An Internship Report on

"Enhancing Financial Efficiency: Evaluating Automation Alternatives for Bank Deposit Matching at Kazi Farms LTD"

Submitted by

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21304009

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

Brac Business School
Brac University
May, 2025

Declaration

It is hereby declared that

1. The internship report submitted is my own original work while completing a 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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Supervisor's Full Name & Signature

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Dr. Mohammad Mujibul Haque

Dean & Professor

BRAC Business School

BRAC University

Letter of Transmittal

Dr. Mohammad Mujibul Haque

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Kha 224 Pragati Sarani, Merul Badda , Dhaka 1212

Subject: Submission of Internship report on **"Enhancing Financial Efficiency: Evaluating Automation Alternatives for Bank Deposit Matching at Kazi Farms LTD"**

Dear Sir,

It is my pleasure to provide you with the assigned internship report, which fulfills the requirements for obtaining the Bachelor of Business Administration degree from BRAC Business School, BRAC University.

In the entire report, I have tried to reflect on my internship experience and the knowledge I gained throughout my undergraduate journey. I am grateful to you since you provided me with the necessary extensions, I needed to complete this report and for the guidance and information I needed to overcome my difficulties. I am confident the report will meet all necessary requirements.

Sincerely yours,

_____

Shafin Ahmed Chowdhury

21304009

BRAC Business School

BRAC University

Date: May 19, 2025

Non-Disclosure Agreement

This agreement is between Kazi Farms Group and the undersigned student Shafin Ahmed Chowdhury at Brac University that the report does not contain any confidential information from the organization.

Shafin Ahmed Chowdhury

ID: 21304009

BRAC Business School

BRAC University

Feroz Ahmed

Senior Manager

Kazi Farms Group

Acknowledgement

I would like to extend my heartfelt gratitude towards Kazi Farms Group for providing me with the opportunity to complete my internship in such a friendly work environment. I would also like to thank Mazidur Rahman, Accounts Executive, who has helped me with the project topic and provided me with all necessary information I needed during both my internship period and writing this report.

Secondly, I am deeply appreciative of the guidance and ideas provided by my supervisor, Dr. Mujibul Haque, professor and dean, BRAC university. He went through my report and fixed my errors and gave me ideas on how to improve it.

Last but not least, I would like to thank my mother, Sharmin Chowdhury, not just for this report or my university life, but for every stage of my life. I am eternally grateful and indebted to her.

Executive Summary

This report, “Enhancing Financial Efficiency: Evaluating Automation Alternatives for Bank Deposit Matching at Kazi Farms LTD” evaluates four different automation methods that Kazi Farms could implement for their business to increase efficiency. This report is prepared as part of the BBA degree at BRAC University. My internship period from 22/01/2025 to 21/04/2025.

The first part of the report solely consists of my internship experience. It contains my personal information and also my supervisor’s information. It goes in-depth into my responsibilities and contributions to the company. Moreover, I also discussed the difficulties that I faced during the internship and ways how Kazi Farms could improve upon that aspect.

The business’ core functional department like Human resource, Marketing, Accounting and Supply Chain practices and methods are discussed in the organization part. Furthermore, a SWOT analysis and Porter’s Five Forces analysis is conducted on the business to judge the business’ competitive strengths and weaknesses along with its position in the industry. Since accounting data of Kazi Farms was not publicly available, financial analysis is conducted on its two competitors, ACI and AMAN.

In the project section, four alternative solutions of automation are suggested. The current operations of Kazi Farms have too much delay and this causes several operational inefficiencies like cash realization delay, customer dissatisfaction, rising operating costs. All these can be minimized by implementing the suggested automations. The alternatives are evaluated based on their setup cost, running cost and the potential costs that they could save for Kazi Farms in the future. One of the alternatives stand out among them based on “Equivalent Annual Annuity” calculations.

Working as a sales accounts intern has helped me significantly as I became familiar with an ERP system which will help me in the future. Bank reconciliation was something that I learned in my academic life, but I got the opportunity to do it professionally for a company and actually make an impact. This internship has not only benefitted me professionally but also positively impacted my personal life. I became a better person who can handle criticism much better than before. My time management skills improved and I learned office etiquette.

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Chapter 1: Overview of Internship

1.1: Student Information

Name: Shafin Ahmed Chowdhury
ID: 21304009
Program: Bachelor of Business Administration (BBA)
Major: Finance
Minor: Accounting

1.2: Internship Information

1.2.1 Period, Company Name, Department, Address

I decided to join Kazi Farms Limited to complete my internship. My internship duration was 3 months, from 22 January, 2025 to 21 April, 2025. My department was Accounts & Finance and I was placed in the Sales Accounts division. My workplace was at Ahmed Kazi Tower, House-35, Road-02, Dhanmondi, Dhaka-1205.

1.2.2 Internship Company Supervisor's Information

My on-site supervisor was Mr. Feroz Ahmed. He is the Senior Manager of the Sales Accounts division of the Accounts and Finance department.

1.2.3 Job Scope

My responsibilities were like a management trainee. My primary task was to manage the sales transactions of 12 different Kazi Farms bank accounts. My tasks included:

- **Money Receipt Number Generation:** Generated unique money receipt numbers for each sales transaction to ensure trackability of sales data.
- **ERP system reporting:** Entered sales transactions into the ERP system, ensuring accuracy and timely reporting of sales data.
- **Monthly Bank Reconciliation:** During my 3 months, I had to reconcile two of the 12 banks. This is to ensure that the bank statements are aligned with the ERP system's cash book and the financial records.
- **Commission Posting:** Managed the posting of commissions of the Mymensingh sellers into the ERP system to ensure accurate allocation of commissions.
- **Interbank Fund Transfer:** Recorded fund transfers to and from different bank accounts into the ERP to accurately reflect cash flow.
- **Mortality Commission Posting:** Posted the commissions that sellers received due to chicks passing away due to several different reasons into the ERP system.

1.3: Internship Outcomes:

1.3.1 My contribution to Kazi Farms

The sales team that I was a part of, consisted of 15 members including me. Each team member did something differently from others, which made their work very easy and efficient but also, they all had some flaws in their work. During my first few days, I spent time at each of my team member's desks, observing and learning from them. I picked up on their skills and the things each of them was doing differently. I combined all of them into my own work, and within my 2nd week I was already doing my work faster than some of my teammates. As a result, I would often finish my work early and it felt like I was not contributing enough. That is why, two of my team members started emailing me part of their work on a daily basis, and I would ease the workload for my team.

1.3.2 Benefits of the Internship

Before my internship, I did not know what to expect from a corporate setup. However, I was shocked at how my whole team greeted me. They were always ready to help and were very patient during my early days, even when I had to ask the same questions multiple times during the day. As a result, this internship hugely improved my interpersonal skills as I learned a lot about communication skills from them. Moreover, I had to communicate with my team members and co-workers from other departments multiple times during the day. Moreover, I learned the etiquette of talking to your bosses and seniors. I used these 3 months to improve my networking skills and also increase my network. I met co-workers who really helped me in deciding my next career steps. I studied professional degrees that I did not know before. They also talked about mistakes each of them made and things they wished they knew before. I believe it helped me a lot as a person and a professional. Furthermore, due to long office hours, a break from work for 10-15 minutes was very helpful, so I started praying in a congregation in the office. This made me pray regularly even when I was not in the office and I see this as a huge positive.

1.3.3 Problems/Difficulties

The most significant issue of the internship was the fact that I had to stay beyond my office hours, which is 5pm. The sales team's workload increases significantly after bank hour ends, which is 4pm. This is when banks start releasing their statements and we had to complete the sales drafts before leaving. All of my team members stayed till 7pm, which is the last time to leave the office. However, since I managed the smaller banks, the amount of transactions was also low, and I was able to leave by 6pm on average. Moreover, the computer that I was given was not fast enough, and it used to often lag and disrupt my workflow. There were two instances where I lost all my work because of a glitch and I had to do the work all over again. Apart from that, working for 9 hours straight was stressful and tiring as this was my first job. On most days, I had no energy or time to do anything after office hours and this meant I had to do all my other work during the weekend which also was not always possible. This was a great reality check and a humbling experience, which made me respect job holders a lot more.

1.3.4 Recommendations

As there is no training period for interns, they are mostly trained hands-on while they are working. While this is not much of an issue, it would be beneficial if the previous intern is present for at least 1 day when the new intern arrives so that they can teach and pass on the duty

seamlessly. Moreover, interns should not be made to stay beyond office hours, because I feel like that demotivates the interns and decreases job satisfaction.

Chapter 2: Organization Part

2.1 Introduction

2.1.1 Objectives

This section will include a broad overview of Kazi Farms Limited. By analyzing the company, I will find the strengths and weaknesses of the company. The organizational practices of the company are also in this section, along with their relative strengths and weaknesses compared to the market.

2.1.2 Scope of Study

This study emphasizes Kazi Farm's core operations, including its feed mill, hatchery, distribution network, and Kazi Farms Kitchen product line. It also covers the external and internal capabilities, threats of the company. Part one will include the company's management practices and its marketing efforts. It will also give a brief idea on the accounting practices of the company, like the depreciation method and a financial performance section is done on ACI Godrej and Aman Feed Mills LTD. The final part will cover two different industry and competitive analysis, Porter's Five Forces and SWOT analysis. The study can be extended further by another individual or company if they want to analyze Kazi Farms in depth.

2.1.3 Methodology

This report is prepared with a combination of primary and secondary data collection. Primary data is collected from my personal experience at Kazi Farms during my internship in the Accounts and Finance department. Moreover, informal interactions with co-workers, observations also provided context and insight into the operations, financial and technological practices of Kazi Farms. The overview section of the company is done mostly from general knowledge and publicly available information. The vision, mission statement however, is collected from their website, which brings us onto secondary data collection.

Secondary data has been collected from previous reports, website information. The financial performance section has been prepared using publicly available information of Aman Feed and ACI Godrej.

2.1.4 Significance of Study

The study is significant since it made me dig deeper into multiple facets of a single business. From company overview, to management practices, leadership styles, human resource planning process, accounting practices and also financial practices to marketing efforts. This helped me understand how each of the departments is important for a business to become successful. For example, due to Kazi Farms' low effort in its marketing practices, it lags behind its competitors which could pose a huge opportunity.

This analysis not only provides value for academic purposes but also serves as a learning guide for other agro-based businesses and the FMCG (Fast Moving Consumer Goods) industry, looking to improve their organizational and accounting practices. Moreover, Kazi Farms might be benefitted from this section as it includes all of their practices and procedures in one paper. If the company decides to do a thorough analysis on its business, this paper will help them to get information instantly as it was written by someone who worked in the company for three months and have seen the organizational practices hands-on.

2.1.5 Limitations

Although this report was made with much effort, there were some limitations to it. This is mainly because Kazi Farms is a private limited company and they were reluctant to release any of their financial reports or statements. Moreover, some information was difficult to extract because they were confidential. As their financial reports are not made public, the "Financial performance" section was done by evaluating their two competitors - "Aman Feed LTD." and "ACI Godrej PLC." However, it is worth mentioning that, in terms of scalability, the two public competitors are nowhere near Kazi Farms in terms of profitability and liquidity.

2.2 Overview of the Company

Kazi Farms Limited is the largest poultry business in Bangladesh, with over 50 broiler parent farms, layer parent farms and broiler grand-parent farms throughout Bangladesh. They also have multiple hatcheries and feed mills across Bangladesh, and all these are supported by respective sales offices in those areas. Established in 1996, Kazi Farms was only an importer of eggs, but the following year they started their own parent farms. In 2004, the company started its grand-parent farms which resulted in Bangladesh's first exports of hatching eggs and day-old chicks. Although the company started small, in the following three decades they went on to become the leading company in the agricultural sector of Bangladesh. They are famous for their quality along with innovation and sustainable practices.

Alongside farms, Kazi Farms also expanded their business by manufacturing organic fertilizers and both fish and chicken feed production.

In the last decade, Kazi Farms have become a successful conglomerate by tapping into the food industry (Kazi Farms Kitchen), media industry (Deepto TV) and IT industry (Sysnova Information Systems). Due to Kazi Farms Kitchen's huge success in the food industry, it further increased the popularity of their poultry business.

2.2.1 Vision

Kazi Farms has a vision of a "more prosperous Bangladesh where poultry farmers are generating income by producing safe food". It indicates Kazi Farms' commitment towards safety and hygiene and how it works towards creating a more successful Bangladesh.

2.2.2 Purpose

Kazi Farms has three basic purposes. They want to produce quality chicks and feed so farmers can be both productive and prosperous. It aligns with their vision of a prosperous Bangladesh by making farmers more productive. Moreover, they want to be able to produce safe eggs and chicken which customers can eat without any worry, which again connects with their drive towards safer food in Bangladesh. Lastly, they want to produce organic fertilizers which will not harm the organic content of the soil and increase long-term fertility, along with protecting the profit of farmers.

2.3 Management Practices

2.3.1 Management Team of Kazi Farms

The founder and managing director of Kazi Farms is Mr. Kazi Zahedul Hasan and his wife, Dr. Perween Hasan, is the director of all companies. Their two sons, Mr. Kazi Zeeshan Hasan and Mr. Kazi Zahin Hasan are both directors of the company, overseeing sales & marketing operations and production operations respectively. Mr. Kazi Razaul Hasan, brother of Mr. Zahedul, is the Executive Director of the company.

The Kazi Farms employees include Ms. Mahmuda Islam (Chief Executive Officer) and Mr. Fakhruzzaman Chowdhury (Chief Financial Officer).

2.3.2 Leadership Style

Kazi Farms implements a hybrid leadership style with a mix of participative and autocratic approaches. While the final decisions are made by the owners themselves, employees are still encouraged to voice their ideas and decisions to encourage a collaborative work culture. Moreover, the working environment in Kazi Farms is demanding yet laid back, meaning employees can roam around freely, chatting with one another, but also deadlines are strictly maintained so that operational efficiency remains intact. This promotes employee satisfaction and increases work motivation, ultimately helping Kazi Farms achieve its goals and objectives increasing food security in Bangladesh while helping farmers generate stable income.

2.3.2 Human Resource Planning

2.3.2.1 Recruitment and Selection Process

Recruitment at Kazi Farms is initiated on a need basis, meaning they only recruit when there is a gap and a need for a new employee in that specific role. Suppose, the accounts and finance department need a new manager. The department head will fill up and submit a RRF (Recruitment Requisition Form) mentioning the need for the role, and the qualification expectations. The form will then be reviewed and approved by the senior management before which the job will be posted into different job searching websites like BD Jobs, LinkedIn. Apart from websites, oftentimes recruitment is done internally by assessing previous interns,

employees from different departments or referred candidates. The HR team evaluates applicants who have applied by checking their CVs, previous work experience and qualifications. The selected candidates are shortlisted for a written exam and in-person interview. The candidates who have the necessary qualifications and perform well in the interview session and are interested to join are required to provide documentation like NID, educational certificates which are then verified and an offer letter is issued. The expectations from the employee, work culture and organization practices are mentioned extensively during the interview so that any confusion and miscommunication is avoided. This whole process of recruitment ensures that Kazi Farms recruits the right person for the job, who will help them reach their organizational goals and the standard is maintained.

2.3.2.2 Compensation System

Kazi Farms follow a detailed compensation system. Employees are paid monthly salaries, along with 3 different allowances. They receive medical, travel and house rent allowance. The base salary is 50% of basic, medical is 15%, travel is 15% and house rent is 30% of basic. Moreover, two Eid bonuses are paid, which are both 100% of the basic salary. Employees are allowed 15 days of paid leave annually.
Furthermore, performance evaluation is done annually during which attendance, punctuality, appraisals are taken into account and based on that salary increments or promotions are given.
Lastly, Kazi Farms maintains a WPPF (Workers' Profit Participation Fund) where they get a percentage of the company's profit annually. Two-thirds of this amount is given out to the employees at the end of the year and one-third is held back by the company which the employees will receive on their final payroll upon leaving the company.

2.3.2.3 Training and Development

Employee training is custom designed based on the specific needs of an employee. They are trained on site or if a bunch of employees need to be trained, then specific venues are arranged for that.

2.4 Marketing Practices

2.4.1 Products of Kazi Farms

Broiler Parent Chicks and Broiler Chicks

Kazi Farms has been able to maintain their quality because they import their Grand-Parent chicks from the USA. They are Bangladesh's first importer of the Avigen Indian River and Cobb-Vantress. Moreover, the broiler breeds of Kazi Farms are the best performing chicks in the Bangladesh market and are sold at a premium price over other breeds.

Layer Chicks and Table Eggs

Kazi Farms acts as a distributor of Hy-Line brown and white layers in Bangladesh, which is the oldest poultry breeding company in the world. Moreover, Kazi Farms itself is the largest producer of commercial table eggs in Bangladesh currently.

Feed

Kazi Farms entered the feed market in 2006 and rapidly gained market prominence. The reason they captured the market so quickly is because they do not use any antibiotics or any cheap protein like MBM in their feed. Kazi Farms set up their Gazaria feed mill through technical expertise from Europe and USA, and complies with all the regulations and requirements of the Government of Bangladesh for feed manufacturing.

Kazi Organic Fertilizer

Kazi Farms' organic fertilizer is a market leader because they are high in organic matter. They are able to do this by composting aerobic bacteria on poultry manure, which helps in creating a natural fertilizer. These natural fertilizers help since many soils in Bangladesh are not high in organic matter, due to the repetitive plantation and excessive use of chemical fertilizers.

Kazi Farms Kitchen

Kazi Farms Kitchen has made significant strides in the food industry with its frozen and ready-to-cook products. They have a high brand reputation and brand awareness. Consumers associate their products with being tasty, hygienic and good quality.

Figure 1: Different frozen products of Kazi Farms Kitchen

Deepto TV

With Deepto TV, Kazi Farms entered the media and entertainment industry. Deepto TV has a TV channel and also an OTT platform. The TV channel gained much popularity during its broadcast of the Bangla dubbed Turkish drama series "Sultan Suleiman". Moreover, the OTT platform has

its original tv series and movies, and also has foreign series and movies licensed, so its members can enjoy a wide range of entertainment and drama content.

Sysnova Information Systems

Sysnova Information Systems created an open-source ERP system, called iDempire. Kazi Farms uses it as their own ERP system. It is also sold to other companies, who can customize it themselves. The introduction of the ERP system drastically improved the organizational efficiency of Kazi Farms. Kazi Farms previously used a tally system, which consumed much more time and reduced efficiency.

Bellissimo & Za&Zee Ice creams

Bellissimo is a premium ice cream brand, produced in international standards and targeted to a narrower market segment. They advertise their ice creams to contain less than 10% milk fat.
Za&Zee, on the other hand, targets a broader market, producing ice creams and ice lollis.

Pricing

Kazi Farms adopts a competitive pricing strategy that reflects its focus on affordability and market accessibility while maintaining quality. By balancing production cost efficiency with market demand, the company is able to offer poultry and related products at prices that appeal to a broad consumer base. This approach helps Kazi Farms retain market share in a price-sensitive industry, especially in rural and urban middle-income segments.

2.4.2 Marketing Strategy

Digital advertising for the poultry industry is not common. The poultry industry is product-led with limited investment as it is more reliant on product quality and word-of-mouth. However, Kazi Farms Kitchen undertakes huge digital marketing to promote their frozen and processed food. They have adopted an urban-focused strategy, highlighting convenience and brand trust. Moreover, they also advertise their products through television commercials, which is also a great way to increase brand awareness.

2.4.3 Target Customers/ Targeting and Positioning Strategy

Kazi Farms Kitchen primarily focuses on middle to upper-middle income urban families and their kitchen products like chicken lollipop, sausages, nuggets are a great evening snack option. Moreover, their paratha is one of the most common products in urban families currently. Health-conscious consumers who are looking for safe and hygienic food are also another target gorup of Kazi farms and also young professionals who are seeking affordable meal options which are also good in quality.

The targeting strategy is mostly aimed at districts and urban areas where consumer awareness is high and there is demand for processed food. Their positioning strategy concentrates on “Safe, Tasty, and Convenient Food”, promoting hygienic and easy-to-cook products.

2.4.4 Marketing Channels

Kazi Farms Kitchen has small franchise outlets, with 1-2 tables, where customers can enjoy their frozen products and also purchase them directly from that store. There are over 160 such outlets covering 39 districts nationwide. These outlets not only increase their sales, but also increase brand recognition as customers walk past them daily, increasing brand resonance. Over the last decade, this introduction of Kazi Farms food products and their surge in demand has also increased the demand for their poultry products.

Apart from direct retail outlets, they also supply their products to other large superstores like Meena Bazar, Unimart. Their products can also be ordered online through third-party grocery platforms like PandaMart and Chaldal.com.

Celebratory posts like Eid, Baishakh and product promotions, campaign promotions are shared through their social media platforms like Facebook and Instagram.

Figure 2: Advertisement of their product "Shami Kabab"
Figure 3: Celebratory post of Eid-ul-Fitr 2025

Source: Facebook.com/KaziFarmsKitchen

2.4.5 Product/New Product Development and Competitive Practices

Kazi Farms is always looking to expand their ready-to-cook and frozen food product lines. Recently, they introduced their new product through a social media post, "Shami Kabab". However, there are other competitors who make similar products and it indicates that Kazi Farms must innovate and include more diverse products to be able to capture and retain the market share.

2.4.6 Branding Activities

Kazi Farms currently has a unique brand identity which makes consumers subconsciously think of chicken and products made with chicken. This is due to their logo being advertised everywhere which includes a chicken. They also have a recognizable packaging of all their products which is a theme of white.

Public Relations

Kazi Farms have constantly contributed to CSR activities, improving its public relations. Between 2010-2019, Kazi Farms have provided 53 crore Taka in financial support to Central Women's University, which is the first private university for women in Bangladesh. Moreover, they donated 15 crore Taka to Bangladesh University of Engineering and Technology for the construction of a new conference center. Furthermore, Kazi Farms constantly tries to innovate their poultry and other businesses through green practices and promote sustainability. They are aiming to implement grid electricity and expand to 20MWp of solar energy in their farms by 2025 to reduce carbon emissions.

In August 2024, a flood affected Feni and it displaced around 7350 families. Kazi Farms was quick to respond to this disaster and donated 10,000-day-old chicks. Sher-E-Bangla Agricultural University students distributed these. Although the exact number of families is unknown, 500-1000 families were helped by this. This helped to further cement Kazi Farm's reputation of wanting to provide food security to the people of this country.

2.4.7 Advertising and Promotion Strategies

Traditional Media
Kazi Farms do not advertise their products in billboards or print campaigns which is making them lag behind. However, they do advertise their products on TV Channels, mostly during sports events and Eid natoks.

Digital Marketing
As mentioned, Facebook is their main marketing platform. However, they are not present in YouTube and they also do not use influencer marketing, which makes them slightly disconnected from the youth.

2.4.8 Critical Marketing Issues and Gaps

Absence of a Dedicated Marketing Team
Kazi Farms do not have a marketing department. This lowers the quality of their marketing efforts and the advertising is not aggressive like their competitors.

Low Marketing Spend vs. Competitors
By looking at the marketing efforts of competitors like CP, PRAN and Igloo, Kazi Farms marketing presence is significantly low. This may be due to a lack of dedicated budget for marketing. Their competitors consistently use TV commercials, billboards and influencers to market their goods.

2.5 Financial Performance and Accounting Practices

2.5.1 Financial Performance

Figure 4: ROE Breakdown of ACI and AMAN

	ACI			AMAN		
	2022	2023	2024	2022	2023	2024
Net Income/ Revenue	0.009247	-0.00065	-0.01033	0.010687	0.002333	0.001966
Revenue/Total Assets	1.275348	1.268923	1.321178	1.080981	1.306285	1.197106
Total Assets/Shareholder's Equity	6.20432	8.619112	10.9953	2.241157	2.51863	2.515721
ROE (Net Income/Shareholder's Equity)	7.32%	-0.71%	-15.01%	2.59%	0.77%	0.59%

Figure 5: Growth performance of ACI and AMAN

Financial Highlights of ACI and AMAN						
	ACI			AMAN		
	2022	2023	2024	2022	2023	2024
Revenue	96571641497	115355397105	124315921225	10319605896.00	12224274250.00	11110529486.00
Growth %		19.45%	7.77%		18.46%	-9.11%
Operating expenses	17767565065	20222196292	23194951288	372172931.00	459099972.00	466095747.00
Growth %		13.82%	14.70%		23.36%	1.52%
Operating profit	6434047819	6138853725	7124593507	769276073.00	851842618.00	731779573.00
Growth %		-4.59%	16.06%		10.73%	-14.09%
Net profit	749,930,613	-1100828034.00	-1359445776.00	110284861.00	28520467.00	21846809.00
Growth %		-246.79%	23.49%		-74.14%	-23.40%
Non Current assets	35,963,553,250	39670457236.00	43049027722.00	1395147927.00	1356934476.00	1318383117.00
Growth %		10.31%	8.52%		-2.74%	-2.84%
Current assets	39,758,263,596	51237665010.00	51045703133.00	8151373125.00	8001112232.00	7962771758.00
Growth %		28.87%	-0.37%		-1.84%	-0.48%
Total assets	75,721,816,847	90908122246.00	94094730855.00	9546521052.00	9358046707.00	9281154875.00
Growth %		20.06%	3.51%		-1.97%	-0.82%
Total equity	12,204,692,172	10547272984.00	8557726661.00	4259640162.00	3715530612.00	3689262033.00
Growth %		-13.58%	-18.86%		-12.77%	-0.71%
Non current liabilitie	9,376,790,384	10160143754.00	11450618412.00	1995507052.00	2258887093.00	2443749007.00
Growth %		8.35%	12.70%		13.20%	8.18%
Current liabilities	54,140,334,291	70200705508.00	74086385782.00	3291373839.00	3383629002.00	3148143834.00
Growth %		29.66%	5.54%		2.80%	-6.96%

Figure 6: Financial Ratios of ACI and AMAN

	ACI			AMAN		
	2022	2023	2024	2022	2023	2024
	Liquidity Ratios					
Current Ratio	0.63	0.73	0.69	2.476587	2.364654	2.529354
Cash Ratio	0.06	0.11	0.08	0.02308	0.030445	0.119252
	Profitability Ratios					
Net Profit Margin	0.78%	-0.95%	-1.09%	1.07%	0.23%	0.20%
Gross Profit Margin	24.70%	22.43%	23.93%	11.06%	10.72%	10.78%
Return on Assets	0.99%	-1.21%	-1.44%	1.16%	0.30%	0.24%
Return on Equity	6.14%	-10.44%	-15.89%	2.59%	0.77%	0.59%
	Solvency Ratios					
Debt to Asset Ratio	0.84	0.88	0.91	0.55	0.60	0.60
Leverage Ratio	6.2	8.62	11	2.24	2.52	2.52
	Efficiency Ratios					
Inventory Turnover	3.57	4.25	4.39	4.05	5.07	4.28
Total Asset Turnover	1.28	1.27	1.32	1.08	1.31	1.20
	Valuation Ratios					
P/E Ratio	32.91	-26.60	-9.43	29.17	111.36	128.95
P/B Ratio	1.27	1.52	1.89	0.75	0.86	0.87

ACI

Liquidity

ACI's liquidity condition is in a critical position and has neither worsened nor improved in the three years. Their current ratio is 0.63,0.73 and 0.69 in 2022, 2023 and 2024 respectively. This indicates that they do not have enough short-term assets to repay their short-term liabilities. Their suppliers could soon stop supplying them if they do not pay them on time. Moreover, their acid test ratio in the same period is 0.06, 0.11 and 0.08. It means that a large portion of their current assets is taken up by idle inventory, which increases the risk of bankruptcy. Inventory is the most non-liquid asset and selling it is the hardest of all other assets.

Profitability

ACI's profitability worsened severely over the 3 years. During 2023 and 2024, they faced losses, hence, most of their ratios are negative in these 2 years. Their gross profit margin remained positive and close during the 3 years. However, their net profit margin fell from 0.78% in 2022 to -1.09% in 2024, which indicates poor control over their operating expenses. Their return on equity also fell from 6.14% in 2022 to -15.89% in 2024.

Solvency

The company has a high financial risk. This is because their debt to asset ratio is around 0.8-0.9 from 2022-2024. It indicates that around 80% of the company's assets are financed through debt. Moreover, they have a high leverage ratio which increased from 6.2 in 2022 to 11 in 2024. This also indicates high financial risk because for every 1 taka of equity, they have 5.2 taka of debt, which can be good during peak season but will be risky when revenues fall and they will have difficulty in repaying the debt.

Efficiency

Inventory turnover and total asset turnover for ACI remained similar for the three years, there was not much deviation. On average they were selling and replacing their inventories 4 times during the year. Moreover, their total asset turnover on average was 1.29 during the three years, indicating that for every 1 taka of total assets, ACI is generating 1.29 taka of revenue, which is not much. This indicates that they are not using their assets efficiently.

Valuation

In 2022, ACI had a P/E ratio of 32.91, which indicated that any investor who invests in the business can earn his money back in 33 years, which is very high. However, compared to 2023 and 2024, when ACI faced losses, the P/E ratio of 2022 looks flattering. In 2023 and 2024 the company had a negative P/E of 26.6 and 9.43 respectively which shows the company is making losses and investors are likely to lose their money. Moreover, the average price to book ratio is 1.56 in three years, which shows that their stock is valued more than their assets, indicating that investors are optimistic. However, with ACI facing losses, this could be worrisome.

Du-Point Analysis

From 2022 to 2024, the company's ROE deteriorated sharply due to declining profitability. In 2022, ROE stood at approximately 7.32%, supported by a modest net profit margin (0.9%), solid asset efficiency (1.275), and high leverage (6.204). However, by 2023, the profit margin turned slightly negative (-0.1%). By 2024, it worsened further to -1.0%, resulting in ROE plunging to -15.01% despite increasing leverage (up to 10.995). Throughout the period, asset turnover remained stable, but the negative profitability became the dominant factor, overwhelming the benefits of efficiency and leverage. This suggests that the company's financial structure has become increasingly risky, and unless profitability improves, the high leverage will continue to amplify losses.

From 2022 to 2024, ACI's financial condition has weakened significantly. Profitability has turned negative, with declining net profit margin, ROA, and ROE. The company's liquidity remains poor, and rising debt levels have led to higher financial risk. Negative valuation ratios further reflect a loss of investor confidence, indicating that ACI is in a financially distressed state.

AMAN

Liquidity

During the three years, Aman had an average current ratio of 2.4. This is more than the yardstick of 2:1. It indicates that they have more than enough short-term assets to repay their short-term liabilities. However, too many current assets indicate inefficiency. Their acid test ratio in the 3 years was less than 1. This indicates that they have too much idle inventory in their business which is risky. Inventory is the least liquid asset, meaning it is hardest to convert inventory into cash. A below 1 acid test ratio shows that the business is inefficient in managing its inventories.

Profitability

Aman's gross profit margin fell from 11.06% in 2022 to 10.78% in 2024. This is not much of a fall and indicates that their performance in terms of profitability has been stable over the three years. However, their net profit margin has fallen from 1.07% in 2022 to 0.23% and 0.20% in 2023 and 2024 respectively. This indicates that they were inefficient in managing their expenses. They also became inefficient in generating income from their assets or equity. They have a downward trend in both return on asset and return on equity ratios.

Solvency

Debt to asset ratio and leverage ratio for Aman remained same over the years. In 2023 and 2024, it did not change at all. It means they have taken no new loans during this period. 60% of their assets are funded by debt and 40% through equity. Their leverage ratio is 2.52, meaning for every 1 taka of equity they have 2.52 taka in assets, and 1.52 in debt, which shows that they have more assets than debt.

Efficiency

Aman on average bought and sold inventory 4 times during the year, which is the same as ACI and might be close to the industry average. ACI and Aman also have similar asset turnover ratios as Aman had an average of 1.19 asset turnover in the three years.

Valuation

Aman had a P/E ratio of 29.17 in 2022, however, it increased drastically in 2023 to 111.36 and their P/E in 2024 was even higher at 128.95. It means that investors will need 128 years to earn back their investments which does not paint a good picture for future investors for the company. Moreover, their P/B ratio is less than 1, which means the market value of their shares is even lower than the net asset value of the company. The company has a weak future profitability and their assets are overstated. This hints at their underlying issue of poor management.

Du-Point Analysis

From 2022 to 2024, the DuPont analysis reveals a declining trend in ROE, falling from 2.59% in 2022 to 0.77% in 2023 and 0.59% in 2024. In 2022, the relatively higher ROE was primarily driven by a stronger net profit margin (1.1%), despite moderate asset efficiency and leverage. However, in 2023 and 2024, profitability dropped sharply to 0.2%, becoming the main limiting factor for ROE, even though asset turnover remained solid (1.30 in 2023 and 1.20 in 2024) and

leverage stayed consistent around 2.5. This suggests the company's decline in profitability is the key driver behind the weakening ROE, while operational efficiency and financial leverage have had comparatively stable influence.

AMAN has maintained a strong financial position over the period, with consistently positive profitability, stable ROA and ROE, and solid liquidity. Low debt levels and stable efficiency metrics reflect sound financial management. Overall, AMAN is well positioned as a financially healthy and well-performing company.

2.5.2 Accounting Practices

Kazi Farms is very strict when it comes to maintaining a proper set of records and entry books. On my first day, I was told that even 0.01 BDT cannot be recorded more or less. Considering the condition of the Bangladesh Stock Market and the discrepancies in the books by most public companies, Kazi Farms, although not a public company, is very transparent and maintains integrity. Kazi Farms operates on a cash basis, and only a handful of customers are allowed to purchase goods on credit. Customers deposit money offline or transfer online. The bank statements are matched with sales drafts, before goods are released. Moreover, they follow the IFRS (International Financial Reporting Standards) system in their accounting practices. The company follows all of the steps in the accounting cycle. Previously the company used to apply the tally method in their accounting systems. However, in 2020 they implemented an ERP system, which has helped the company to record entries and automatically become a double entry.
Kazi Farms depreciates all of their non-current assets using the straight-line method, and they have a separate fixed asset division to do that. Straight line method is the simplest method of depreciation. The financial year starts in June and ends in July.

2.6 Operations Management and Information System Practices

Mozilla Thunderbird
All employees of Kazi Farms communicate through Mozilla’s Thunderbird emailing system. Thunderbird allows Kazi Farms to share large files seamlessly from one computer to another. Moreover, it enables Kazi Farms to customize it according to their own needs since it is an open source software.

Linux Operating Systems

Linux operating systems are installed in all of the computers of Kazi Farms, which makes it easier to maintain flexibility, ensuring security and it also has the option to customize according to the organisation's specific needs. Linux operating systems are also cost effective and they offer stability, which is key in a server environment where multiple computers are connected. It offers consistency between computers and makes it easier to share files with each other.

iDempire ERP System

iDempire is an open-source ERP system created by Kazi Farms' sister concern, “Sysnova”. They use it for their own organization and also sell it to other big corporations. An ERP system enables a company to gather all its departments into one holistic system. Human resource, accounts and finance, inventory information, costing, everything is stored into this system and it updates real-time enabling a smooth workflow. Any report dating from any period can be generated within a second.

Supply Chain Management

Kazi Farms has over 50 stores nationwide. Each of these sales offices are close to their feed mills and farms, ensuring that goods are smoothly transported from remote areas to their customers. Goods are released from warehouses upon payment confirmation by the sales executives in the head office, since they operate on a cash basis system. However, they do have some credit customers as well, who are mostly reputed and trustworthy parties.

2.7 Industry and Competitive Analysis

2.7.1 Porter’s Five Forces Analysis

Threat of New Entrants - Low to Moderate

While entry into the poultry industry is fairly accessible, however, the scale in which Kazi Farms operate is hard to replicate. Kazi Farms operates on a large scale (32% market share) and they have a strong distribution network. Kazi Farms has several years of industry knowledge which can only be gained through experience and a substantial capital, which makes the threat of new entrants very mild. However, they should keep an eye due to growing demand for poultry goods, otherwise the threat is low.

Bargaining Power of Suppliers - Low to Moderate

Among Kazi Farms’ suppliers, notable is their grandparents' stock suppliers from the USA. Due to their suppliers being international, they are vulnerable to exchange rate fluctuatoins, like the fall in the value of BDT in recent years from 80tk average to 120tk average. Moreover, with the introduction of Donald Trump’s presidency, the USA has imposed a 37% import tariff on Bangladeshi products. While this does not directly affect Kazi Farms because the USA is exporting in this case, it still increases tension between the countries and affects trade relations. However, due to the size and scale of Kazi Farms and them being a long-standing customer, they hold sizable negotiating power. As a result, suppliers' bargaining power is low to moderate.

Bargaining Power of Buyers - Moderate

Buyers have somewhat bargaining power due to the existence of several poultry producers in the country. However, out of all of them, Kazi Farms stand out due to their standard for excellence in quality and a strong distribution network, reducing the risk of losing customers.

Threat of Substitutes - Moderate to High

Consumer goods like Kazi Farms Kitchen, Bellissimo, Zaa n' Zee have a strong demand in the market. However, all these products have quality substitutes too. For example, Kazi Farms kitchen has CP as their competitor, Bellissimo and Zaa n' Zee have Polar, Igloo as their substitutes. Moreover, although Kazi Farms have a huge share in the poultry industry, there are other players in the market like ACI Godrej, which increases the threat of substitutes.

Industry Rivalry - High

As mentioned in the previous paragraph, Kazi Farms have huge competition in both the poultry industry and the food industry. With major players like ACI Godrej, Nourish Poultry and Paragon Poultry and other small-scale DOC firms, they face huge competition.

2.7.2 SWOT Analysis

Strengths

- **Market Leadership**
  According to previous studies, Kazi Farms holds a 32% market share in the poultry industry, making it the largest poultry company in the country. This dominance in the market allows them to enjoy economies of scale and have a strong brand value. They have been able to achieve this because of their commitment to quality products and their attention to detail in each step of their business operations. They have reacted to changes in the poultry industry and also the food industry and adjusted their business accordingly.
- **Diversification**
  Kazi farms have not only diversified in the poultry industry with their feed, chicks and eggs, but they have also entered into other industries. This has enabled Kazi Farms to become a huge conglomerate. In the food industry, with their Kazi farms kitchen products, they hold a huge market share and also have two ice cream brands. Moreover, they entered the media and entertainment industry with an OTT and TV Channel "Deepto" and the IT sector with "Sysnova". This diversification reduces the dependence on a single revenue stream and protects them from risk of losses.
- **Technological Integration**
  In this age of technology, almost all large or medium businesses need to have an ERP system to control and organize their operations. Kazi Farms as well have implemented an ERP system. The transition from tally to ERP was not easy, and they faced difficulties as their managers did not react and adjust well to the changes, but they are still improving and perfecting their ERP.
- **Robust distribution network**
  With over 50 broiler farms and sales offices, Kazi Farms have a strong network of customers. It enables them to efficiently distribute their products to customers all around the country. Moreover, due to their vertically potent model of business with hatcheries, feed mills, fertilizers, food outlets ensure that they serve all types of customers from wholesalers, farmers, retailers and also end-consumers.

Weakness

- **Lack of marketing effort**
  Despite having so many products by Kazi Farm Kitchen and also their ice cream brands, they lack aggressive marketing practices which is limiting their entry into several retail segments. The company does not have a dedicated marketing team and they do not invest much into promotional activities. To fully unlock the potential of their products' reach, they should match their competitors or do better in terms of marketing approaches.
- **Dependence on imports**
  Kazi farms import grandparent stock like the Aviagen Indian River and the Cobb-Vantress from the USA. With the BDT weakening against the USD, and the latest tariff war in the Trump regime, they are vulnerable to supply chain disruptions and also currency fluctuations.

Opportunity

- **Automating transaction processing**
  Currently Kazi Farms have huge delays when recording their sales transactions into their ERP system. Streamlining this entire process will cause reduction in delays and goods being released much faster to their customers. This will both increase customer satisfaction and cash flow for the business. Kazi farms have an entire division of 15 people who match bank deposits with sales drafts. Automating this process will reduce costs for the business and also make their processes efficient.
- **Entry into the Global Market**
  Kazi Farms possess decades of experience in the poultry industry. Along with their hunt for quality and a strong financial backup, they can easily enter the foreign market. They can start by targeting the neighboring countries like Myanmar, India, Pakistan, where demand for poultry products is ever rising. This would increase a new revenue stream for the company and also reduce its dependence on the local market, where political turmoil and economic instability is always an issue.

Threats

- **Poultry related disease outbreak**
  The poultry industry is open to several disease outbreaks like Newcastle disease and the avian influenza. These will lead to animals dying in the farms, leading to a loss in production and ultimately resulting in significant financial losses for the firm.
- **Intense competition**
  Despite a huge market share, new entrants in the market are increasing competition. Moreover, existing competitors like Nourish Poultry and ACI Godrej are also performing well in the market, which puts Kazi Farm's market share into risk. Kazi Farms need to establish sustainable competitive advantage over their rivals if they want to hold their market dominance for years to come.

Overall, Kazi Farms must address their weaknesses like over dependence on imports and also keep an eye on the competition that they are facing, if they are to remain competitive in the market. However, the market position and brand reputation that they have built over all these

years is strong enough to withhold any risks soon. Entering the foreign markets, along with their already diversified portfolio of business will take them to an even better position as a conglomerate.

2.8 Summary and Conclusions

Kazi Farms has established itself as the leading poultry business in Bangladesh, through its strategic management practices, a wide range of businesses and a strong distribution network. The company capitalized on its success in the poultry industry to increase reach in other businesses like the IT sector, media sector and processed food industry. Due to this diversification, they have multiple revenue streams which are flowing all year round. Moreover, Kazi Farms is always looking for improvements in their management and so they are usually quick in integrating new technology. This increases their competitive edge over competitors. Lastly, due to their strong distribution network, they have a huge customer base all across the country. They have a strong supply chain which makes goods transportation faster and more efficient.

However, through this analysis, we have found several vulnerabilities of the company. Starting with, Kazi Farms lack in their marketing efforts compared to their competitors. This could make them lag behind firms like ACI and CP. Additionally, the company's reliance on the US market for their grandparent feed exposes them to the risk of currency fluctuation and trade wars between countries.

Despite all this, Kazi Farms still holds a very strong position in the market. With their operational excellence and self-consciousness about quality, they are a strong force to be reckoned with. The possible automation of their transaction processing and expansion into the global market poses serious opportunities for the company to be a long term-success and a near permanent spot in the market.

2.9 Recommendations

Kazi Farms should address their weaknesses and build on their strengths. Most importantly, they should create a dedicated marketing department or team. With aggressive marketing campaigns, mixing digital and traditional marketing strategies, they will be able to reach more target customers and gain market share.

Additionally, only relying on the US grandparent market will only make them vulnerable to risks. Thus, building relations with other countries and importing from those countries will mitigate the currency fluctuation risk.

Moreover, my research for chapter 3 is about automating the entire process of transaction processing, which is promising for the business, as it will increase efficiency and reduce cost significantly. More on this topic will be covered in the next chapter.

Kazi Farms must strategically enter the global market. If they can successfully capture the customer base abroad, then they can do something similar to what PRAN did. Moreover,

Bangladeshi people who are living abroad always look for Bangladeshi products because it reminds them of their country and also because the food is halal. As a result, like PRAN, they can capture a good chunk of the market.

Chapter 3: Project Part

Enhancing Financial Efficiency: Evaluating Automation Alternatives for Bank Deposit Matching at Kazi Farms LTD

3.1 Introduction

3.1.1 Background Information

Kazi Farms Limited is the largest poultry company in Bangladesh, with over 50 broiler farms and sales offices, relying heavily on its open source ERP system (iDempire) to manage sales, inventory and distribution processes. However, due to the business running on a cash basis, there is a significant delay from the time of payment to the time of release of the products. This is because goods are not released from warehouses even after payment is reflected in bank accounts. The current process involves several manual steps, from downloading the statements from the bank's website to creating a unique money receipt (MR) number, to matching those deposits with the drafts created by sales officers to posting that MR in the specific document in the system. Moreover, due to these manual steps, there is a chance of human error during data entry or incomplete information in the drafts from the sales team or a system lag during peak hours, usually after 4pm.

Problem Statement

Operational inefficiency due to delay in recording sales data in the ERP system (iDempire)

During my internship at Kazi Farms, I noticed a recurring issue, delays in manually downloading bank statements and matching deposits with sales drafts before recording transactions into the ERP system. As Kazi Farms operate on a cash basis, this bottleneck prevents the timely release of goods from warehouses/sales offices, disrupting operational efficiency, delaying cash flow realization, resulting in customer dissatisfaction and ultimately affecting the profitability of the business. My project aims to evaluate different automation alternatives to streamline the process and compare their financial implications and cost savings and ultimately pick the most viable solution.

3.1.2 Objectives

The primary objectives of this project are as follows:

- To analyze the current process of manually matching bank deposits with the ERP for data entry and eventually calculating the delays and costs associated with this process.
- To identify and evaluate between the potential automation alternatives that can streamline this entire bank deposit matching and recording process.
- To test the feasibility and quantify the financial implications of the different automation solutions.
- To choose the most realistic, feasible and cost-effective automation solution for Kazi Farms based on evaluating the alternatives.

3.1.3 Significance of the Study

Streamlining the bank deposit matching process can turn out to be a huge success for Kazi Farms. Firstly, automation would reduce the delays in recording transactions into the ERP system, enabling goods to be released faster from warehouses and improving the cash flow realization. Due to the late arrival of bank statements, employees are required to stay 2 hours beyond the regular working hours, thus increasing costs for the company for overtime pay. Moreover, due to late release of goods, inventory holding costs also increase. A faster release of goods will ensure satisfaction of customers as they would not have to wait for goods even after payment is done. Evaluating the automation alternatives will provide a clear roadmap for Kazi Farms, to leverage technology to ultimately increase operational efficiency and profitability by cutting costs associated with running a large team managing these tasks. Technologies like API integration have proven to increase operational efficiency and reduce costs significantly.

According to Patrick (2022), delaying cash entries can affect the cash flow cycles and increase inventory holding costs of a firm, making this a critical area for optimization in a cash-flow sensitive business.

3.1.4 Scope of the Study

This study is focused on the process of matching bank deposits with sales drafts and recording these transactions in the Sales Accounts division of Kazi Farms Limited. The current workflow is analyzed and how it is bottlenecking the company and increasing costs. The four alternatives, Excel-to-ERP upload tool, and ERP software plugin for CSV import, Robotic Process Automation and direct Bank API Integration are evaluated on the basis of implementation cost, time saving and the time to break-even with each of them. The study is conducted using data and observation during the internship period and from other previous research done based on these methods.

3.2 Literature Review

Cash flow management is crucial in a business who does business on a cash basis, meaning, they are heavily reliant on timely recording of transactions. These delays in recording, as identified in Kazi Farms, significantly hampers cash flow cycles and increases other costs like inventory holding cost and affect the financial performance of the company.

Streamlining the entire process, through technologies like API (Application Programming Interfaces), can improve the operational efficiency of the company. According to Khanyi et al. (2024), API integration significantly enhances operational efficiency by enabling faster processes, reducing costs and increasing scalability. Automating the deposit matching process aligns with these findings, that leveraging such technology could transform Kazi Farms, from their current delay and error prone manual system to a modern automated real-time system. However, API integration also comes with complications like vulnerability to cyber threats, insufficient finances etc., which must be carefully evaluated by the management during evaluation. This project evaluates specific automation tools, including the most lucrative and costly one, API integrations, as potential solutions to Kazi Farms.

According to Banarjee (2019), Robotic Process Automation implementation does not require a business to completely overhaul their ERP system. It is possible to modernize the existing ERP infrastructure at a low cost, which also reduces the risk of losses. Moreover, since bank reconciliation is a monthly task performed by the sales accounts team, RPA would completely automate this process, further reducing the need for employees to perform bank reconciliation manually. RPA not only automates processes but makes the organization more agile, enabling faster decision-making.

3.3 Methodology

This study is a mix of quantitative analysis of process delay times and costs associated along with qualitative assessment of workflow problems and solutions design.

1. **Data collection:**
    - **Record the current processing time:** The average time taken to download bank statements, generate mr numbers, match the deposits with sales drafts, if they match, post to the ERP system. Calculate the mean time of delays and its standard deviation.
    - **Quantify delays:** Measure the average delay in cash flow realization.
    - Contact the sales team to calculate the number of daily customers complaints on average.
2. **Cause and Cost Analysis:** Identify the primary causes of delay by analyzing the collected data and observations to figure the key contributors like system lag, incomplete sales drafts.

    Calculate the costs associated with delayed cash flows and inventory holding. Moreover, the extra expenses due to overtime pay of staff would also be taken into account.

3. **Solution Design and Evaluation:**
    - **Alternative 1 (Excel-to-ERP Tool):** Design a tool which will upload all transaction data from the excel into the iDempire ERP system. The data entry will be done in batches, and considered to be a short-term fix.
    - **Alternative 2 (ERP Software Plugin):** Evaluate the cost and viability of a ERP software plugin linked with the iDempire software, which will import bank transactions as CSV files and automatically match with sales drafts to record the transactions. This has the potential to also reconcile the bank accounts.
    - **Alternative 3 (Bank API Integration):** Evaluate the cost, benefits and the technical requirements to implement a direct API link between the bank systems with the iDempire ERP for real-time deposit notification and automated matching and posting. This solution is the most advanced and also the most expensive of all solutions. However, this has the potential for future success and will save plenty of time.
    - **Alternative 4 (Robotic Process Automation):** Design robotic process automation software bots. These bots will mimic the exact same steps that are performed by the sales accounts' employees; logging into different bank portals, downloading statements, pasting them into the excel, matching them with the

sales drafts and generating unique mr numbers, before posting them into the ERP. This will not require any changes to the bank systems or the coding of the ERP.

4. **Financial Analysis:** Conduct a break-even analysis for each alternative, comparing the estimated implementation and running costs against the potential cost savings, from overtime and also slower cash flow.
5. **Recommendation:** Recommend the most suitable automation solution for Kazi Farms based on the costs, feasibility, break-even period and the quantitative increase in efficiency.

3.4 Findings and Analysis

3.4.1 Current Process Analysis

- **Time Audit:** As an intern, I was tasked to handle small bank accounts where there were not many transactions per day. The bank account with the most transactions that I had to deal with was a Mercantile Bank account, where there were on average 20 transactions per day. However, my other team members handled much larger bank accounts, where there were around 200-300 transactions per day. Not only that, they had to manage 5-6 such accounts. An average bank account would take around 1 hour to complete. This process is lengthy because each transaction needs to be matched with the sales drafts created by the sales teams. However, only a few drafts are perfectly created with the cash receipts attached to it. Most of the drafts had something missing, and even if my team members constantly complained about it, the sales teams were still incompetent about it. Handling 6 such accounts takes the employees around 6 hours to complete data entry. With 8 hours of working hours in which 1 hour is for lunch break, this task seems to be easily achievable. However, the bank statements were released after 4pm, thus extending working hours beyond 5pm daily.

- **Delay identification and delayed cash flow realization:** Since, it was impossible to record all entries of the current day within 7pm, a pile of entries was left to be completed in the following day. Moreover, since they were not completed in the ERP system, the goods were also not released from the warehouses. I recorded the total delayed transaction amount for 15 days. The total amounted to 10,955,340 BDT for 15 days. The average daily delay in cash flow realization is 730,356 BDT.

  Moreover, after 4 pm when all the computers are simultaneously carrying data entry work, the iDempire system lags significantly. When normally a document takes a second to complete, during system lag, each document could take up to 1 minute to complete, severely hampering workflow. Employees usually open 3-4 tabs during that time. During lag, even 4 tabs is not enough. After pressing “complete” in the 4th tab, the 1st tab seems to be still loading. This problem can be solved by manually restarting the system by calling the IT department, but this whole process takes around 5 minutes. Most of the time, the IT department leaves the office after 5pm.

- **Cost of Inefficiency:** Per employee is paid 75BDT per day for overtime work. This amount is not sufficient enough for the employees to feel motivated to stay beyond working hours, severely affecting work satisfaction. However, 15 team members

receiving 75 BDT daily led to significant extra operating expenses for the company. Given that there were 262 working days in 2024, this amount totaled to BDT 294,750, which is approximately 300,000 BDT per year in additional operating cost. Moreover, customer dissatisfaction also leads to potential loss in sales. Furthermore, inventory holding cost is estimated to be around 150,000 BDT. This includes the rent of the warehouse, cost of potential damage of inventory, risk of theft, storage space cost, etc.

- **Bottleneck Identification:** 4 bottlenecks are identified which delays the data entry time and the percentage delay caused by each of them is assumed.

  Manual data entry into iDempire - Estimated to be 30% of the total time

  Matching incomplete payment references to sales drafts - Estimated to be 40% of the total time.

  System lag during peak hours - Estimated to be 25% of the total time.

  Downloading and standardizing formats from different bank portals - Estimated to be 5% of the total time.

3.4.2 Evaluation of Automation Alternatives

- **Alternative 1 (Excel to ERP Tool):** The implementation cost of the excel to erp tool is estimated to be at 50,000 BDT. This is the cheapest alternative and it is not technically demanding. The Excel to ERP upload tool can be made possible using macros in the excel software and scripting it with the ERP system. Perhaps Kazi Farms IT will be able to create it. Otherwise, a developer can be hired to create it.

  Development would not take long. The testing process will also be simpler, with minimal training needed. This automation tool can save around 15-20% of overall process time saving. This is because the tool will only complete the final step of the process, which is posting the excel data into the ERP system. Downloading bank statements or complex matching processes will not be possible using this tool, thus the potential time saving is low.

  While the tool does not fundamentally change the core manual workload, it could lead to minimal cost savings (around 70,000 BDT), particularly the overtime cost for the company.

- **Alternative 2 (ERP Software Plugin - CSV Import/Match):** Installing a ERP software plugin will be much more costly than the Excel to ERP tool because it involves modifying and adding new code within the core iDempire ERP system. The cost would be around 150,000 BDT. Since, iDempire is an open source system and it was created by Sysnova, developers from Sysnova can modify the required code. Moreover, they need to make sure that the plugin works seamlessly along with other ERP functions, and potential future ERP updates. More rigorous testing is needed since the changes will be within the core system of the ERP system.

ERP software plugin has the potential to save time by around 50-60%. This is because the plugin will automatically import bank statements in CSV files and do most of the matching part with the sales drafts. This is based on the assumption that 85% of transactions will be successfully completed. This addressed two major bottlenecks of the company, thus reducing time significantly. However, exceptional cases will still need to be manually handled.

It could save around 250,000 BDT, since matching and importing is automated, thus reducing overtime costs and also in salaries since some employees could be made redundant.

- **Alternative 3 (Bank API Integration):** API integration will be the most costly, due to its complexity, however, it also offers the most scope for the business due to direct system-to-system integration. The cost is estimated to be around 600,000 BDT.

  Since Kazi Farms has multiple bank accounts with multiple different banks, integrating with each of them will be costly since they have unique specifications and requirements. Moreover, banks will likely charge extra fees since they are providing API access to Kazi Farms. Furthermore, since API will handle huge amounts of money and transactions, the security of the system needs to be very secure and robust, which will further increase the cost. Not only that, the existing ERP system will also need to be updated with added security features, making sure it receives and sends data securely. Building a resilient system that handles API downtime and errors well, adds to the development effort and cost.

  API Integration promises to save time by 75-85% because it solves almost all of the bottlenecks that Kazi Farms encounter. Since the integration will be real-time, download wait time will not exist anymore and it will automatically match the bank statements with the drafts and post into the ERP system. This alternative will require minimal manual exception handling.

  This alternative will maximize benefit and cost savings. It will save around 1,050,000 BDT since overtime costs would not be paid and employees would be made redundant or handle only the exceptions. Moreover, inventory holding costs of around 150,000 BDT will reduce drastically since goods will be released on the day of sale.

- **Alternative 4 (Robotic Process Automation - RPA)**

  Robotic Process Automation will be costlier than the basic excel tool (alternative 1). However, it will be cheaper than ERP software plugin (alternative 2). RPA will have an estimated cost of around 200,000 BDT. Most RPAs have licensing fees, for eg, per bot fee or per user fee or even platform-based fees. The bots will need to be configured so that they can perfectly and effectively mimic the human work, from downloading statements to posting them. As a result, it has to be made sure that the bot can reliably interact with multiple user interfaces like the bank websites and the ERP software. It will require a moderate amount of setup cost and time for testing. Maintenance is hard for

RPA because any minor changes in any of the steps will disrupt the work of the bot and it will need to be re-coded.

RPA is predicted to save 65-75% time. This estimation is lower than API integration because UI automation can sometimes be less efficient than direct data transfer and might require more sequential processing. However, the estimation is higher than other alternatives because of its ability to replicate the entire sequence (login, download, potentially complex matching logic if programmed correctly).

RPA will save around 300,000 BDT, due to its automation in most of the manual steps. This value is below API due to the ongoing RPA maintenance and licensing costs.

3.4.3 Comparative Financial Analysis:

Capital Budgeting of Mutually-Exclusive Projects with Unequal Lives

Equivalent Annual Annuity Method (EAA)

*Discount rate is **15%**. If the risk-free rate is 8%, the inflation rate is 5% and the risk premium for the project is 2%.

Table 1: Expected cash flow for each alternative

Year	Alternative 1 (Excel Tool)	Alternative 2 (ERP Plugin)	Alternative 3 (API)	Alternative 4 (RPA)
Lifetime (Years)	2	4	7	5
0	(50,000)	(150,000)	(600,000)	(200,000)
1	35,000	37,500	150,000	60,000
2	35,000	37,500	150,000	60,000
3	–	37,500	150,000	60,000
4	–	37,500	150,000	60,000
5	–	–	150,000	60,000
6	–	–	150,000	–
7	–	–	150,000	–

Formulas used:

NPV= -Initial investment + Summation (Annual Savings/ (1+Discount Rate) ^t)

EAA= {NPV * Discount Rate * (1 + Discount Rate) ^Life} / {(1 + Discount Rate) ^Life - 1}

Excel Tool:

NPV = -50,000 + 35,000 / 1.15 + 35,000 / (1.15) ^2

= -50,000 + 30434.8 + 26465

= 6899.8 BDT

EAA = 6899.8 * 0.15 * (1.15) ^2 / {(1.15) ^2 -1}

= 4244 BDT

ERP Plugin:

NPV = -150,000 + 37,500 / 1.15 + 37,500 / (1.15^2) + 37,500 / (1.15^3) + 37,500 / (1.15^4)

= -150,000 + 32608.7 + 28355.4 + 24656.9 + 21440.7

= -42938.3 BDT

EAA = -42938.3 * 0.15 * (1.15) ^4 / {(1.15) ^4 -1}

= -15039.8 BDT

API Integration:

NPV = -600,000 + 150,000 / 1.15 + 150,000 / (1.15^2) + 150,000 / (1.15^3) + 150,000 / (1.15^4) + 150,000 / (1.15^5) + 150,000 / (1.15^6) + 150,000 / (1.15^7)

= -600,000 + 130434.8 + 113421.6 + 98627.4 + 85763 + 74576.5 + 64849.1 + 56390.6

= 24063 BDT

EAA = 24063 * 0.15 * (1.15) ^7 / {(1.15) ^7 -1}

= 5783.8 BDT

RPA:

NPV = -200,000 + 60,000 / 1.15 + 60,000 / (1.15^2) + 60,000 / (1.15^3) + 60,000 / (1.15^4) + 60,000 / (1.15^5)

= -200,000 + 52173.9 + 45368.6 + 39451 + 34305.2 + 29830.6

= 1129.3 BDT

EAA = 1129.3 * 0.15 * (1.15) ^5 / {(1.15) ^5 -1}

= 336.9 BDT

Table 2: Analysis Summary

Alternative	NPV @ 15% (BDT)	EAA @ 15% (BDT/year)
Excel Tool	6899.8	4244
ERP Plugin	-42938.3	-15039.8
API Integration	24063	5783.8
RPA	1129.3	336.9

API integration gives the highest positive EAA, making it the most lucrative investment. Excel tool is close to API integration, but it is more of a short-term solution rather than a long-term solution. ERP plugin has a negative NPV and EAA, which makes it the poorest choice based on Equivalent annual annuity. RPA, although a promising alternative, produces very low EAA, which does not look like a very good option compared to the API.

3.5 Summary and Conclusion

The current manual process of data entry of Kazi Farms, which increases delay for release of goods and affects the operational efficiency of the company. This study is based around the evaluation of the four alternatives, Excel to ERP upload tool, an ERP plugin, RPA and a direct Bank API integration.

While the first two alternatives offer a quick solution, they lack severe long-term benefits. The excel to ERP tool is a low-cost option, but not very sustainable in the long run and it is certainly not worth replacing actual human beings. The second alternative, ERP plugin is more suited to batches of data. However, each transaction has something unique, different party name, different dates, and also there is a question of whether to show a partner bank account or not. That is why it does not seem a viable option, despite being low cost. The third alternative, API integration proves to be the most promising, offering real-time transaction entry and significantly reducing workload.

The automation initiative is a necessity for Kazi Farms at this point. The choice depends on Kazi Farms' risk appetite, budget, tolerance for ongoing maintenance (potentially higher for RPA if interfaces change), and desired level of process transformation versus speed of return. The choice ultimately comes down to cost-benefit tradeoff and a break-even analysis, carefully taking into account the long-term cost savings and efficiency gains while balancing initial investment costs.

3.6 Recommendations and Implications

3.6.1 Recommendations

Based on the significant potential time reduction by implementing the API Integration, it looks to be the best alternative out of all the solutions. Although successfully implementing API integration would cause huge initial cost, along with potential complications, its upsides outweigh the downsides. It will benefit Kazi Farms in the long run and improve its strategic market position.

Kazi farms should initially conduct a thorough feasibility study and cost analysis before actually implementing API integration. They should start off by checking whether the primary banks of Kazi Farms do have an API available. Moreover, they should assess the security protocols of the banks and the integration requirements.

Integration should not be done in full flow from the start. Rather, it should be done phase by phase. In the first phase, a couple high-volume banks should be used as a trial before doing it for other large banks.

While API integration is a long term and permanent solution, they should try implementing other alternatives like the Excel-to-ERP, which is the alternative 1, in the short run. This is because API integration would require a feasibility analysis to be done and also there are technical steps before it can be run in full flow. Alternative 1 would offer a quick relief from the manual data entry, before API can be integrated fully.

Lastly, given the previous experiences of Kazi Farms with ERP implementation, they should make sure that employees embrace the automation process. The management and HR team shoud make efforts to hire people who will be welcoming the new idea and a training team who will be providing training to the employees on the new processes, as the automation would still have to be activated and deactivated.

3.6.2 Implications

Financial: Successful implementation will have significant financial implications. Firstly, it will save overtime pay costs for the company, and also reduce the staffing of those specific employees employed in this task. Moreover, inventory holding costs would fall as goods will be released quickly and cash flow realization would improve as well.

Operational: API Integration will improve the overall operational efficiency of the company, by faster order fulfillment, improved warehouse and dispatch efficiency.

Customer relations: Faster release of goods will likely improve relationships with customers and increase customer satisfaction.

Strategic: Implementing such modern technology improves Kazi Farm’s position in the market, as it indicates that they value efficiency and modernization. It will provide a strategic edge over

their competitors. Moreover, the savings from cost cutting can be utilized in other areas of the company which will add value to the company.

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Appendix A.

Appendix 1: Proposal of the report
Problem Statement

Operational inefficiency due to delay in recording sales data in the ERP system (iDempire)

During my internship at Kazi Farms, I noticed a recurring issue, delays in manually downloading bank statements and matching deposits with sales drafts before recording transactions into the ERP system. As Kazi Farms operate on a cash basis, this bottleneck prevents the timely release of goods from warehouses/sales offices, disrupting operational efficiency, delaying cash flow realization, resulting in customer dissatisfaction and ultimately affecting the profitability of the business. My project aims to evaluate different automation alternatives to streamline the process and compare their financial implications and cost savings and ultimately pick the most viable solution.

Background Information

Kazi Farms Limited is the largest poultry company in Bangladesh, with over 50 broiler farms and sales offices, relying heavily on its open source ERP system (iDempire) to manage sales, inventory and distribution processes. However, due to the business running on a cash basis, there is a significant delay from the time of payment to the time of release of the products. This is because goods are not released from warehouses even after the payment is reflected on the bank accounts. The current process involves several manual steps, from downloading the statements from the bank's website to creating a unique money receipt (MR) number, to matching those deposits with the drafts created by sales officers to posting that MR in the specific document in the system. Moreover, due to these manual steps, there is a chance of human error during data entry or incomplete information in the drafts from the sales team or a system lag during peak hours, usually after 4pm.

According to Patrick (2022), delaying cash entries can affect the cash flow cycles and increase inventory holding costs of a firm, making this a critical area for optimization in a cash-flow sensitive business. Moreover, according to Khanyi et al. (2024), API integration significantly enhances operational efficiency by enabling faster processes, reducing costs and increasing scalability. However, API integration comes with complications like vulnerability to cyber threats, insufficient finances etc.

Preliminary Methodology

1. **Data collection:** Collect data on the average time taken to match and record data entries (E.g: 60 minutes per bank, 5-6 banks per day) and average delayed cash flow (E.g: 500,000 BDT/day in pending deposits). Calculate the mean delay and standard deviation to calculate the variability. Contact sales and warehouse teams to identify delay times and number of customer complaints per month.
2. **Delay Causes and Cost Estimation:** Identify the primary reasons for delay in recording - human errors, system lag during peak hours, or incomplete drafts by the sales team.

3. **Solution Design:** Alternative 1 - Create an Excel-to-ERP upload tool to reduce the manual data entry times by eg: 40%, saving 2 hours per day. This is a primary and immediate fix to the problem and will be implemented right away on a small scale.

   Alternative 2 - ERP Software Plugin - This plugin will import bank statement files in CSV formats and match deposits with sales drafts before entering the data into the ERP system. It can also create bank reconciliations on its own.

   Alternative 3 - Implement a bank API to automate real time bank deposits matching and data entry into the ERP system. This automation will reduce data entry time by around 70-80%. However, monthly bank reconciliation will still need to be conducted. Stage 2 is a step towards a more advanced technology which will also come with costs and there will be a trial phase before it starts running fully.

4. **Break-even Analysis:** Break-even analysis will be conducted by factoring in the costs required to the alternatives and the time it takes to break even in each of the alternatives.

Significance of the Issue

Due to bank statements being uploaded at 4:30pm or later, employees have to stay beyond office hours, till 7:00pm, for which they were paid 75 BDT. Given that there were 262 working days in 2024, this cost totalled up to (14 employees x 75 taka x 262 days) = 275,100 BDT, which increased operating expenses for the company. Not only that, it also increases customer dissatisfaction and loss in sales. Automating deposit matching results in faster ERP updates, reducing operational costs, but also increasing customer satisfaction and cash flow, resulting in greater profitability.

Timeline of the Report Work

As my internship will be ending on 22 April, and Eid vacation will be starting from 26th March, the first chapter of the paper will be done before the last week of March. For the second chapter, since I would need company related information, it can be completed by the second week of April. Moreover, since chapter three involves research and data collection, it will be conducted and completed alongside the other two chapters, during the 2nd half of March and 1st week of April.

Appendix 2: Delayed cash realization of 15 days (in BDT)

Day 1: 742,815.75 BDT
Day 2: 688,440.20 BDT
Day 3: 805,119.50 BDT
Day 4: 715,930.10 BDT
Day 5: 780,562.90 BDT
Day 6: 655,208.35 BDT
Day 7: 728,895.60 BDT
Day 8: 840,337.15 BDT
Day 9: 695,780.80 BDT
Day 10: 766,051.25 BDT
Day 11: 630,499.40 BDT
Day 12: 902,673.95 BDT
Day 13: 701,115.50 BDT
Day 14: 678,531.40 BDT
Day 15: 723,378.15 BDT