currency and Payment Systems

In the Metaverse, traditional fiat currencies like the US dollar, Euro, and Japanese yen are unlikely to be the primary means of payment. Instead, new forms of virtual currency, such as NFTs and Meta tokens, are emerging as the primary means of exchange in virtual economies.

NFTs, or non-fungible tokens, are unique digital assets that are stored on a blockchain. NFTs can be used to represent virtual assets, such as virtual real estate, virtual collectibles, and virtual currency. Because NFTs are unique and stored on a blockchain, they are secure and tamper-proof, making them ideal for use in virtual economies. Meta tokens, on the other hand, are virtual currencies that are specifically designed for use in the Metaverse. Meta tokens can be used to purchase virtual assets, pay for virtual experiences, and facilitate transactions within virtual economies. Meta tokens are similar to traditional cryptocurrencies, but they are designed specifically for use in the Metaverse, and they provide users with access to a range of new financial services and products.



### How Metaverse could be Used in the Field of Finance?

- Virtual currencies: The Metaverse could be used to support virtual currencies, such as Bitcoin and Ethereum, which are decentralized and can be used for peer-to-peer transactions without the need for intermediaries.
- Virtual marketplaces: Virtual markets where users can trade virtual goods including virtual commodities, virtual real estate, and virtual collectibles could be developed using the Metaverse.
- Virtual banking: The Metaverse might be used to establish virtual banks that would provide users in the virtual world with a

variety of financial services like loans, savings accounts, and investment opportunities.

- Virtual financial instruments: The Metaverse could be used to create virtual financial instruments, such as virtual bonds, virtual derivatives, and virtual options, enabling users to access a wider range of financial products and services.
- Virtual stock exchanges: By utilising the Metaverse to build virtual stock exchanges, users would have access to new investment options as well as the capacity to trade virtual stocks, bonds, and other financial assets.
- Virtual insurance: The Metaverse could be used to provide virtual insurance

products, such as virtual life insurance, virtual health insurance, and virtual property insurance, to users in the virtual world.

- Virtual crowd funding: Through the use of virtual crowd funding systems made available by the Metaverse, people might raise money for fictional endeavours including virtual communities, enterprises, and games.
- Virtual financial education: The Metaverse could be used to provide virtual financial education and training programs, helping users to better understand financial markets and financial products and services, and to develop their financial literacy skills.

### Benefits of Metaverse in Finance

**New investment opportunities:** The Metaverse offers a new arena for investment, providing investors with access to new asset classes, such as virtual real estate and virtual commodities, as well as new financial instruments, such as virtual bonds and virtual derivatives.

**Increased accessibility:** The Metaverse offers greater accessibility to financial markets and financial services, making it easier for people to participate in the global economy, regardless of their location or financial status.

## The Rise of the Metaverse: Financial Frontier



**Decentralization:** The Metaverse offers a decentralized platform for financial transactions, reducing the need for intermediaries and creating a more efficient and transparent financial system.

**Increased efficiency:** By leveraging cutting-edge technology, the Metaverse offers a more efficient and streamlined financial system, reducing the time and cost of transactions, and increasing the speed of financial processes.

**Innovation:** The Metaverse is a new frontier for innovation in finance, providing a platform for the development of new financial products and services, and promoting the advancement of financial technology.

**Global reach:** The Metaverse offers a global platform for financial transactions, enabling businesses and individuals to access new markets and reach

new customers, regardless of geographical barriers.

**Increased privacy:** The Metaverse offers a high degree of privacy and security for financial transactions, reducing the risk of fraud, theft, and identity theft, and increasing user confidence in virtual financial systems.

The unification of Metaverse in the banking and financial sector can bring several advantages including:

- **Improved Security:** With block chain technology, transactions are secured through cryptography and are less susceptible to fraud or hacking.
- **Better Customer Experience:** Banks can provide customers with a more personalized and convenient experience through the use of decentralized applications (dApps) and digital assets.

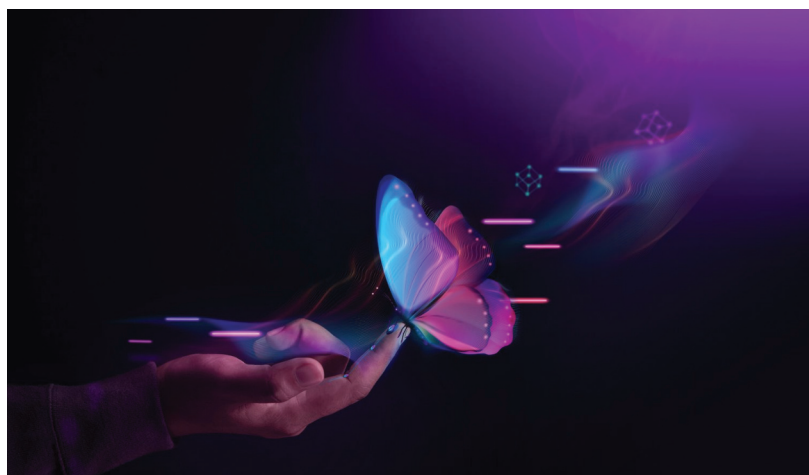
- **Increased Accessibility:** With Metaverse, people who are unbanked or under banked can access financial services, as well as participate in the global economy.
- **New Business Models:** Metaverse allows banks to create new business models and revenue streams, such as providing services for tokenization and trading of assets, and participating in decentralized finance (DeFi) applications.

**Note:** The integration of Metaverse is still in the early stages, and more research and development is needed before it can be widely adopted by the banking industry.

### Challenges to be Addressed

While the Metaverse holds great promise for the future of finance, it also presents several challenges that must be addressed to ensure the stability and security of virtual economies. These challenges include:

- **Regulation:** As virtual economies grow, it is important to establish a clear regulatory framework to ensure that virtual currencies, virtual assets, and virtual economies are protected from fraud and manipulation. This may include regulations around



the creation and circulation of virtual currencies, the protection of virtual assets, and the security of virtual transactions.

- **Cyber security:** The Metaverse relies on complex technology and networks to operate, making it vulnerable to cyber-attacks. To ensure the stability and security of virtual economies, it is important to invest in robust cybersecurity measures, including encryption, firewalls, and intrusion detection systems.
- **User protection:** As virtual economies become more prevalent, it is important to protect users from exploitation, such as fraud, price manipulation, and hacking. This may include the creation of user protection programs, dispute resolution

mechanisms, and consumer protection laws.

- **Economic stability:** To ensure that virtual economies are stable, it is important to establish sound monetary policies and regulations, such as controlling the supply of virtual currency, preventing inflation, and managing the exchange rate between virtual currencies and fiat currencies.

### Examples of Companies that are using Metaverse in the Finance

**Enjin:** A block chain-based platform that enables users to create and trade virtual assets, including virtual currencies, virtual goods, and virtual real estate.

**Decentral Games:** A decentralized gaming platform that uses blockchain technology to support virtual economies

and virtual marketplaces, enabling users to trade virtual assets, such as virtual collectibles and virtual commodities.

**Axie Infinity:** A block chain-based gaming platform that enables users to trade and battle virtual creatures, known as Axies, and to participate in a virtual economy that is powered by a virtual currency, known as SLP.

**Sandbox:** A virtual world platform that uses blockchain technology to support virtual economies and virtual marketplaces, enabling users to create, trade, and monetize virtual assets, such as virtual real estate and virtual collectibles.

**Somnium Space:** A virtual world platform that uses blockchain technology to support virtual real estate and virtual marketplaces, enabling users to buy, sell, and trade virtual land, buildings, and other virtual assets.

**Mirrored:** A virtual world platform that enables users to buy, sell, and trade virtual assets, including virtual real estate, virtual commodities, and virtual collectibles, and to participate in a virtual economy that is powered by a virtual currency, known as the Miro.

**The Sandbox:** A virtual world platform that enables users to create, share, and monetize virtual experiences and virtual assets, including virtual games,

## The Rise of the Metaverse: Financial Frontier



virtual experiences, and virtual collectibles.

### Conclusion

The Metaverse represents a new frontier for finance, offering new opportunities for investment, new forms of currency and payment systems, and new challenges that must be addressed to ensure its stability and security. As the Metaverse continues to grow and evolve, it is important to monitor its development and address the challenges that it presents to ensure that virtual economies are safe, stable, and secure. The Metaverse has the potential to transform the financial landscape as we know it, providing new opportunities for investment, new forms of currency and payment systems, and a new edge for innovation. However, it is important to address the challenges that it presents, such as regulation, cybersecurity, user protection, and economic stability, to

ensure that the Metaverse is a safe and secure environment for all users.

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# Combating Money Laundering in Bangladesh's Fintech Industry

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## Introduction

There are several ways to define money laundering. To explain it simply, money laundering is the method used by criminals to conceal their true identities and sources of the money obtained through illegal activities. They do so to avoid being proven guilty and having their money confiscated.

There has been an unsettling rise in the financing of terrorist activities and money laundering in recent years. Adopting multiple agreements and resolutions, the United Nations (UN) was the first international body to take major steps in the battle against money laundering. The first intergovernmental body to address money laundering was the Financial Action Task Force on Money Laundering (FATF), established by the G-7 in 1989. Bangladesh, following international initiatives and norms, also passed The Money Laundering Prevention Act, 2002.

The Money Laundering Prevention Act, 2002 is Bangladesh's first anti-money laundering law. Six years down the line, the Money Laundering Prevention Ordinance of 2008 took its place. Afterwards, the Money Laundering Prevention Act of 2009 revoked the ordinance. The government replaced it once more in 2012 with the Money Laundering Prevention Act of 2012. The

amended Money Laundering Prevention Act of 2012 resolves every shortcoming in the previous anti-money laundering laws, which synchronizes the country's compliance with international norms. The shortcomings that have been mitigated, include the following:

1. Section 14 deals with freezing of assets that have been laundered. This part of the act has given authority to the investigation agency. If the investigation agency places a formal request, the court will be able to order the freezing of any property connected to a money laundering charge. This provision could, however, be abused by the investigating agency.
2. The term "human trafficking" is defined more broadly. Receiving money through a false promise to send it overseas will now be prosecuted as money laundering.
3. According to Section 4(2), money laundering carries a two-million-BDT fine, or double the asset's worth, as well as a four-to twelve-year prison sentence. Furthermore, the court may order the confiscation of any assets connected to money laundering in the state's favour under section 4(3).



4. The Act's Section 6 lays out the penalties for disclosing any investigation-related information with malice. These penalties include a maximum two-year prison sentence, a fine of BDT 50,000, or both. The maximum sentence for wilfully providing false information regarding the sources is 3 years in prison and/or a fine of up to BDT fifty thousand, as stated in Section 8.
5. No court may find any offense to be committed without the authorization of the Bangladesh Financial Intelligence Unit (BFIU), according to Section 12 of the Act. The court's capacity to handle offenses involving money laundering is impacted by this clause. Debatable is

the sub-part of the aforementioned clause that stipulates that the BFIU must receive prior clearance for any investigative report about a violation of this Act.

To summarize most points mentioned above, the amendment has given extensive jurisdiction to BFIU when it comes to offenses related to money laundering.

With the authority granted by both Acts (MLPA and ATA), Bangladesh Bank acts as the focal point in the prevention of money laundering and terrorist financing by providing guidelines and instructions to reporting organizations, including Mobile Financial Services (MFS), as specified in MLPA, 2012, Section 2(g). This is where the role of Anti Money

Laundering and Combating the Financing of Terrorism (AML&CFT) comes into play, as the entire industry legally and judicially adheres to the guidelines and regulations imposed upon them by Bangladesh Bank.

A research published by Global Financial Integrity (GFI) claims that trade-based money laundering (TBML) was used to drain USD 61.6 billion out of Bangladesh between 2005 and 2014. Mis-invoicing had cost Bangladesh USD 7.53 billion annually on average between 2008 and 2017, making up 17.95% of the country's total international commerce with all of its trading partners during that time. Similarly, Transparency International Bangladesh (TIB) revealed that around BDT 26,400 crore, or USD 3.1 billion, is sent out of Bangladesh illegally each year. These reports further indicate that hundi, over-invoicing, under-invoicing, and trade mis-invoicing are the primary techniques of money laundering.

Capital flight and money laundering are two major issues that have been affecting the economy of Bangladesh. According to a recent article by The Business Standard, Bangladesh loses a significant amount of money to capital flight and trade mis-invoicing every year. The article suggests that accounting for unrecorded factors such as capital outflow

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and money laundering is crucial when analysing the causes of the country's economic problems. As for fintech companies in particular, risks associated with AML include cross-border transactions, transaction speeds, money-muling, consumer identities, and regulatory delays. Service providers must be aware of the fintech AML risks they face and how to take appropriate precautions to safeguard themselves to prevent compliance violations.

**The Flourishing Fintech Industry in Bangladesh**

Financial technology, or fintech, is the term for technical innovation used in the creation and provision of financial services and goods. Advances in financial technology include the use of artificial intelligence (AI), machine learning, and big data to assess investment

possibilities, optimize portfolios, and reduce risk. Due to the reshaping of traditional financial systems, the term "fintech" has garnered significant attention in Bangladesh in recent years. Currently, there are 234 fintech startups in Bangladesh, and the fintech sector is experiencing innovations which include the appearance of prominent trends like virtual currencies, digital investments, electronic payments, and online fundraising. Global market research firm Statista projects:

- Bangladesh's fintech digital investment market to be worth \$55.5 million in 2023
- Bangladesh's fintech digital investment market to likely grow by 35.8% by 2024
- Bangladesh's fintech digital investment market to be worth an estimated \$909 million by 2027

As per information published by Bangladesh Bank's Statistics Department on Mobile Financial Services (MFS) statistics, MFS transactions have increased significantly over the last year, confirming the tremendous growth the fintech industry is experiencing. As such the risk of money laundering has also increased in parallel to industry growth.

Decentralized finance (DeFi) platforms, which make use of blockchain technology to provide alternative financial services like lending and borrowing without the need for conventional intermediaries, are a recent example of fintech innovation. These platforms have become widely adopted. In 2020, it was reported by The Daily Star that, the first blockchain-based cross-border remittance service had been launched in Bangladesh by Standard Chartered Bank, in

Summary of total MFS transaction count and amount for the year 2023 (till November):

Month	Cumulative Number of Accounts	Number of Transaction Count	Number of Transaction Amount
November'23	220	542	1,196,692
October'23	218	573	1,205,965
September'23	215	497	1,083,782
August'23	212	512	1,095,551
July'23	210	484	983,069
June'23	207	573	1,321,753
May'23	204	502	1,083,552
April'23	201	531	1,249,540
March'23	198	482	1,084,673
February'23	197	451	973,076
January'23	194	463	1,005,934
<i>*in Millions</i>			



collaboration with Valyou of Malaysia and bKash of Bangladesh. The service is facilitated by Ant Group's cutting-edge blockchain technology.

Financial inclusion is one of Bangladesh's major problems because a sizable portion of the population is still unbanked. Fintech, however, is drastically altering this landscape. The government has taken several initiatives to encourage fintech innovation. To promote the development of digital banking solutions, Bangladesh Bank has established a regulatory sandbox. With the help of this initiative, fintech companies can test their cutting-edge goods and services in a safe setting before putting them on the market. bKash is one such company that is a significant part of Bangladesh's fintech industry and has been working closely with government

regulators and other external stakeholders to guarantee customer satisfaction and the security of their money while pursuing innovative approaches to financial inclusion.

### **The Role of Compliance**

Bangladesh Bank has established a regulatory framework that fintech businesses operating in Bangladesh must abide by. Guidelines for Know Your Customer (KYC), Combating Financing of Terrorism (CFT), and Anti-Money Laundering (AML) policies are included in the regulatory framework. In Bangladesh, fintech enterprises are currently subject to a different set of regulations compared to regulated banks. Regulations governing banks are stricter than those governing fintech companies. For instance, to guarantee their financial stability, banks must

maintain a specific level of capital adequacy ratio (CAR). Fin-tech businesses, however, are exempt from maintaining CAR. In addition, traditional banks have to abide by several rules, such as Basel III, a global regulatory framework for banks. On the other hand, Basel III laws do not apply to fintech companies. However, if fintech companies handle credit card transactions, they must abide by the Payment Card Industry Data Security Standard (PCI DSS).

The nation has realized over the years that being technologically advanced and experiencing quick growth does not make fintech companies prone to financial crime risks. Fintech companies have to fulfill their customer obligations while analysing and processing large amounts of transactions. However, they also must deal with the constantly shifting regulatory requirements including heightened industry scrutiny, continuous modifications to the sector's scope, and related compliance expectations. Financial crime and money laundering pose risks to all financial sectors and the Bangladesh fintech industry is also subject to regulatory AML obligations, similar to other financial sectors.

The fintech industry's compliance requirements are governed by two main sets of guidelines: Bangladesh MFS Regulation 2018 and BFIU Circular 20. These regulations

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provide a unified regulatory framework that include all standards to be followed by authorized MFS providers to maintain market discipline and risk mitigation standards. The products, services, and models that are acceptable for fintech companies are described in great detail in these guidelines. BFIU Circular 20 offers standards adhering to KYC protocols and ensuring data security to build a secure transactional platform that meets the needs of its clients and other pertinent stakeholders. BFIU Circular 20 states that each mobile financial service provider shall have its own policy in accordance with the relevant laws and regulations existing in the country and the guidelines of the Bangladesh Financial Intelligence Unit (BFIU), taking into account the international standards for the prevention of money laundering and terrorist financing, which should be

approved by their Board of Directors. BFIU Circular 20 further enforces the following upon MFS providers:

- A declaration of commitment to preventing money laundering and financing of terrorist activities by the Chief Executive of the MFS provider.
- Appointment of CAMLCO (Chief Anti Money Laundering Compliance Officer), Deputy CAMLCO, and a Money Laundering and Anti-Terrorism Financing Compliance Committee consisting of at least 5 (five) members with meetings for at least 4 times a year.
- Customer Acceptance Policy: Services will not be provided to anonymous customers, or under a pseudonym, or to any listed suspects with

involvement in terrorism and terrorist financing.

- The organization is to collect and store complete and correct customer information by carrying out proper identification and verification processes.
- Proper Customer Due Diligence (CDD) to be performed upon registration and onboarding of a customer or entity.
- The organization should identify and assess the level of risk and take appropriate measures to address the risk arising from any new service or technology
- MFS providers to regularly monitor all complex and unusual transactions by customers, agents, distributors, and merchants
- Any suspicious transaction or activity identified is to be reported to BFIU by filing a suspicious transaction report (STR) report using goAML web.
- Agents, Merchants and Distributors to be appointed after ensuring their full and proper identity by following proper screening mechanisms



## Combating Money Laundering in Bangladesh's Fintech Industry



Trading of cryptocurrency and virtual assets have become a source of apprehension for Fintech companies in Bangladesh. Multibillion-dollar scandals and frauds are creating extreme volatility in the financial markets. Organized crime groups are using cryptocurrencies to launder money and finance terrorism. Other uses of cryptocurrency include evading sanctions, profiting from hacks and cyber-scams, and funding nuclear weapons projects. In recent times, several cases of fraudulent activities have been reported where the prospect of online employments that pay for short product or service reviews, enticed citizens to participate in a fraudulent operation that ended up costing them a fortune. As per an article published by The Daily Star, on November 25, 2023, detectives detained fifteen people for their involvement in lending schemes, including a certain Chinese national. In relation to similar schemes, nine other people

were taken into custody on January 3 and January 14 of this year, respectively.

The effects of money laundering could be detrimental to the economy and society. Money laundering gives terrorists, drug dealers, smugglers, illegal arms dealers, dishonest public officials, and other criminal enterprises the fuel they need to survive and grow. Money laundering reduces tax revenue for the government and it impacts law-abiding citizens. Money laundering causes resource misallocation and manipulation of assets and commodity prices.

Despite rigorous efforts of all organizations involved in combating this phenomenon, professionals in risk and compliance anticipate an increase in cases of fraud and money laundering in the upcoming years. In such cases, it becomes vital for fintech companies to take the initiative instead of solely relying on

guidelines and regulatory frameworks.

### Steps Recommended to be Taken in the Future

1. Automating procedures that are currently manual: It is recommended that fraud and AML professionals in fintech companies prioritize automating manual processes, such as transaction monitoring, and alert resolution, and minimizing analysts' manual efforts in the upcoming years. One of the main reasons is the inability to cope with the large amounts of analysis that need to be done.

For instance, several news outlets such as The Financial Express, Dhaka Tribune, and The Daily Star have reported that bKash, a fintech company in Bangladesh, introduced "AML360", an integrated anti-money laundering and countering the financing of terrorism (AML&CFT) system that is used to monitor real-time transactions of customers and channel partners such as agents, distributors, merchants, and aggregators. For the very first time in the country, bKash has introduced an automated solution to improve accountability, transparency, and risk-free ecosystem. The



Bangladesh Financial Intelligence Unit (BFIU) and other organizations' collaborative process has become more dynamic with the implementation of the AML360 solution. Financial institutions tend to conduct transaction monitoring through common platforms such as MS Excel or MySQL. However, with the advent of automated solutions such as AML360, such transaction monitoring functions are now automated through the system. Certain algorithms and parameters are set in the system which raises a flag upon suspicious or irregular transactions conducted by an account. Similarly, automation in other AML&CFT functions can enable fintech or MFS

companies to become much more efficient going forward.

2. Responding quickly to evolving risks: Professionals in fintech companies should be concerned with recognizing and promptly responding to new fraud threats and changes in AML regulations, given the constantly changing fraud landscape and AML regulatory market. Thus, implementing that knowledge into proactive measures to reduce future financial crime takes precedence over simple identification.
3. Increasing efficiency while reducing the cost of compliance: Given that the purpose of compliance is

to mitigate fraud losses and increase revenue for the company, the more funds that fintech companies spend on compliance activities, the more opportunities they have to truly succeed in their objective of lowering financial setbacks. Organizations need to have confidence in a solution that enables them to streamline processes and lower the expenses related to combating fraud, laundering money, and other related crimes.

## Conclusion

There is no doubt that the existing regulatory framework and guidelines imposed on fintech companies have had a significant impact on anti-money laundering and combating the financing of terrorism effectively, but as the companies evolve, so do their products and services and subsequently the risks of any emerging fraudulent activity. To keep up with these risks and mitigate them effectively, initiatives for prevention and mitigation must be taken by fintech organizations in the country, particularly their anti-money laundering departments.

Mobile Financial Services have significant scope in Bangladesh as they have become a popular and easier medium of transactions. Though there is an

## Combating Money Laundering in Bangladesh's Fintech Industry



established and proper regulatory framework for addressing anti-money laundering and combating the financing of terrorism effectively, the Government should readdress the laws as new companies are evolving where their products and services as well as subsequent risks of any emerging fraudulent activity are increasing day by day. With proper regular monitoring and update of the existing policies and guidelines, the MFS industry can take Bangladesh to a different level.

Some of the recommendations have been included in this article, such as automating manual procedures, responding quickly to newly identified risks, and being efficient while keeping costs to a minimum. There are many more to be added to this existing list, but as of the current situation, these take precedence over other recommendations for a

compliant fintech industry.

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# GLOBAL RECOGNITION TO ICAB



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## Recognition of ICAB membership by ICAEW

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

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

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

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

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

## Recognition of ICAB Membership by CIPFA, UK

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

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

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

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

## Membership Pathways Agreement (MPA) with CPA Australia

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

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

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

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

## Membership of the International Valuation Standards Council (IVSC)

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

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

## Other Memberships

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