Report On

Islamic VS Non-Islamic Banks in Bangladesh

By

Tanisha Tanzim
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An internship report submitted to BRAC Business School in partial fulfillment of the
requirements for the degree of Bachelor of Business Administration (BBA).

BRAC Business School
BRAC University
April 2020

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Abstract on Chapter 3

This research attempts to unearth the factors influencing incomes of 30 Banks listed in Dhaka Stock Exchange (DSE). Six independent variables including Net Interest Margin, Operating Profit Margin, Provisions, Deposits, Equity and a Dummy variable representing the Islamic Bank status were taken into consideration to explain differential performances of banks in this study. The alternative hypothesis of this paper- At least one of these variable's beta is non-zero; meaning one or more of these variables affect bank's performance, and for some variables, the impacts on performance may be differ between Islamic and non-Islamic banks. Panel Data Estimation was used to test this hypothesis first. Then the study was further focused on revealing performance deviations between Islamic and Non-Islamic banks by compounding the Dummy variable with other independent variables. Findings have proven that the alternative hypothesis can be accepted. The findings were analyzed with Bangladesh Bank policies to interpret why some independent variables behave in a certain manner that eventually justifies performance deviations between the two bank categories. To conclude, the paper presents a few recommendations to help ease difficulties faced by Islamic and Non-Islamic banks in Bangladesh.

Declaration

It is hereby declared that:

1. The internship report submitted is my own original work while completing degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

Student's Full Name & Signature:

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Tanisha Tanzim

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Supervisor's Full Name & Signature:

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Dr. Sang H. Lee

Dean, BRAC Business School

BRAC University

Letter of Transmittal

Dr. Sang H. Lee

Dean,

BRAC Business School

BRAC University

66 Mohakhali, Dhaka-1212

Subject: Submission of Internship Report Spring 2020.

Dear Sir,

It is a great pleasure that you have given me an opportunity to prepare the report on "**Islamic VS Non-Islamic Banks in Bangladesh"** based on my internship at IDLC Asset Management Limited (AML).

I have attempted my best to finish the report with the essential data and recommended proposition in a significant compact and comprehensive manner as possible.

I trust that the report will meet the desires.

Sincerely yours,

_____

Tanisha Tanzim

16104089

BRAC Business School

BRAC University

Date: April 2020.

Non-Disclosure Agreement

This agreement is made and entered into by and between IDLC Asset Management Limited and Tanisha Tanzim, the undersigned student at BRAC University; in order to assure avoidance of unapproved disclosure of any confidential data of the organization.

IDLC Asset Management Limited

Tanisha Tanzim

Acknowledgement

Executive Summary

IDLC Asset Management Limited (AML) is a wholly owned subsidiary of IDLC Finance Limited (FL) which is one of the largest non-banking financial institutions in Bangladesh. The parent company offers services such as home loan, car loan, term loan, seasonal loan, supplier finance, lease financing, project financing, merger and acquisitions, etc. With only 5 employees, it started as a single product lease finance company in 1985. After 33 years the company is one of the largest and renowned multi-product multi-segment non-banking financial institution in Bangladesh. IDLC AML commenced operation from 2016. It offers investment knowledge, investment products and investment return in Bangladesh for both individuals and institutions. Products/services include 3 open ended mutual funds: IDLC Balanced Fund, IDLC Growth Fund and IDLC AML Shariah Fund. The company intends to provide a catered investment tool for its clients through lumpsum investment and their newly established IDLC SIP (Systematic Investment Plan).

In IDLC AML, I worked as an intern under their portfolio management division. My duties were to assist the portfolio management team's research wing. Regular tasks involved data inputs for their stock watchlist, Weekly Mutual Funds Review and sometimes data collection for companies soon going for IPO. I have also assisted Navin Rahman, Investment Analyst, in creating a bank database consisting financial data of 30 listed banks in Bangladesh. Data ranged from entire Balance sheet and Income statement to few necessary breakdowns from the banks' annual reports 'Notes' section; many further calculations were required to complete the database. The purpose of this database is to enable an individual to simply type a bank's name and be able to see multiple financial performance indicators such as CASA ratios, CAR, NIM, growth rates, loan defaults, etc.

My research was conducted on the Bank Database Project. A time series and cross-sectional analysis was carried out on 30 banks to determine several independent variables affecting the performance of these banks. The research is further focused towards uncovering whether Islamic banks differ from Non-Islamic banks in terms of performance. If yes, why? The answer to this question represents my core findings. Explanations, backed by Bangladesh Bank rules and regulations, are provided for every type of correlation discovered in this study. Several important ratios were calculated to determine overall comparative performance of the banks. Lastly, recommendations are provided to help banks improve their performance in excess of pre-determined standards.

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List of Acronyms

MNC	Multi-National Company
HR	Human Resources
IDLC	Industrial Development Leasing Company of Bangladesh
AML	Asset Management Limited
IPO	Initial Public Offering
DSE	Dhaka Stock Exchange
DSEX	DSE Broad Index
CSE	Chittagong Stock Exchange
NPAT	Net Profit After Tax
NAV	Net Asset Valuation
CASA	Current Account and Savings Account
CAR	Capital Adequacy Ratio
NIM	Net Interest Margin
NPL	Non-Performing Loan
SME	Small or Medium-sized Enterprise
ICSB	Institute of Chartered Secretaries of Bangladesh
ICAB	Institute of Chartered Accountants of Bangladesh
ICMAB	Institute of Cost and Management Accountants of Bangladesh
SAFA	South Asian Federation of Accountants
BO	Beneficiary Owners
SIP	Systematic Investment Plan
ROA	Return on Assets
ROE	Return on Equity

EPS	Earnings Per Share
SLR	Statutory Liquidity Ratio
BSEC	Bangladesh Securities and Exchange Commission
ICB	Investment Corporation of Bangladesh
BGIC	Bangladesh General Insurance Company Limited
AUM	Assets Under Management
SWOT	Strengths, Weaknesses, Opportunities, and Threats
PESTEL	Political, Economic, Social, Technological, Environmental and Legal factors
OLS	Ordinary Least Squares
SBIC	Schwarz's Bayesian Information Criterion
MFS	Mobile Financial Service

Glossary

Asset Manager	Entities responsible for making well-informed investment decisions on behalf of their clients.
Intranet	A private network accessible by authorized personnel only.
Open-ended mutual fund	A diversified portfolio of pooled money from different investors with the provision for ongoing new contributions and withdrawals.
Shariah-compliant	Halal business practices conforming to Islamic beliefs, laws and regulations.
SLR	Statutory Liquidity Ratio measures the proportion of deposits the commercial banks must maintain in the form of liquid assets in addition to the cash reserve ratio.
Systematic Investment Plan	A plan that allows investors to invest a fixed amount of money every month for a specific time period to reach their investment goals.

Chapter 1: Overview of Internship

1.1 Student information

Name: Tanisha Tanzim

ID: 16104089

Program: Bachelor of Business Administration (BBA)

Dual Major: Finance and Accounting

1.2 Internship Information

1.2.1   On January 6, 2020 I have joined the company IDLC Asset Management Limited (AML) as an intern under their portfolio management division. The company's address is as follows: Symphony [4th floor], Plot # SE (F) 9, Road # 142, Gulshan South Avenue, Bir Uttam Mir Shawkat Sarak, Dhaka 1212, Bangladesh. I have successfully completed two months internship in this company. I have always aspired to work for an MNC; therefore, I accepted an offer from Chevron Bangladesh where I joined as an HR intern from 15th March, 2020. As a result, I could only complete two months (January 06, 2020 to March 06, 2020; as per my experience letter) internship at IDLC AML.

1.2.2   Md. Itrat Hossain, Manager was my on-site supervisor. With 7 years' experience in conducting sector analysis and equity coverage, he is leading the investment analysis activities of the Portfolio Management team in IDLC AML. His contact information are as follows: *Phone: +8801730374551, email: itrat@idlc.com*

1.2.3   My duties were to assist the portfolio management team's research wing. Office hours was from 9.30 a.m. to 5.30 p.m. My job responsibility can be categorized into:

   (a) Regular duties: Appointed tasks involved both annual and quarterly data inputs of NPATs for all DSE listed companies (used for their stock watchlist). Sometimes data inputs of revenues and other financial indicators for companies soon going for IPO were also assigned. On Mondays, I helped prepare a Weekly Mutual Funds Review by collecting data on NAV, investor buy and sell price of open-ended mutual funds in the market.

(b) Project: I have assisted Ms. Navin Rahman, Investment Analyst, in creating a bank database. The purpose of this database is to enable an individual to simply type a bank's name and be able to see how that bank is performing in different aspects such as CASA ratios, CAR, NIM, growth rates, loan defaults, etc. It consists of financial data of 30 listed banks in Bangladesh. Data ranged from entire Balance sheet, Income statement, few necessary breakdowns from the banks' annual reports 'Notes' section and many calculations required to complete the database. I have done the data inputs for all banks' Balance sheet, Income statement (annual figures for all and quarterly figures for 5 major banks) and partial breakdowns from Notes. Rest of the breakdowns and calculations, the most integral part of the database, were done by Ms. Rahman. She and my supervisor graciously gave me access to parts of the database completed by me for the purpose of my internship report.

Job Responsibilities			
Bank database project	Weekly Mutual Funds Review	Updating stock watchlist	Other data inputs

Figure 1: Job responsibilities as an intern in IDLC AML

1.3 Internship Outcomes

1.3.1 As an intern, I have contributed to the aggregation of ample yet partial amount of data that an investment analyst is entailed to do so on a regular basis. In doing so, the team was able to focus on the integral parts of daily tasks and projects.

1.3.2 This internship has helped me get real-life understandings of a non-banking financial institution. It was a crucial point to gain valuable experience, develop skills, explore a career path and most importantly transition into a job. Overall, it was a delightful experience for me.

1.3.3 I would like to recommend job rotation between interns within the company for a few days. This will drastically increase the range of knowledge and skills developed by interns. Moreover, it will allow interns to work together since the interns themselves will be responsible for teaching each other how to complete respective tasks.

Chapter 2: IDLC Asset Management Limited (AML)

2.1 Introduction

IDLC stands for Industrial Development Leasing Company of Bangladesh Limited. IDLC Asset Management Limited (AML) is a subsidiary company of IDLC Finance Limited (FL) which is one of the largest non-banking financial institutions in Bangladesh. Other sister concerns include IDLC Securities Limited and IDLC Investment Limited. The parent company offers services to consumers (home loan, car loan, etc.), SME (term loan, seasonal loan, supplier finance, etc.) and corporate (lease financing, project financing, merger and acquisitions, etc.). With only 5 employees, it started as a single product lease finance company in 1985. After 33 years the company is one of the largest and renowned multi-product multi-segment non-banking financial institution in Bangladesh. Today it has 38 branches across the country with more than 1400 employees offering a wide range of financial products and services. Therefore, IDLC FL has a strong foothold in Corporate, SME, Retail and Capital market segments. Some important recent events are shown below:

2016
- Establishment of IDLC ASSET MANAGEMENT LIMITED

2017
- 4th ICSB National Award for Corporate Governance Excellence
- 17th ICAB National Award for Best Presented Annual Report
- Highest Tax Payer in Non-Banking Financial Institutions

2018
- SAFA Award
- ICMAB best corporate award
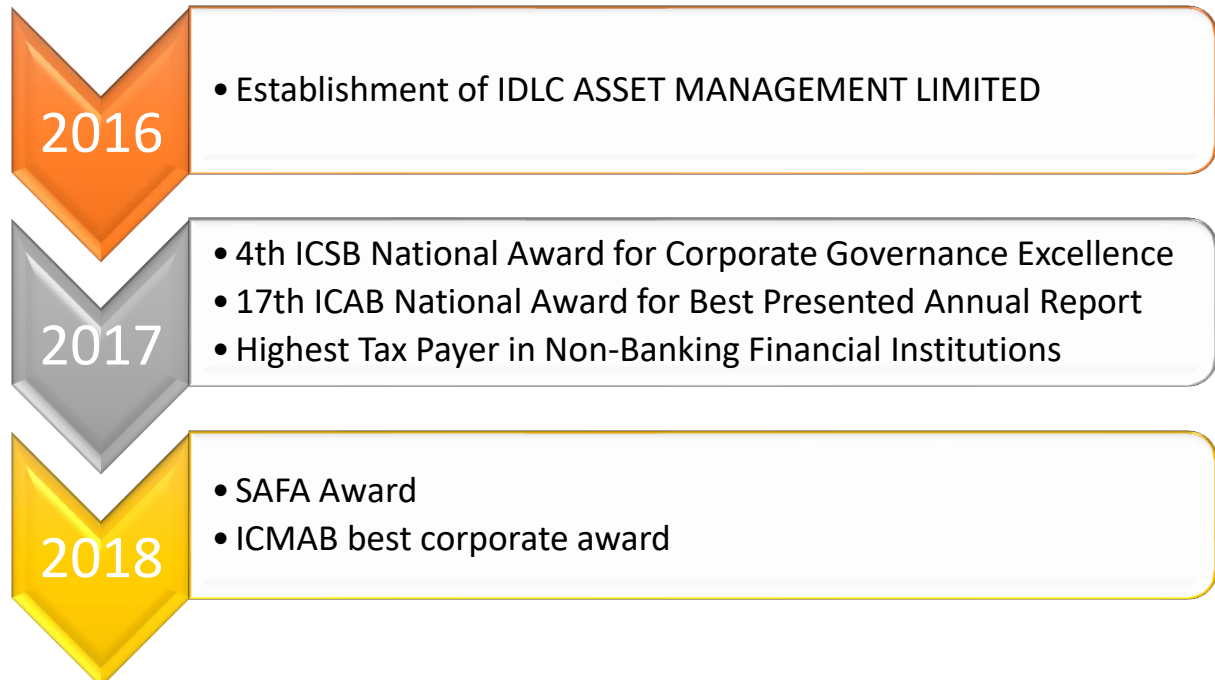
Figure 2: Recent events of IDLC FL

2.2 Company Overview

IDLC Asset Management Limited (AML) commenced operation from 2016 as a subsidiary wholly owned by IDLC Finance Limited (FL). It was incorporated in 2015 with an authorized capital of BDT 250,000,000 however its asset management license was obtained in 2016 and that is when its operations started. Although the parent company is listed in DSE, IDLC AML is not a listed company. The company follows a team approach to create common values yet respects diverse views. The following values are cemented within every employee:
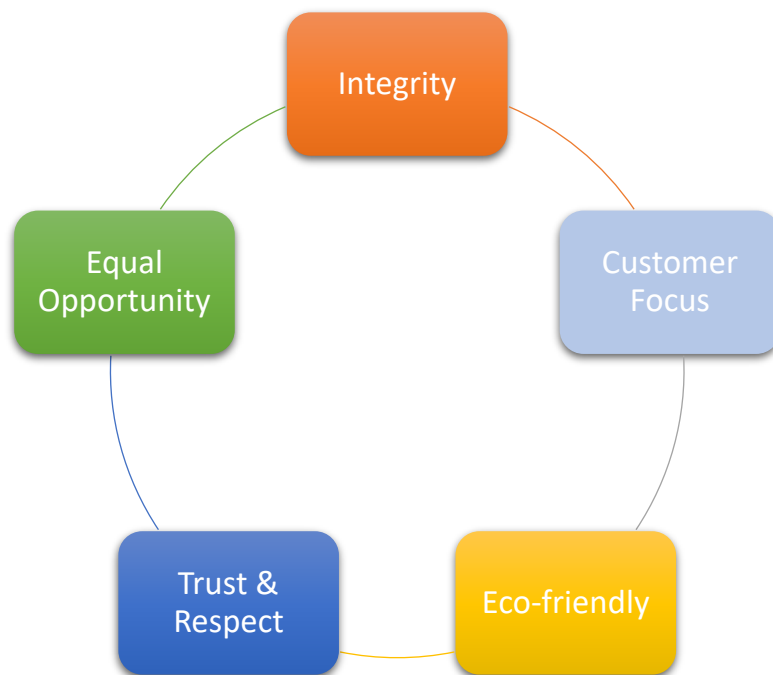
Figure 3: Company values of IDLC AML

2.2.1 Products/Services and scope

Offers involve investment knowledge, investment products and investment return in Bangladesh for both individuals and institutions. The company offers 3 open ended mutual funds: IDLC Balanced Fund, IDLC Growth Fund and IDLC AML Shariah Fund. In order to invest in IDLC mutual funds an individual has to first create Beneficiary Owner (BO) account as units of the mutual fund will be credited (for purchase) and debited (for surrender) to the designated unit holder through this account. Investors can choose to make a one-time lump sum investment in their preferred IDLC mutual fund or they may use IDLC SIP (Systematic Investment Plan) that allows them to invest a fixed amount of money every month for a specific

time period in a suitable IDLC mutual fund available for them based on their goals. Therefore, their scope involves: Mutual funds for individual and institutional investors, portfolio management services for institutional clients, exploring, channeling and managing alternative investment funds, corporate advisory services, performing all forms of all trade, investment, research, publication related to Bangladesh capital market.

2.2.2 Objective, Mission and Vision

Objective: "We believe in utilizing proper financial knowledge and suitable investment vehicles for maximizing the growth of people's wealth. In order to accomplish that, our objective is to -

- Make people aware of the criticality of financial knowledge & planning

- Aid them to materialize their plans through proper investment vehicles

- Help people feel financially secure and feel confident of a brighter and prosperous future."

Vision: "We want to be Bangladesh's no. 1 asset management company in terms of investors' trust and Asset Under Management."

Mission: "We want to be the most-preferred destination for investment knowledge, investment products and investment return in Bangladesh for both individuals and institutions."

2.2.3 Board of Directors and Organogram

Name	Designation
Matiul Islam Nowshad, CMgr, Chartered Fellow, FCMI	Chairman
Arif Khan	Director
Mir Tariquzzaman	Director
Akhteruddin Mahmood	Shareholding Director
Md. Masud K Majumder, ACA	Director
Rajib Kumar Dey	Director (Ex-officio)

Table 1: IDLC AML Board of Directors
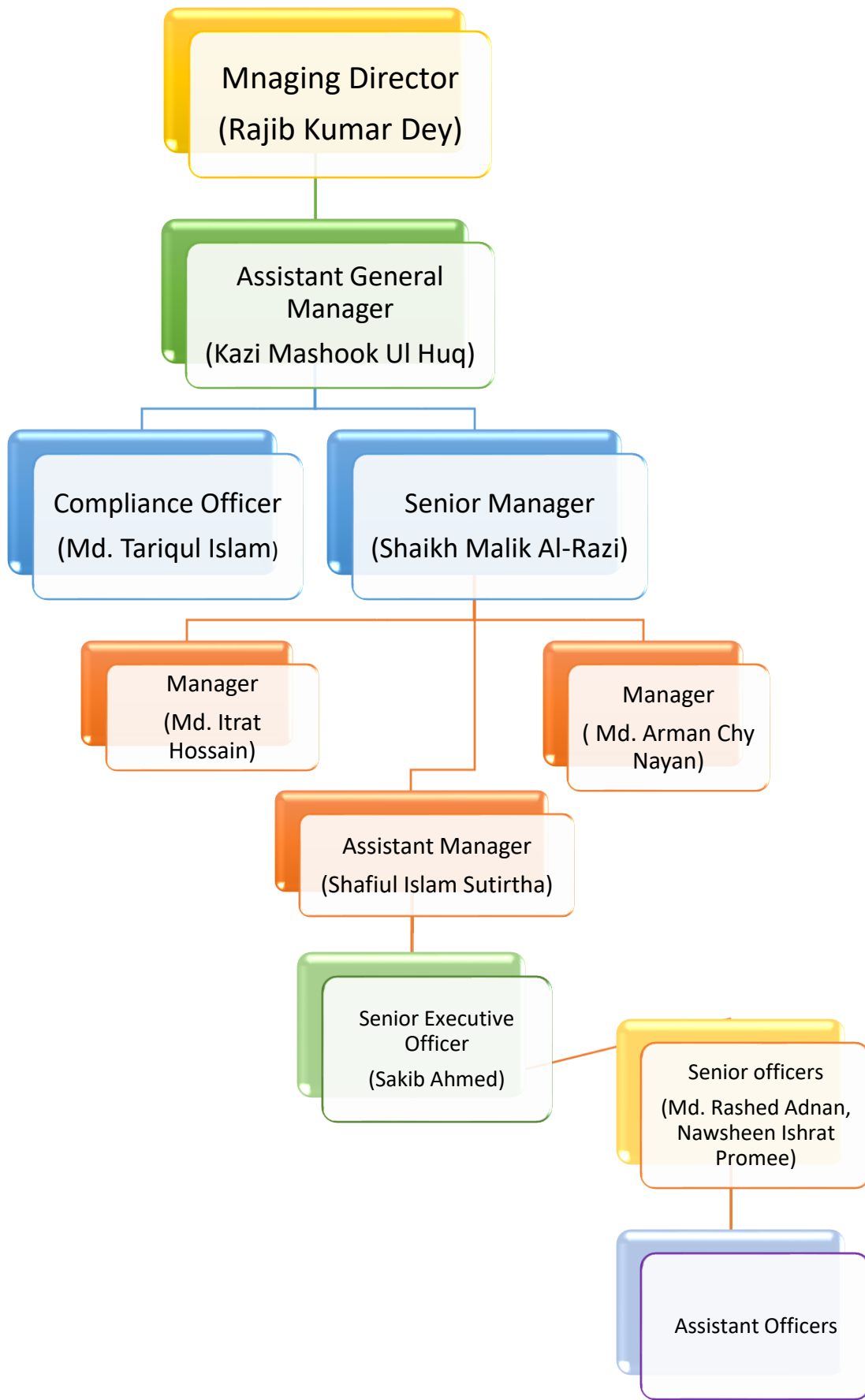
Figure 4: Organogram of IDLC AML

2.3 Management Practices

Engaged workforce: At IDLC AML managers seek to align workers' interests with the company's vision through constant top to bottom level employee interaction. Workers thus are more enthusiastic, productive and encouraged to take up greater responsibility.

Regular meetings: Constant meetings are held to keep employee performance on track and to help managers stay updated to daily operations. Any issues faced by employees are shared and participants propose solutions here.

Focus team effort: Since the organization is built on team work, the managers invest a bulk if their energy to keep the teams happy. They try to boost morality and solidarity by hosting retreats to focus on team dynamics. Consistent reassessment and realignment of team goals are exercised to achieve best results.

2.4 Marketing Practices

Major promotional activities are done by outbound calls through their call center under Customer Service and Insights team. Potential clients are called to inform them about products/services available at IDLC AML. Other marketing practices of IDLC AML are publishing NAVs, buy and sell prices of mutual funds in "The Financial Express" newspaper and their own website. Word of mouth and client references are specifically used for their SIP; since it is fairly new clients are very skeptical about subscription.

It is highly recommended to invest in better more large-scale marketing activities in order to grab/retain more customers. If long-term strategies are not feasible then short-term tactics are worth a shot. For example, sponsoring school/college/university events that involve parents. This will help promote IDLC AML products and services first hand.

2.5 Financial Performance

Respective revenues and profits for the year ended June 30, 2019 were: Tk. 53,119,896 and Tk. 41,485,270 for IDLC Balanced Fund; Tk. 38,104,795 and Tk. 22,995,743 for IDLC Growth Fund. IDLC Shariah Fund is a new addition with a revenue and loss of Tk. 0 and Tk. 734,344 for the quarter ended December 31, 2020. The following sub-chapters show details of each mutual funds.

2.5.1 IDLC BALANCED FUND

The objective of this fund is to use a combination of equity, debt and money market instruments to generate capital appreciation along with current income. Its risk scale is moderately high with a dividend policy that pays a minimum 70% of realized income of the fund as dividends to subscribers at the end of each accounting period. Its latest reported NAV as on March 31, 2020 was BDT 8.78.

Figure 5: Return of IDLC Balanced Fund
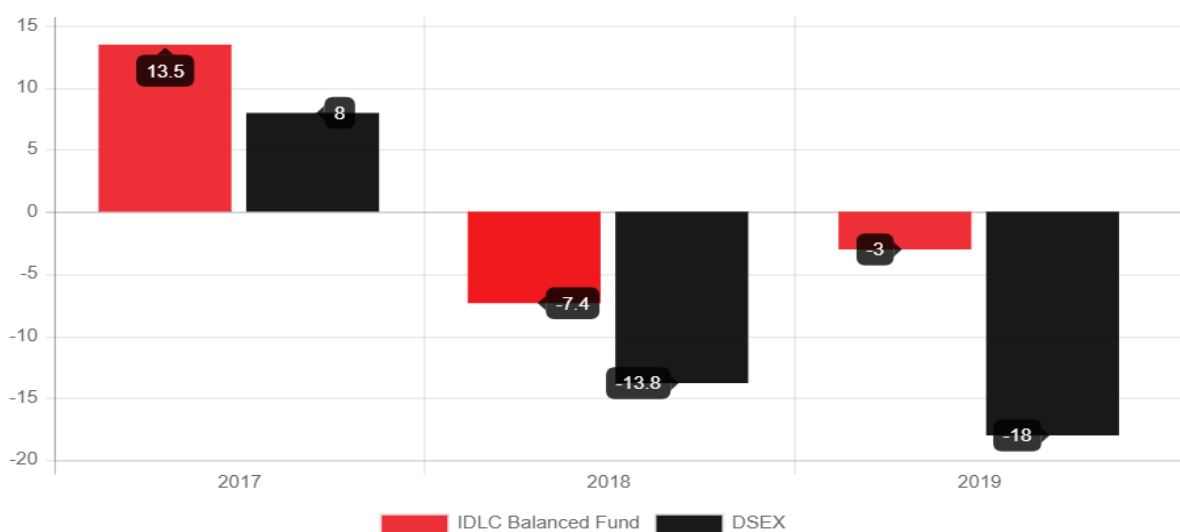
Figure 6: Return of IDLC Balanced Fund Compared to DSEX

2.5.2 IDLC GROWTH FUND

The objective of this fund is to form a portfolio using equity & equity related instruments in order to generate long-term capital appreciation. Its risk scale is high with a dividend policy that pays a minimum 50% of realized income of the fund to subscribers at the end of each accounting period. Its latest reported NAV as on March 31, 2020 was BDT 8.78.
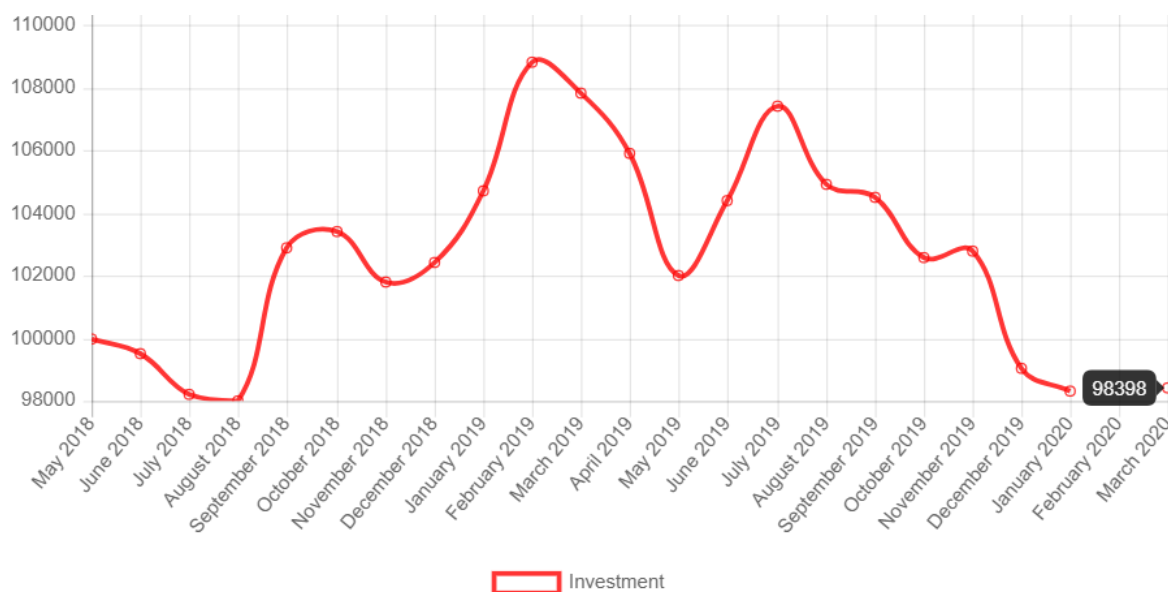
Figure 7: Return of IDLC Growth Fund
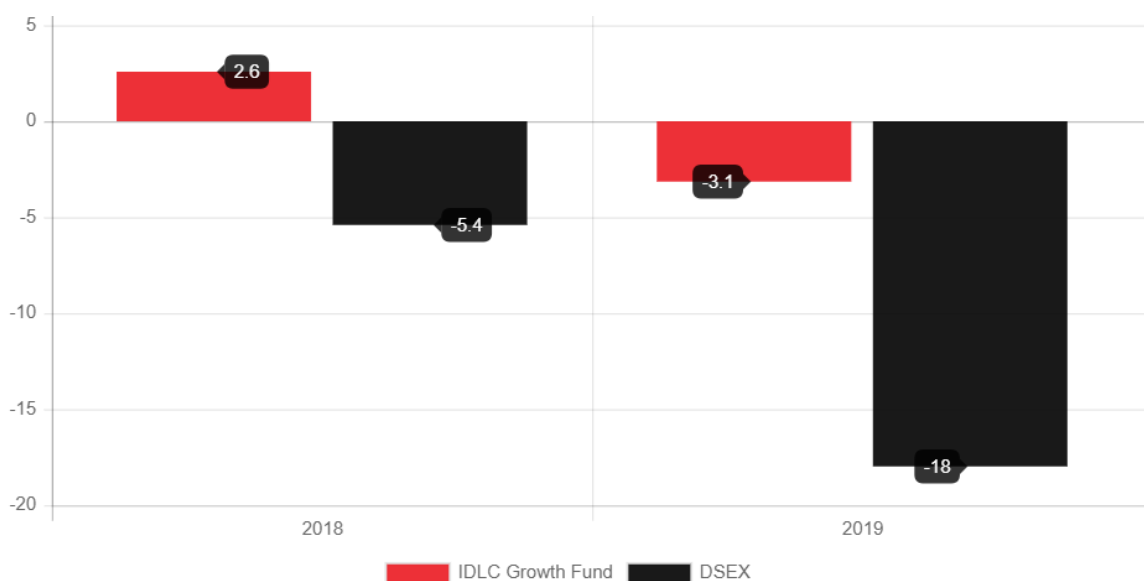
Figure 8: Return of IDLC Growth Fund Compared to DSEX Index

2.5.3 IDLC ASSET MANAGEMENT SHARIAH FUND

This fund launched in April 25, 2019 for investors who are inclined to Islamic investment practices. The fund intends to generate profits in the form of dividend and capital appreciation by investing in a portfolio of Shariah compliant securities as per the Shariah Advisory Board. Its risk level is high and has the same dividend policy as IDLC Balanced Fund that pays a minimum 70% of realized income of the fund to subscribers at the end of each accounting period. Its latest reported NAV as on March 31, 2020 was BDT 9.80.

2.5.4 Annual data comparison of IDLC funds

Fund Name:
- IDLC Balanced Fund
- IDLC Growth Fund

Revenue:
- BDT 53,119,896
- BDT 38,104,795

Net profit:
- BDT 41,485,270
- BDT 22,995743

Assets:
- BDT 801,729,407
- BDT 327,050,016
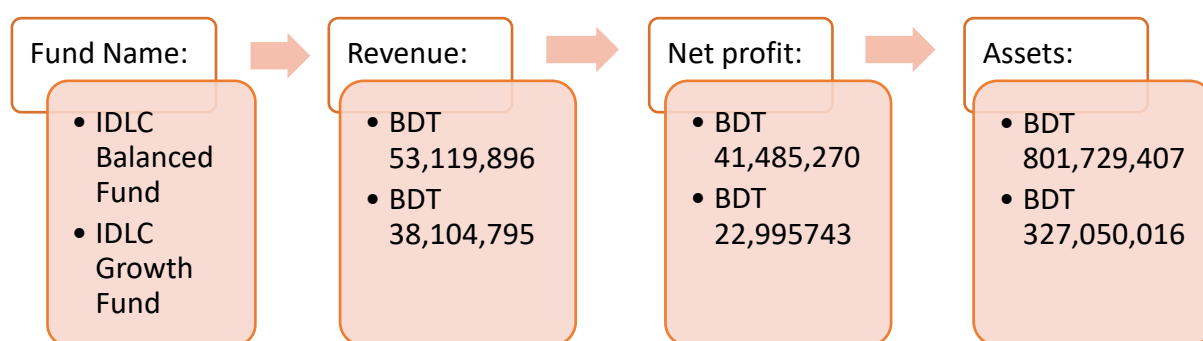
Figure 9: Key Annual Financial Figures of IDLC Funds
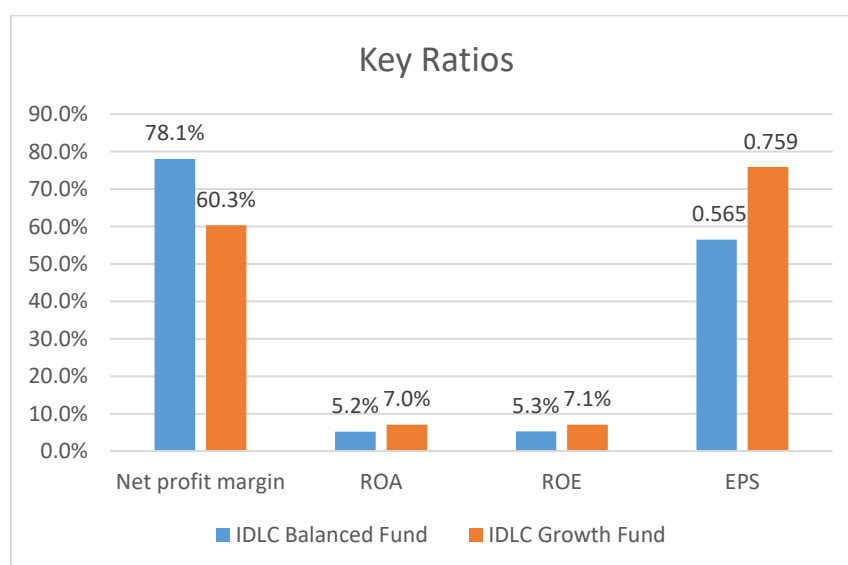
Figure 10: Key Ratios of IDLC Funds

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2.6 Operations Management and Information System

The entire operation of an asset management company generally involves 4 key parties: Sponsor, Trustees, Custodian and of course, the Asset Management Company itself. The sponsor initiates the mutual fund by subscribing minimum 10% of the total fund who will then appoint the trustees, Custodian and the Asset Management Company. The board of trustees are responsible for protecting the interests of the unit holders. It must be an independent body not associated with the Sponsor or the appointed Asset Management Company. Board of trustees receive their Trusteeship license from the regulator. Moving on to the custodian who also receive their Custodian license from the regulator. Custodian is independent of the Sponsor or the Asset Management Company. They are responsible for physical handling and safe keeping of the assets managed by the Asset Management Company. Lastly, in accordance with Bangladesh Securities and Exchange Commission (BSEC) regulations and guidelines provided by the Trustee, the appointed Asset Management Company is liable for floating and managing the mutual funds. The following table shows respective key parties for each IDLC AML mutual fund offered:

	IDLC Balanced Fund	IDLC Growth Fund	IDLC AML Shariah Fund
Sponsor	IDLC FL	IDLC FL	IDLC AML
Asset Manager	IDLC AML	IDLC AML	IDLC AML
Trustee	ICB	BGIC	ICB
Custodian	ICB	BRAC Bank Limited	BRAC Bank Limited

Table 2: The 4 Key Parties of IDLC AML

2.6.1 Daily operations of IDLC AML

IDLC AML teams work interdependently to tend to the investment needs/goals of their investors. A typical mutual fund purchase and surrender process in IDLC AML looks like this:
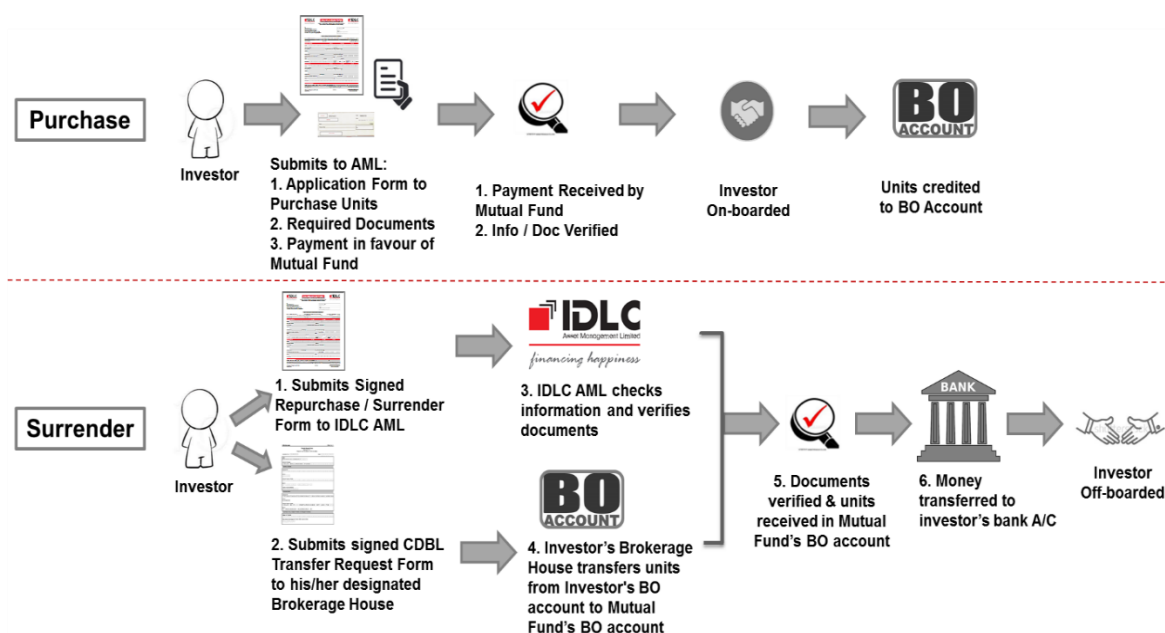
Figure 11: Mutual Fund Purchase and Surrender Process

To acquire customers, the call center of Customer Service and Insight team, led by Md. Rashed Adnan, makes outbound calls to potential customers to inform them about product/services available. Inbound calls and walk-in customers are dealt by the rest of the team and the Financial Planner team led by Shafiul Islam Sutirtha. When an investor comes on-board these team tends to his documents and investment needs. In case of customers who cannot walk into the office but they still want to discuss about investing, the Financial Planner team will go to the potential client and discuss face to face. The Operations team under Nawsheen Ishrat Promee handles all necessary activities such as high-level HR duties, logistics, etc. to ensure smooth day-to-day operations. Last but not the least there is the Portfolio Management team led by Shaikh Malik Al-Razi. It is divided into portfolio managers and a research wing. There are 3 analysts in this wing, the lead analyst Md. Itrat Hossain was my on-site supervisor. The research wing is responsible for collecting and processing all necessary data required to create a portfolio of securities. The research wing is also responsible to keep track of day-to-day stock trading done for IDLC AML mutual funds. Portfolio managers make the final call on securities to be purchased or surrendered based on their expertise and findings of the research wing.

2.6.2 Information System at IDLC AML

The essential technologies for IDLC AML's operation are computers, internet, in and outbound call services. Internet is used to collect all sorts of data starting from client information to raw data from stock market. "Backoffice" is the software used for customer data management and for company accounting they use a proprietary software called "ISAF". A python algorithm is used to automatically pull data for weekly mutual funds review from online sources. Other complex algorithms and models are used to store and assess DSE stock data. Lastly, to access all information within the company employees use an intranet named "Shares Folder".

2.7 Industry and Competitive Analysis

2.7.1 Porter's Five Forces
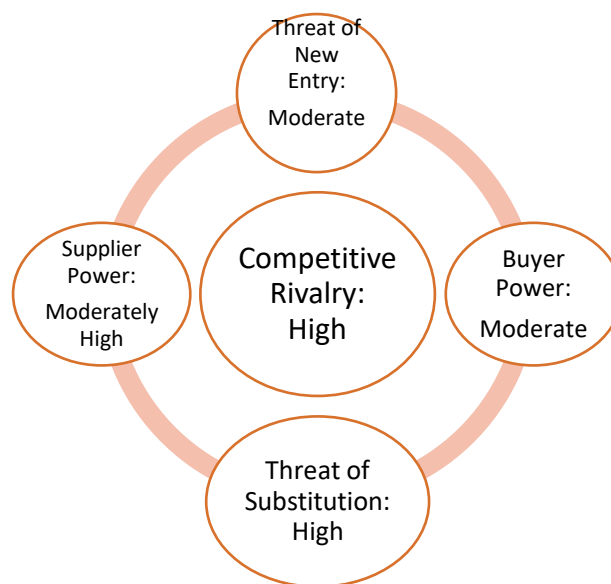
Figure 12: Porter's Five Forces Analysis for IDLC AML

Competitive Rivalry: According to BSEC there are 46 Asset Management Companies in Bangladesh making this industry very competitive. Due to similar pricing and quality of service investors can easily shift from one company to another. Lanka Bangla Asset Management Company Ltd, ICB Asset Management Company Ltd, Asset & Investment Management Services Bangladesh Ltd. (AIMS) and L-R Global Bangladesh Asset Management Company Ltd are some of the major competitors of IDLC AML.

Supplier Power: The main suppliers who are pertinent to the mutual fund industry are the traders/dealers who actually trade in the market on the company's behalf. Qualified fund

experts are hard to come by and often request a premium for maintenance. For special cases where the company needs to purchase stock market information, DSE and CSE act as monopolies. Thus, bargaining power of suppliers is quite high.

Buyer Power: Buyers may be categorized as individual and institutional buyers. There is lack of awareness in the individual purchasers and they will, in general, depend on the advisory services of the distributors. Therefore, they do not have a significant bargaining power.

Threat of Substitutes: Life insurance (for wealth transfer), bank fixed deposit (for wealth preservation), self-investment in equity/real estate (for wealth creation) and bank fixed deposits all act as substitutes for mutual funds. These substitutes place pressure on mutual funds by lowering their AUM.

Threat of New Entrants: Regulatory requirements by BSEC, finding Custodians and Trustees make it difficult for new firms to enter the market. However, low start-up costs, bearable losses and exploiting brand names ease barriers to entry.

Thus, overall competitiveness of asset management industry is high.

2.7.2 PESTEL Factors

Unfortunately, most of the PESTEL factors are causing unfavorable impacts in the industry.

Political	Economic	Social	Techno-logical	Emvironm-ental	Legal
Unstable political conditions	Rising literacy rate	Rising interest in capital market	Recent developments in technology helped imporve: Product offering, Cost structure, Value chain structure	Stable weather & climate	Insufficient data protection law
Corruption and bureaucracy	Limited skilled workforce	Improved financial conscious-ness		Increased focus on "green" or ecological products	Incompetent intellectual property law
Unfairness due to favored trading partners	Inefficient financial markets	Power gaps/ inquality	Faster rate of technology diffusion		Loopholes in business laws
	High Inflation rate				

Figure 13: PESTEL Analysis for IDLC AML

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2.7.3 SWOT Analysis of IDLC AML

STRENGTHS	WEAKNESSES
• Backed by IDLC FL • BRAC Bank and ICB as Custodians; helps establish rapport with customers • One of the firsts to introduce SIP • Strong capital base	• Unsatisfactory marketing practices • Targeted towards mid to high income groups only
OPPORTUNITIES	THREAT
• Increasing awareness amongst people • Economic uptick and increase in customer spending	• New technologies developed by the competitor • Intense competition and high profits attract new entrants

Figure 14: SWOT Analysis of IDLC AML

2.8 Summary and Conclusion

IDLC AML is a company that believes in utilizing proper financial knowledge and suitable investment tools for people's wealth maximization. It operates in the asset management industry where competition is high and PESTEL factors are not quite favorable. Many opportunities await IDLC AML along with some moderate threats. Current strengths and time will help heal weaknesses related to target groups and marketing practices. Technology is yet to revolutionize this industry so a well-planned hierarchical and complex information system are essential for this company. In only 5 years the company has already crafted 3 mutual funds: IDLC Balanced Fund, IDLC Growth Fund and IDLC AML Shariah Fund. It shows how much the company cares about social norms and values since they have one mutual fund completely dedicated to investors who gravitate towards Islamic practices. With the support of its parent company IDLC FL, well-known key parties such as ICB, BRAC Bank Ltd, etc. and given its rate of success, a wider range of mutual funds can soon be expected from IDLC AML.

Chapter 3: Islamic VS Non-Islamic Banks in Bangladesh

3.1 Introduction

At IDLC AML I had the liberty of working alongside Ms. Navin Rahman, Investment Analyst, on a bank database project. This database was comprised of the financial data of 30 listed banks, out of which 7 were Shariah or Islamic banks and the rest 23 were Non-Islamic banks. The entire database had a wide array of data covering entire Balance sheet, Income statement, a few necessary breakdowns from the banks' annual reports 'Notes' section and many further calculations done by Ms. Navin Rahman. This database methodically presents individual performance of these 30 banks in areas such as CASA ratios, CAR, NIM, growth rates, loan defaults, etc. For policy reasons the entire database could not be disclosed for my use. Therefore, for my research purposes, only the 5-year annual Balance Sheet and Income Statement of all 30 banks were used. The objective of my research is to analyze how Islamic banks perform differently from Non-Islamic banks. Banks are increasingly incorporating Islamic practices into parts of their operations if not fully, thus justifies the increasing knowledge needs of customers or even bank employees. Therefore, the findings of this research may provide insights for individuals interested in Shariah compliant banks.

3.2 Data and Methodology

Only *secondary data* was used in this research. All required data were collected from published annual reports of respective banks. This study used combined panel data of 30 banks over a span of 5 years from 2014 until 2018. Therefore, *N=30, T=5* and Number of Observations or *NOB=150.*

For analysis, TSP Version 5.0 software was used to conduct *Panel Data Estimation*. It is a combination of both time series and cross-sectional analysis. *Plain OLS* and *Fixed Effects* were prioritized for interpretation of panel data estimation findings.

My primary goal is to explain causal relationships using regression analysis between dependent and different independent variables. As a result, this particular research can be termed as an *Explanatory Research*.

3.3 Limitations

Although I had access to a wide range of data it would have been possible to generate a more comprehensive result if more banks were used for this study. Similarly, a greater time span with shorter frequency such as quarterly data would have helped define stronger and more meaningful time-series trends. Definitions of some variables may not follow textbook definitions since the entire database, containing further breakdowns of financial figures, could not be used for policy reasons. Therefore, proxy variables formed close to the textbook definitions are used, and the eventual findings may be interpreted as a close approximate.

3.4 Analysis, Findings and Discussions

3.4.1 Analysis

Panel data usually contains more degrees of freedom and have less multicollinearity problems than cross-sectional data, so the inference of model parameters is more accurate (Hsiao, 2005). It also uncovers dynamic relationships while controlling omitted variables' impact. This is very helpful since all possible variables affecting each bank's performance were not accounted for.

As mentioned before: N=30, T=5 and NOB=150.

Net Interest Income or *NII* was used as the *Dependent Variable* of my study. NII is defined as a percentage of operating income.

The *Independent Variables* of my study are as follows:

1. *Net Interest Margin* or *NIM* defined by net interest income as a percentage of total interest income.
2. *Operating Profit Margin* or *OPP* defined by operating profit as a percentage of total operating income.
3. *Provisions* or *PRV* defined by total provisions as a percentage of total loans.
4. *Deposits* or *DEP* defined by total deposits as a percentage of total liabilities.
5. *Equity* or *EQR* where total equity is defined as a percentage of total loans. This is used as a proxy for Capital Adequacy Ratio or CAR.
6. *Dummy variable or DUM: 1 for Islamic Banks and 0 for Non-Islamic Banks.*

<u>Note</u>: *Definitions of some variables may not be following textbook definitions. Therefore, for this study, my own catered definitions were used as a proxy for textbook definitions.*

So, the equation representing this aforementioned relationship would be:

$$NII = \alpha + \beta_1 * NIM + \beta_2 * OPP + \beta_3 * PRV + \beta_4 * DEP + \beta_5 * EQR + \beta_6 * DUM + e$$

(where α represents the y-intercept/constant)

In order to test the validity of this relationship, I have set the following hypothesis:

$$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$$

$$H_1: \text{At least one or more of these betas are non-zero}$$

In other words,

$$H_0: \beta_i = 0$$

$$H_1: \beta_i \neq 0 \text{ (for some i)}$$

It is essential to find out the significance of the coefficients of each of these independent variables. If any one of these betas are *significant* and *does not equal to zero* the null-hypothesis can be rejected.

3.4.2 Findings and Discussion

	Dependent Variable = NII			
	Plain OLS		Fixed Effects	
	Coefficients	P-value	Coefficients	P-value
NIM	0.9791	0.000	0.9363	0.000
OPP	0.1648	0.000	0.1571	0.000
PRV	-1.386	0.547	-2.773	0.092
DEP	0.3572	0.024	0.3144	0.128
EQR	-0.363	0.000	-1.462	0.000
DUM	0.221	0.000		
α	-0.197	0.163		

Table 3: Significance of coefficients of Independent Variables using Plain OLS & Fixed Effects

Note: Refer to Appendix A to see the data set used to generate findings.

From the above findings, it can be inferred that:

In Plain OLS

NII= -0.197 + 0.9791* NIM + 0.1648* OPP - 1.386* PRV + 0.3572* DEP - 0.363* EQR + 0.221*DUM

In Fixed Effects

NII= 0.9363* NIM + 0.1571* OPP – 2.773* PRV + 0.3144* DEP – 1.462* EQR

Since $\beta_i \neq 0$, *null hypothesis is rejected.*

Majority of these independent variables have some statistically significant influences on the dependent variable NII. Each variable affects NII in different ways as explained below:

1. NIM: It has a very strong positive relation with NII because a higher NIM signals higher interest earnings hence higher NII. The numerators of these two variables are the same (interest income – interest expenses) while the denominators are different, operating income for NII vs. total interest income for NIM. Therefore, a unit increase or decrease in total interest income has a direct impact (98% of the change in OLS and 94% in Fixed Effect) on the increase or decrease, respectively, in NII.

2. OPP: Similarly, a higher operating profit margin indicates bank's ability to generate higher NII. The operating profit which is a measure representing a net of operating expenses has a significant positive change (17%) on net interest income. This is an interesting observation since the operating expenses include substantial amount of interest expenses. At the same time, there is a possibility that the causality relationship could be reversed, meaning that NII may have caused the movement of OPP. Since no lag variables are used in this analysis to save the degrees of freedom, the true causality flow is unknown at this time.

3. PRV: Although statistically insignificant in OLS and weakly significant in Fixed Effect, the magnitude of the impact of this variable is largely negative. When banks set aside large provisions, they are not earning any interest against it since it is sitting idle. As a result, higher PRV means more idle money and less NII.

4. DEP: Higher deposits increases bank's loanable funds against which they can generate interest income. When the deposit as a percent of liability increases by 1%,

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the banking system, in general, increases the net interest income as a percent of operating income by 0.35% in OLS result.

5. EQR: This variable included regulatory equity and the back-up fund banks maintain to cover its risk. Therefore, large EQR means less loanable funds leading to low NII. In the Fixed Effect results, the coefficient shows an accelerating negative effect (-1.46). This indicates the heavy dependence on loanable fund for generating interest income and the importance of risk management of individual bank. Once the analysis allows each bank to have a unique constant value which may incorporate the impact of individual risk management effect, then the excess reserve amount which may represent the expected risk exposure of individual bank has a strong negative impact on the net interest income as a percent of operating income.

6. DUM: In Plain OLS it was revealed that Dummy variable is significant and positively impacts NII (coefficient= 0.221). It indicates that, compared to the non-Islamic Banks, Islamic banks show 22% point more net interest income in general.

In Plain OLS, all banks have an average constant (α) = -0.197. This figure is not significant enough to depict an actual picture of the banks' performance.

Since the previous results show a superior performance in Islamic banks, the next analysis attempts to search which particular variables have induced a better performance for the Islamic banks. The dummy variable is multiplied with other independent variables (NIM, PRV, and EQR) to identify the compounding effects that are related to the Islamic banks.

| | Dependent Variable = NII | | | |
| | Plain OLS | | Fixed Effects | |
	Coefficients	P-value	Coefficients	P-value
NIM	0.971446	0.000	1.1994	0.000
DNIM	-0.06184	0.664	-1.14971	0.000
OPP	0.165503	0.000	0.148462	0.000
PRV	-1.79244	0.487	-2.83439	0.075
DPRV	7.18791	0.27	1.90029	0.596
DEP	0.337694	0.043	0.025024	0.892
EQR	-1.82592	0.000	-0.40976	0.218
DEQR	1.46221	0.000	-0.24156	0.607
α	3.53E-03	0.982		

Table 4: Significance of coefficients after compounding Dummy variable

In order to see how Islamic banks perform differently from Non-Islamic banks the Dummy variable was compounded over 3 selective independent variables. So, the following equations can be derived:

In Plain OLS

NII= 0.971446* NIM -0.06184* DNIM + 0.165503* OPP -1.79244* PRV + 7.18791* DPRV + 0.337694* DEP -1.82592* EQR + 1.46221* DEQR

(Note: α was excluded as it is not significant and has a negligible coefficient)

In Fixed Effects

NII= 1.1994* NIM -1.14971* DNIM + 0.148462* OPP -2.83439* PRV + 1.90029* DPRV + 0.025024* DEP -0.40976* EQR -0.24156* DEQR

The table below shows a summarized version of net coefficient values for Islamic banks.

	Plain OLS	Fixed Effects
NIM	0.909606	0.04969
OPP	0.165503	0.148462
PRV	5.39547	-0.9341
DEP	0.337694	0.025024
EQR	-0.36371	-0.651316
α	3.53E-03	

Table 5: Net coefficients of Islamic bank's Independent variables

The followings are the interpretation of the results:

1. DNIM: Non-Islamic banks' NIM has a coefficient of 0.971446 and DNIM coefficient is -0.06184. It means that the difference between NIM coefficient of Islamic and non-Islamic banks is -0.06184. So, Net NIM coefficient of Islamic banks= 0.971446 -0.06184 = 0.909606. The difference is not too high in OLS although the magnitude is high and statistically significant in Fixed Effect. In Islamic banks, the definition of interest income and expenses may be different from those of non-Islamic banks. For Islamic banks, the increase or decrease in total interest income has a strong negative impact on the total operating income. There must exist a large role of non-interest income in the total operating income for Islamic banks.

2. DPRV: Similarly, the definition of provision in Islamic banks may be different from that of non-Islamic banks. This is because Bangladesh Bank allows Islamic banks

to maintain 10% of their total deposit liabilities as statutory liquidity rate (SLR), unlike conventional banks who have to maintain 20% SLR. This flexibility in provisions enables Islamic banks to use more liquid funds for investment thereby generating more NII. Although the magnitude in difference is large, the statistical significance is negligible for this variable. More observations are needed to verify a meaningful significance level.

3. DEQR: In the previous equation, the equity ratio has a strong negative impact on the net interest income. However, the compounding effect equity for Islamic banks is significantly different from the non-Islamic banks. The negative impact of equity is significantly reduced for the Islamic banks. For Islamic banks, the majority of loan amount is counted as an equity, and the change in equity represents the change in investment which ultimately resulted in operating income. Therefore, the increase in equity may still be reflected as a negative impact on NII, but in less impactful than the way it has shown in non-Islamic banks. Unlike non-Islamic banks, Islamic banks generally treat bad investments as losses which do not need to be covered by keeping a high CAR. With more liquid capital available for investment, Islamic banks can comparatively earn higher NII than Non-Islamic banks. However, they still have to maintain a certain level of CAR which is why the overall impact of EQR on NII is still negative.

All variables that were not statistically significant could have been significant if large data was used. Fixed effects model again proved superior to Plain OLS as it had the highest SBIC.

The differences found in variable coefficients between Islamic and Non-Islamic banks using Fixed effects are summarized below:

Variables	Islamic	Non-Islamic
NIM	0.04969	1.1994
OPP	0.148462	0.148462
PRV	-0.9341	-2.83439
DEP	0.025024	0.025024
EQR	-0.65132	-0.409756

Table 6: Difference in coefficients of each category of bank

3.4.3 Further discussions

The average values of Non-performing loan (NPL) ratio, Liquidity ratio [(Short-term Assets-Short-term Liabilities)/Loan Assets], NIM and EQR (a proxy CAR= Total Equity/Total Loans) of 2018 are shown below. are provided in. It is evident Islamic banks are performing better in every aspect. They have lower NPL ratio meaning they incur comparatively lower doubtful and bad loans. Higher Liquidity ratio suggests better ability to cover liabilities with cash and cash equivalents. Lower EQR indicates less money is tied up as loss-covering equity leaving them with more funds available for investment hence higher NIM.

AVERAGE VALUES				
Category	NPL Ratio	Liquidity Ratio	NIM	EQR
Islamic	4.98%	133.00%	3.85%	5.72%
Non-Islamic	6.84%	32.63%	3.34%	7.21%

Table 7: Important ratios for the year 2018

<u>Note</u>: *Refer to Appendix B to see ratios for all 30 banks.*

3.4 Summary and Conclusions

Conventional banks earn most of their income from interest and bank charges. Whereas Islamic banks earn their money by profit/loss sharing, service charges, trading, leasing, and using other Shariah compliant exchanges. This implies that factors influencing net income will be different for Islamic banks. Some factors may be similar but its degree of influence differs due to unique composition of revenues. This difference was established by compounding the Dummy variable using both models. Fixed effects model was superior in case of testing initial hypothesis as well as Dummy variable compounding. Differences in coefficients revealed NIM is still a good indicator of NII for Islamic banks. PRV has no statistical significance in the difference between Islamic and non-Islamic banks. Lastly, in accordance with Bangladesh Bank rules and regulation, Islamic banks have to maintain the same CAR as Non-Islamic banks. The prescribed minimum CAR is 10% of the total RWA for all commercial banks including Islamic banks. This is not necessary since Islamic banks write-off bad investments as losses that do not need to be covered by keeping large amounts of equity against risky assets. Only a small portion of funds are loaned out so, risky loan assets are not high either and Islamic banks do not need to maintain the same level of CAR as Non-Islamic banks. As a result, EQR is having a much less negative impact on Islamic banks' NII. Regardless of that, Islamic banks are still performing better in terms of NIM, NPL and liquidity ratios.

3.5 Recommendations

The state religion of Bangladesh is Islam, as a result Muslims make up over 90% of the country's population. The primary reason behind Islamic banks' superior performance is the demand for Shariah banking practices suited for those 90% Bangladeshis. Evidently, demand for Islamic banking will only rise in future. On account of the undeniable demand trend, many conventional banks such as AB Bank, Bank Asia Limited, Mercantile Bank, etc. have introduced their own Islamic bank branches/windows. Remaining Non-Islamic banks yet to adopt this strategy should get on this bandwagon quickly before the Islamic banking market becomes saturated.

Bangladesh Bank has prescribed a lower SLR for Islamic banks (10% for Islamic and 20% for Non-Islamic banks) which enabled them to use more liquid funds for investment thereby generating more NII. If similar relaxation was allowed for the prescribed 10% CAR, Islamic banks would have less funds tied up as loss-covering equity. Increased availability of funds will therefore have a positive impact on total investments and eventually profits.

As for Non-Islamic banks, improvements are called for in NPL ratio. Their NPL ratio was about 2% higher than that of Islamic banks. Lowering this ratio is key to generating higher loan interest income that comprises major portion of its total income. Non-Islamic banks are more susceptible to doubtful and bad loans as they loan out more than Islamic banks. So, it is extremely important to be strategic with offering loans. Investment in proper background check procedures for individual borrowers and mostly providing corporate loans will reduce overall defaults.

Speed and convenience are essential in this era. Online banking, or in some cases Internet banking, has flourished considerably since 2011. HSBC, BRAC Bank, Janata Bank, City Bank, Southeast Bank, AB Bank, Bank Asia, Jamuna Bank, First Security Bank, Mercantile Bank, Premier Bank etc. were among the first to launch online banking. Right now, bKash (subsidiary of BRAC Bank Ltd.) and Rocket (subsidiary of DBBL) are leading the Mobile Financial Service (MFS) industry with a combined market share of 97% (where bKash holds 80% market share) as of February 2020. Although this market is clearly exhibiting characteristics of duopoly it is a very lucrative one with 2,708,700,000 active MFS accounts in February 2020 as per Bangladesh Bank. Therefore, be it Islamic or Non-Islamic banks, adapting to this technological advancement by launching its own MFS subsidiary or other online banking services will definitely boost turnover.

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Appendix A.

A.1 Names of all 30 banks with category

DSE TRADING CODE	BANK NAME	ISLAMIC (I)/NON-ISLAMIC (N)
ABBANK	AB BANK LIMITED	N
ALARABANK	AL-ARAFAH ISLAMI BANK LIMITED	I
BANKASIA	BANK ASIA LIMITED	N
BRACBANK	BRAC BANK LIMITED	N
CITYBANK	CITY BANK LIMITED	N
DHAKABANK	DHAKA BANK LIMITED	N
DUTCHBANGL	DUTCH BANGLA BANK LIMITED	N
EBL	EASTERN BANK LIMITED	N
EXIMBANK	EXIM BANK LIMITED	I
FIRSTSBANK	FIRST SECURITY ISLAMI BANK LIMITED	I
ICBIBANK	ICB ISLAMI BANK LIMITED	I
IFIC	IFIC BANK LIMITED	N
ISLAMIBANK	ISLAMI BANK LIMITED	I
JAMUNABANK	JAMUNA BANK LIMITED	N
MERCANBANK	MERCANTILE BANK LIMITED	N
MTB	MUTUAL TRUST BANK LIMITED	N
NBL	NATIONAL BANK LIMITED	N
NCCBANK	NCC BANK LIMITED	N
ONEBANKLTD	ONE BANK LIMITED	N
PREMIERBAN	PREMIER BANK LIMITED	N
PRIMEBANK	PRIME BANK LIMITED	N
PUBALIBANK	PUBALI BANK LIMITED	N
RUPALIBANK	RUPALI BANK LIMITED	N
SHAHJABANK	SHAHJALAL BANK LIMITED	I
SIBL	SOCIAL ISLAMI BANK LIMITED	I
SOUTHEASTB	SOUTHEAST BANK LIMITED	N
STANDBANKL	STANDARD BANK LIMITED	N
TRUSTBANK	TRUST BANK LIMITED	N
UCB	UNITED COMMERCIAL BANK LIMITED	N
UTTARABANK	UTTARA BANK LIMITED	N

A.2 Data set used to generate findings

Bank ID	Year	NIM	Net Int Inc (%) of Operating Inc	Operating Prof/Operating Inc (%)	Prov/Assets	Deposit/TTL Liab	TTL EQ/TTL Loan	Islamic Dummy Variable
1	2014	0.2841	0.5001	0.5697	0.0120	0.8730	0.1088	0
1	2015	0.2056	0.4044	0.4681	0.0077	0.8154	0.1087	0
1	2016	0.1500	0.2575	0.4556	0.0096	0.8420	0.1057	0
1	2017	0.1520	0.2581	0.4326	0.0147	0.8086	0.0992	0
1	2018	0.0981	0.2209	0.3556	0.0078	0.7851	0.0940	0
2	2014	0.3343	0.7215	0.6466	0.0084	0.8795	0.1175	1
2	2015	0.3704	0.7258	0.6221	0.0078	0.8225	0.1119	1
2	2016	0.4317	0.7306	0.6283	0.0056	0.8075	0.1035	1
2	2017	0.4294	0.7387	0.5679	0.0040	0.8357	0.0889	1
2	2018	0.3491	0.7065	0.5093	0.0065	0.8546	0.0840	1
3	2014	0.2310	0.3319	0.5966	0.0085	0.8493	0.1444	0
3	2015	0.1988	0.2683	0.5816	0.0084	0.8269	0.1391	0
3	2016	0.2724	0.3730	0.5565	0.0104	0.8169	0.1164	0
3	2017	0.3394	0.4654	0.5588	0.0091	0.7727	0.1066	0
3	2018	0.3779	0.5596	0.5707	0.0112	0.7835	0.1088	0
4	2014	0.4527	0.5670	0.5052	0.0128	0.7946	0.1456	0
4	2015	0.4993	0.5750	0.5170	0.0142	0.7304	0.1276	0
4	2016	0.6057	0.6769	0.5019	0.0035	0.7433	0.1235	0
4	2017	0.5926	0.6493	0.4837	0.0041	0.7750	0.1283	0
4	2018	0.5387	0.7052	0.4603	0.0024	0.8056	0.1329	0
5	2014	0.3651	0.4861	0.4873	0.0087	0.7704	0.1982	0
5	2015	0.3593	0.4307	0.5220	0.0101	0.7591	0.1783	0
5	2016	0.4037	0.4499	0.5236	0.0081	0.7462	0.1180	0
5	2017	0.4466	0.5025	0.4605	0.0062	0.7320	0.1265	0
5	2018	0.4015	0.5786	0.4200	0.0072	0.6831	0.1056	0
6	2014	0.2062	0.4122	0.5553	0.0037	0.8551	0.1236	0
6	2015	0.1664	0.3009	0.5223	0.0064	0.8533	0.1136	0
6	2016	0.2820	0.4249	0.6183	0.0131	0.8371	0.1073	0
6	2017	0.2463	0.3604	0.5551	0.0103	0.7938	0.0990	0
6	2018	0.2937	0.5127	0.6035	0.0132	0.7662	0.0920	0
7	2014	0.5490	0.6009	0.3833	0.0038	0.8337	0.1172	0
7	2015	0.6152	0.6263	0.4112	0.0005	0.8514	0.1144	0
7	2016	0.6437	0.6234	0.3434	0.0085	0.8335	0.1063	0
7	2017	0.6914	0.6171	0.3001	0.0012	0.8078	0.0973	0
7	2018	0.6997	0.6550	0.3120	0.0012	0.8286	0.1039	0
8	2014	0.3046	0.3956	0.5699	0.0105	0.7682	0.1698	0
8	2015	0.2658	0.3582	0.5259	0.0094	0.7570	0.1574	0
8	2016	0.4082	0.4816	0.5590	0.0096	0.7360	0.1353	0
8	2017	0.3990	0.4633	0.5480	0.0108	0.7229	0.1173	0
8	2018	0.3787	0.5713	0.5437	0.0091	0.7693	0.1097	0
9	2014	0.3107	0.6844	0.5875	0.0069	0.9569	0.1299	1
9	2015	0.3256	0.7239	0.5851	0.0098	0.9403	0.1289	1

9	2016	0.3438	0.7187	0.5406	0.0035	0.9411	0.1195	1
9	2017	0.2873	0.5867	0.5378	0.0020	0.9288	0.1088	1
9	2018	0.2934	0.6590	0.5618	0.0072	0.8773	0.0923	1
10	2014	0.1972	0.8290	0.4323	0.0035	0.9304	0.0546	1
10	2015	0.2216	0.8532	0.4002	0.0039	0.9407	0.0514	1
10	2016	0.2736	0.8949	0.4643	0.0039	0.9440	0.0473	1
10	2017	0.2963	0.8602	0.4901	0.0061	0.9181	0.0427	1
10	2018	0.2705	0.8327	0.4825	0.0062	0.8937	0.0425	1
11	2014	0.2848	0.4926	-0.6648	0.0050	0.5080	-1.0432	1
11	2015	0.2585	0.5486	-1.0604	0.0092	0.4931	-1.0636	1
11	2016	0.1404	0.4068	-2.0165	-0.0041	0.4885	-1.0741	1
11	2017	-0.0045	-0.0243	-5.2130	0.0017	0.5079	-1.1830	1
11	2018	-0.2622	3.9674	21.3941	-0.0013	0.5147	-1.2684	1
12	2014	0.2860	0.4465	0.4177	0.0032	0.8904	0.1039	0
12	2015	0.2961	0.4661	0.4536	0.0114	0.8808	0.0945	0
12	2016	0.3484	0.5155	0.4030	0.0068	0.8694	0.0936	0
12	2017	0.3680	0.5626	0.4522	0.0080	0.8603	0.1146	0
12	2018	0.2404	0.5066	0.4327	0.0037	0.8673	0.1069	0
13	2014	0.3759	0.6738	0.5593	0.0073	0.9255	0.1006	1
13	2015	0.4032	0.6980	0.5158	0.0072	0.9071	0.0895	1
13	2016	0.4457	0.7325	0.4509	0.0053	0.9078	0.0765	1
13	2017	0.4508	0.7244	0.4726	0.0052	0.8886	0.0708	1
13	2018	0.4343	0.7366	0.5111	0.0066	0.8727	0.0681	1
14	2014	0.1393	0.2349	0.5039	0.0088	0.8908	0.1388	0
14	2015	0.1644	0.2311	0.5202	0.0101	0.9347	0.1800	0
14	2016	0.2627	0.3136	0.5150	0.0072	0.9278	0.1353	0
14	2017	0.3325	0.4327	0.4938	0.0043	0.9226	0.1085	0
14	2018	0.3549	0.5412	0.4829	0.0045	0.9086	0.1093	0
15	2014	0.1859	0.3251	0.5516	0.0126	0.8712	0.1155	0
15	2015	0.1633	0.2900	0.4954	0.0071	0.8836	0.1228	0
15	2016	0.2207	0.3016	0.4395	0.0046	0.8333	0.1114	0
15	2017	0.2078	0.2854	0.5543	0.0087	0.8621	0.0881	0
15	2018	0.2014	0.3466	0.5359	0.0068	0.8431	0.0833	0
16	2014	0.1609	0.2934	0.4498	0.0046	0.8836	0.0899	0
16	2015	0.2494	0.4254	0.4280	0.0031	0.8688	0.0931	0
16	2016	0.3328	0.5240	0.4490	0.0053	0.8507	0.0883	0
16	2017	0.3509	0.5261	0.4550	0.0075	0.8029	0.0817	0
16	2018	0.3276	0.6888	0.3529	0.0011	0.7984	0.0798	0
17	2014	0.1993	0.3283	0.5371	0.0062	0.8855	0.1559	0
17	2015	0.1504	0.2243	0.6317	0.0068	0.8956	0.1802	0
17	2016	0.2151	0.2498	0.6593	0.0076	0.8958	0.1725	0
17	2017	0.2856	0.4013	0.6398	0.0071	0.8788	0.1625	0
17	2018	0.2522	0.4516	0.5866	0.0050	0.8697	0.1425	0
18	2014	0.2230	0.4048	0.5658	0.0090	0.8742	0.1567	0
18	2015	0.2772	0.4446	0.5562	0.0112	0.8623	0.1493	0
18	2016	0.3540	0.5272	0.5933	0.0055	0.8504	0.1313	0

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18	2017	0.3627	0.5299	0.5656	0.0090	0.8637	0.1164	0
18	2018	0.3214	0.5462	0.5969	0.0113	0.8586	0.1017	0
19	2014	0.3899	0.6130	0.5450	0.0058	0.8987	0.1130	0
19	2015	0.3812	0.5973	0.5430	0.0094	0.9203	0.1085	0
19	2016	0.3384	0.5267	0.5200	0.0071	0.8751	0.0978	0
19	2017	0.3276	0.5105	0.5331	0.0077	0.8573	0.0828	0
19	2018	0.2994	0.6163	0.5272	0.0114	0.8052	0.0724	0
20	2014	0.2056	0.3723	0.3586	0.0028	0.9063	0.1283	0
20	2015	0.2309	0.4230	0.3680	0.0019	0.9014	0.1171	0
20	2016	0.2672	0.3798	0.4600	0.0065	0.8796	0.1048	0
20	2017	0.3249	0.4584	0.4982	0.0062	0.8320	0.0962	0
20	2018	0.3525	0.5256	0.5456	0.0105	0.8436	0.0973	0
21	2014	0.1557	0.2412	0.5171	0.0113	0.8889	0.1660	0
21	2015	0.0832	0.1072	0.4892	0.0125	0.8630	0.1739	0
21	2016	0.2368	0.2756	0.4789	0.0125	0.8016	0.1485	0
21	2017	0.3314	0.4028	0.4423	0.0127	0.7757	0.1246	0
21	2018	0.4159	0.5930	0.4433	0.0061	0.7378	0.1272	0
22	2014	0.2921	0.3749	0.5273	0.0036	0.8562	0.1524	0
22	2015	0.3666	0.4863	0.5265	0.0045	0.8627	0.1437	0
22	2016	0.4059	0.5122	0.4700	0.0086	0.8376	0.1239	0
22	2017	0.4137	0.4857	0.5060	0.0157	0.7898	0.1019	0
22	2018	0.3761	0.5227	0.5132	0.0077	0.8079	0.1011	0
23	2014	-0.0805	-0.1808	0.3801	0.0059	0.8751	0.1182	0
23	2015	-0.1110	-0.2329	0.3457	0.0048	0.8818	0.0892	0
23	2016	-0.1299	-0.2768	-0.1401	0.0000	0.8656	0.0666	0
23	2017	0.2105	0.2908	0.4171	0.0102	0.8661	0.0642	0
23	2018	0.1418	0.2245	0.2749	0.0051	0.8730	0.0690	0
24	2014	0.2777	0.6290	0.4652	0.0123	0.8570	0.1392	1
24	2015	0.3394	0.6919	0.4611	0.0045	0.8698	0.1265	1
24	2016	0.3737	0.6972	0.4983	0.0040	0.8058	0.1045	1
24	2017	0.3522	0.6662	0.4844	0.0060	0.7522	0.0839	1
24	2018	0.3403	0.6734	0.5289	0.0058	0.7728	0.0795	1
25	2014	0.3540	0.7355	0.5907	0.0043	0.8795	0.1125	1
25	2015	0.4077	0.7555	0.5879	0.0076	0.8960	0.0966	1
25	2016	0.4347	0.7621	0.5917	0.0066	0.8925	0.0814	1
25	2017	0.4290	0.7312	0.5682	0.0095	0.8727	0.0674	1
25	2018	0.3563	0.7698	0.5318	0.0075	0.8517	0.0660	1
26	2014	0.1644	0.2739	0.7132	0.0063	0.8950	0.1657	0
26	2015	0.1822	0.2807	0.6915	0.0097	0.9030	0.1607	0
26	2016	0.2474	0.3311	0.6693	0.0111	0.8684	0.1401	0
26	2017	0.2305	0.2930	0.6537	0.0143	0.8617	0.1111	0
26	2018	0.2161	0.3515	0.6612	0.0134	0.8450	0.1058	0
27	2014	0.2610	0.5359	0.6106	0.0135	0.8897	0.1216	0
27	2015	0.2525	0.4938	0.5425	0.0040	0.8919	0.1248	0
27	2016	0.3131	0.5595	0.5246	0.0057	0.8807	0.1220	0
27	2017	0.2825	0.4885	0.5027	0.0056	0.8376	0.1056	0

27	2018	0.2622	0.5392	0.4804	0.0062	0.8564	0.1032	0
28	2014	0.2221	0.4621	0.5449	0.0038	0.9114	0.0761	0
28	2015	0.2749	0.5073	0.5181	0.0043	0.8836	0.0728	0
28	2016	0.3377	0.5405	0.5405	0.0047	0.8694	0.0787	0
28	2017	0.3828	0.5766	0.6095	0.0078	0.8805	0.0655	0
28	2018	0.3565	0.6156	0.6248	0.0084	0.8619	0.0654	0
29	2014	0.3547	0.5214	0.5733	0.0071	0.8664	0.1292	0
29	2015	0.3443	0.4967	0.5404	0.0039	0.8233	0.1296	0
29	2016	0.4147	0.5286	0.4643	0.0073	0.8478	0.1151	0
29	2017	0.4253	0.5147	0.4574	0.0069	0.8260	0.1016	0
29	2018	0.3658	0.4980	0.4126	0.0069	0.7965	0.0950	0
30	2014	0.2280	0.2727	0.4830	0.0064	0.8820	0.1642	0
30	2015	0.3078	0.3267	0.4499	0.0096	0.8850	0.1735	0
30	2016	0.3715	0.3896	0.2820	0.0030	0.9056	0.1603	0
30	2017	0.4180	0.4936	0.3202	0.0017	0.9002	0.1320	0
30	2018	0.4488	0.5671	0.3881	0.0049	0.8732	0.1241	0

Appendix B.

B.1 Important ratios for all 30 banks

Non-Islamic Banks	NPL Ratio	Liquidity Ratio	NIM	EQR	Islamic Banks	NPL Ratio	Liquidity Ratio	NIM	EQR
ABBANK	31.35%	41.01%	0.75%	7.02%	ALARABANK	4.15%	155.90%	4.14%	6.48%
BANKASIA	3.98%	29.74%	3.66%	7.60%	EXIMBANK	5.03%	124.60%	3.03%	7.59%
BRACBANK	2.73%	39.76%	4.93%	10.03%	FIRSTSBANK	3.30%	128.74%	3.66%	3.57%
CITYBANK	4.95%	22.59%	4.35%	7.52%	ISLAMIBANK	3.56%	104.35%	3.99%	5.50%
DHAKABANK	4.33%	46.01%	4.16%	6.06%	SHAHJABANK	6.41%	133.79%	3.83%	6.07%
DUTCHBANGL	4.22%	8.87%	6.89%	6.67%	SIBL	7.41%	150.63%	4.44%	5.13%
EBL	1.84%	19.99%	4.00%	8.13%					
IFIC	4.25%	34.80%	1.92%	7.81%	Anomaly	NPL Ratio	Liquidity Ratio	NIM	EQR
JAMUNABANK	3.67%	42.10%	3.30%	8.03%	ICBIBANK	81.85%	66.10%	1.27%	-95.81%
MERCANBANK	4.65%	42.56%	1.21%	6.41%					
MTB	5.15%	15.88%	3.70%	5.87%		AVERAGE VALUES			
NBL	9.18%	24.61%	2.00%	11.00%	Category	NPL Ratio	Liquidity Ratio	NIM	EQR
NCCBANK	5.27%	57.31%	3.73%	7.35%	Islamic	4.98%	133.00%	3.85%	5.72%
ONEBANKLTD	6.62%	50.44%	3.61%	5.41%	Non-Islamic	6.84%	32.63%	3.34%	7.21%
PREMIERBAN	3.84%	19.96%	2.95%	7.07%					
PRIMEBANK	5.50%	26.84%	3.53%	8.91%					
PUBALIBANK	5.22%	34.31%	3.75%	6.68%					
RUPALIBANK	17.75%	45.04%	2.87%	3.69%					
SOUTHEASTB	5.80%	46.56%	2.35%	7.36%					
STANDBANKL	7.48%	35.93%	2.84%	7.58%					
TRUSTBANK	7.34%	23.32%	3.34%	4.96%					
UCB	6.45%	30.58%	3.10%	6.98%					
UTTARABANK	5.67%	12.31%	3.79%	7.76%					

The anomaly was not included in average calculations as it creates an unrealistic picture.