ISSN 2959-6130

Analysis of changes in HSBC's income statement between 2022-2023

Tongke Yu [1, *]

[1]The University of Western Australia, 35 Stirling Highway, Perth, WA 6009, Australia

*Corresponding author: 24268688@student.uwa.edu.au

Abstract:

The banking industry is a cornerstone of the world wide economy, primarily due to the unique nature of its primary product—money. This sector has long held a central role within society and continues to attract considerable interest from potential investors. However, investing in the banking industry is not without its challenges. Market volatility, regulatory compliance costs, and geopolitical uncertainties can profoundly impact the industry's profitability and stability. Being among the biggest banks in the world, HSBC provides financial services such as personal banking, wealth management, and corporate finance in over 60 countries. This is an excellent example of an analysis of the banking sector. The essay lists changes in HSBC's income statement between 2022 and 2023 and analyses them using vertical and horizontal analysis, ratio analysis, segment reporting analysis, and benchmarking. Through these analyses, the essay aims to see HSBC's capacity to face banking crises and provide a few suggestions for investors.

Keywords: HSBC; income statement; investment; banking crises.

1. Introduction

The banking industry is the cornerstone of the world wide economy due to the unique nature of its products – money [1]. The industry has always been popular in society, and more and more investors may want to invest in this industry. However, the banking industry has its risks. Market volatility, regulatory compliance costs, and geopolitical uncertainties significantly impact profitability and stability [2]. In 2023, Several US institutions, including Silicon Valley Bank, Silvergate Bank, Signature Bank, and First Republic Bank, had banking crises one after another. As a result, these banks become non-viable, self-liquidated or even sold, affecting their investors a lot. Therefore, this article aims to analyse HSBC's income statement and the causes for changes in the income statement and summarise several suggestions to help enterprises invest in HSBC.

The Hong Kong and Shanghai Banking Corporation Limited, commonly known as HSBC, was established in Hong Kong in 1865 with the intention of being a local bank that meets global needs [3]. The bank has grown to serve around 41 million customers across 60 countries and has become one of the biggest financial services companies in the world.

This Project is based on the financial reports of HSBC and aims to analyse changes amoung HSBC's income statement to find the effects and causes of the changes [4]. The income statement reflects the operating results of a business in a specific accounting period. It has an initial impact on the company, investors and stakeholders. For external stakeholders such as suppliers and customers, the analysis results of the income statement can help them evaluate whether the cooperative relationship with the business is sustainable and the future development potential of the enterprise. The information in the income statement also helps creditors evaluate the debt repayment ability of the business and decide whether to provide loans or continue the existing credit relationship.

This essay will comprehensively analyse HSBC's income statement by employing vertical and horizontal analysis, ratio analysis, segment reporting analysis, and benchmarking.

2. Business Operation Performance Analysis

2.1 Horizontal Analysis

Table 1. Consolidated income statement for the year 2023 ended December 31 of HSBC

Selected income statement data	2023	2022	Increase/(Decrease) during 2023	
	Amount	Amount	Amount	Percentage
Net fee income	11,845	11,770	75	1%
Net income from financial instruments held for trading or managed on a fair value basis	16,661	10,278	6,383	62%
Insurance finance (expense)/income	(7,809)	13,799	(21,608)	(157%)
Non-interest income	30,262	20,243	100,19	49%
Net interest income	35,796	30,377	5,419	18%
Total operating income	66,058	50,620	15,438	30%
Change in expected credit losses and other credit impairment charges	(3,447)	(3,584)	137	(4%)
Net operating income	62,611	47,036	15,575	33%
Total operating expenses	(32,070)	(32,701)	631	(2%)
Operating profit	30,541	14,335	16,206	113%
Profit for the year	24,559	16,249	8,310	51%

In 2023, HSBC's operation performance demonstrated an overall growing trend, with an increase of 33% in net operating income, 30% in total operating income, 113% in operating profit, and 51% in profit for the year compared to 2022. (Table 1)

For HSBC, Interest expenditures for debt instruments released from the bank for financing goals that are designated based on the fair value option to minimise mismatches in accounting, as well as for derivatives handled in relation to the debt instruments, were belong to the category of interest expense. According to the data in Table 1, the net interest income climbed from 30,377 million to 35,796 million, indicating a rise of 18%. This change is attributed to the higher interest rate environment. The difference between the interest a bank receives from its lending operations and the interest it pays depositors is known as net interest income. Therefore, increasing it shows that the bank has a more favourable market position and competitiveness.

Furthermore, the total operating expenses slightly decreased from 32,701 million to 32,070 million in 2023. A decrease in total operating expenses generally indicates improved efficiency and effective cost management.

Generally, HSBC's noninterest income grew by 49%. The Net income from financial instruments held for trading or managed on a fair value basis contains the largest positive change among all factors that affect the noninterest income. It has increased by 62% and reached 16,661 million in 2023.

The net fee income has the most subtle change among all factors that affect noninterest income, changing by 1% compared to the previous accounting year. HSBC earns fee income by providing services or goods with a fixed price in a particular period, including card fees and account service offerings, or by delivering a certain transaction at a single point, which are import or export offerings and booking offerings.

From 2022 to 2023, the insurance finance income and expense were the only factors that turned from positive to negative in the noninterest income, and it decreased from 13,799 million to -7,809 million, showing a reduction of -157%. The -7,809 million represents a financial loss in insurance-related activities caused by the variance in insurance contracts' carrying amounts increases from shifts in the time value of money and financial risk.

The change in expected credit losses and other credit impairment charges changed slightly by a decrease of 4% with 137. It involves the impairment of loans or advances of the group. Expected credit losses are estimated with a high degree of uncertainty and need management discretion. The degree on expected uncertainty and judgment has maintain high during 2023 due to the uncertainties of the macroeconomic and geopolitical environment, the continuous high degree of inflation in a few regions, the increasing worldwide interest rate environment, as well as improvements in the commercial real estate department and economy more comprehensive in mainland China.

2.2 Vertical Analysis

Table 2. Consolidated income statement for the year 2023 ended December 31 of HSBC

Selected income statement data	2023		2022	
	Amount	Percentage	Amount	Percentage
Net fee income	11,845	18%	11,770	23%
Net income from financial instruments held for trading or managed on a fair value basis	16,661	25%	10,278	20%
Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	7,887	12%	(13,831)	-27%
Insurance finance (expense)/income	(7,809)	-12%	13,799	27%
Insurance service result	1,078	2%	809	2%
Gain on acquisition	1,591	2%	_	_
(Impairment)/reversal of impairment relating to the sale of our retail banking operations in France	150	0.2%	(2,316)	-5%
operating (expense)/income	(1,141)	-2%	(266)	-1%
Non-interest income	30,262	46%	20,243	40%
Net interest income	35,796	54%	30,377	60%
Total operating income	66,058	100%	50,620	100%
Net operating income	62,611	95%	47,036	93%
Total operating expenses	(32,070)	-49%	(32,701)	-65%
Operating profit	30,541	46%	14,335	28%
Profit for the year	24,559	37%	16,249	32%

The discrepancy between net interest income and non-interest income as a percentage of total operating income gradually narrowed and tended to be parity in 2023, and this change reflects a shift in the bank's revenue structure. This suggests that the bank is diversifying its income streams, relying less on interest-based activities and more on fee-based services, operating, or other non-interest activities. (Table 2)

However, net interest income still accounts for a more significant proportion of total operating income, 54%, which indicated a decrease from 60% in the previous accounting year. Despite the proportion of net interest income decreased, it increased from 30,377 million to 35,796 million. The increase in the amount has a similar cause mentioned in the horizontal analysis: the effect of the high interest rate environment.

The noninterest increased to 30,262 from 20,243 in 2023. In 2023, among the various indicators that constitute noninterest income, the most significant percentage of total operating income is Net income from financial instruments held for trading or managed on a fair value basis, which accounts for 25%. Then is net fee income,18%, and net income/(expense) from assets and liabilities of insurance businesses, 12%. The remaining indicators account for about 2% or less. This suggests that HSBC's noninterest income 2023 is mainly composed of Net income from financial instruments held for trading or managed on a fair value basis, Net fee income, and Net income/(expense) from assets and liabilities of insurance businesses. The structure of the noninterest income in 2023 was different from 2022. In 2022, the most significant percentage of total operating income was Insurance finance (expense)/income, which reached 27%. Then is net fee income, 23%, and net income from financial instruments held for trading or managed on a fair value basis, 20%.

Components of total operating expense include interest expense and noninterest expense. The percentage of total operating expense to total operating income dropped by 16% in 2023, while the amount dropped by 631 million, which indicates a minute change in the amount. This could suggest that HSBC's revenue showed a significant rise compared to the last accounting year. Therefore, the proportion of its expenses has shown a significant change with little change in the amount.

2.3 Ratios Analysis

Table 3. Financial ratios of HSBC in 2023 and 2022

Ratio	2023	2022
Asset Turnover	0.02 times	0.02 times
Return on Asset	0.8%	0.5%
Return on Common Stockholders' Equity	13.6%	9%
Net Interest Margin	1.66%	1.42%

Asset Turnover is a financial ratio that measures a bank's efficiency of using its assets to earn income [5]. An Asset Turnover of 0.02 times could indicate that the bank is generating 0.02 dollars in revenue for every 0.01 dollar of assets it holds. HSBC's asset turnover in 2022 and 2023 are consistent, indicating that there is not any significant improvement or decline. A low asset turnover usually shows that the bank isn't utilising its assets efficiently to generate income. However, the asset turnover ratio in the banking industry is typically low due to the nature of how banks operate and manage their assets. Banks hold substantial assets, including loans, securities, and reserves. These assets generate interest income but do not turn over rapidly. Banks generate income primarily through interest income. Therefore, a 0.02 times asset turnover ratio is common in the banking industry. (Table 3)

Return on Assets measures how well a company generates net income from its assets [6]. Due to the same reason mentioned in asset turnover, the return on assets for the bank industry is generally low. The return on assets of HSBC slightly increased from 0.5% to 0.8% in 2023, suggesting that HSBC is more effective in using resources to generate net income in 2023 rather than the previous accounting year.

Return on Common Stockholders' Equity indicates how effectively the bank uses shareholders' equity to earn profit. A return on common stockholders' equity of 13.6% implies that HSBC generates 0.136 dollars in profit for every dollar 100 of common shareholders' equity. HSBC shows a strong ROE performance, suggesting that the bank efficiently uses shareholders' equity to produce profitable returns. Compared to 2022, the ROE increased to 13,6% from 9%, reflecting that HSBC delivers value to its shareholders more effectively. However, a higher ROE could indicate that there is a higher level of risk.

Net Interest Margin represents a bank's ability to manage its core business of lending and borrowing. A net interest margin of 1.66% represents the bank earning 0.166 dollars in net interest income for every dollar of its earning assets, which suggests that the bank is in a moderate position of profitability and efficiency. Moreover, there is an improvement in net interest margin from 1.42% to 1.66%.

Table 4. Solvency ratios of HSBC in 2023 and 2022

Solvency ratios	2023	2022
Debt to Asset Ratio	93.59%	93.72%
Interest coverage ratio	1.52	1.93

The debt-to-asset ratio reflects the scale of the debt in the firm [7]. Therefore, 93.59% indicates that 93.59% of HSBC's assets are financed by debt. A high ratio usually suggests that the firm is heavily leveraged and is more affected by financial stress. However, most banks' assets come from consumers' deposits, so banks usually rely on debt to finance their assets. Therefore, this high debt-to-asset ratio is standard in the banking industry. While compared to 2022, the debt to asset ratio decreased to 93.59% from 93.72%, this could suggest that the bank relies less on its debt to finance its assets in 2023. (Table 4)

The Interest Coverage Ratio reflect the capacity to meet the interest payment obligations from earnings. As Interest Coverage Ratio become higher, the company is in a stronger financial position and its earnings can cover its interest obligations. The Interest Coverage Ratio of HSBC decreased from 1.93 to 1.52, implying that HSBC's capacity to meet interest obligations decreased and had weaker financial health.

Table 5. Liquidity ratios of HSBC in 2023 and 2022

Ratio	2023	2022
Quick ratio	1.12	1.25
Loan-to Asset Ratio	38.55%	35.1%
LCR	148%	132%

According to the data in Table 5, HSBC's quick ratio decreased from 1.25 to 1.12 in 2023. This indicates a slightly weakened capability to cover its current liabilities by its liquid assets. However, a quick ratio over one still implies that the bank owns more liquid assets than short-term liabilities and is considered without liquidity issues.

The loan-to Asset Ratio slightly increased from 35.1% to 38.55% in 2023. This increase indicates that HSBC is more effective in using resources to earn a profit than in the last accounting year.

Compared to 2022, HSBC's LCR shows an increase of 16%. Such an improvement could imply that HSBC has improved its liquidity position and has a more vital ability to deal with liquidity risks.

2.4 Benchmarking analysis

Table 6. Liquidity ratios of HSBC, Citigroup, Bank of America, and JP Morgan Chase in 2023

Company name	Quick ratio	Loan-to-Asset Ratio	LCR
HSBC	1.12	38.55%	148%
Citigroup	0.98	38%	116%
Bank of America	0.32	32.7%	115%
JP Morgan Chase	1.07	45%	113%

Among the four banks, HSBC has the highest quick ratio, 1.12. A Quick Ratio of 1.12 suggests that for every dollar of short-term liabilities, the bank has 1,12 times its liquid assets to cover them. Therefore, HSBC has the slightest difficulty paying off its short-term liabilities via its liquid assets compared to its major competitors. Moreover, a ratio above 1 indicates that the bank can responds to its short-term liabilities, while Citigroup and Bank of America tend to have liquidity issues. (Table 6)

HSBC's Loan-to-Asset Ratio was slightly lower than that of JP Morgan Chase and higher than that of Citigroup and Bank of America. This could suggest that HSBC has a more significant potential for income from interest than Citigroup and Bank of America but less than JP Morgan Chase. However, the greater the Loan-to-Asset Ratio, the higher the risk exposure.

HSBC has the highest LCR of the four banks, 148%. The LCR measures whether banks have enough high-quality liquid assets to meet short-term liquidity demand. An LCR above 100% is an essential requirement of the banking industry, and a higher LCR indicates a strong liquidity position, which suggests that the bank can meet sudden cash outflows. Therefore, HSBC has a stronger liquidity position among its major competitors.

Table 7. profitability ratios of HSBC, Citigroup, Bank of America, and JP Morgan Chase in 2023

Company name	Net Margin	Asset Turnover	Return on Asset	Return on Invested Capital
HSBC	16.13	0.02	0.81	7.88
Citigroup	5.01	0.03	0.38	1.90
Bank of America	13.28	0.03	0.84	8.71
JP Morgan Chase	19.95	0.04	1. 30	6.89

Net margin indicates a bank's profitability and efficiency in regulating its costs relative to its income [8]. A net margin of 16.13% indicates that for every dollar HSBC earns in revenue, it retains 01613 dollars as profit after all expenses are accounted for. Among the four banks, HSBC's net margin appears to be slightly lower than that of JP Morgan Chase but higher than that of Citigroup and Bank of America. This indicates that HSBC has a more vital ability to manage its costs and maximise its income than Citigroup and Bank of America but has a lower ability than JP Morgan Chase. (Table 7)

HSBC has the lowest asset turnover among the four banks, and this could suggest that HSBC's ability of utilising its assets to earn revenue is worse than its competitors. However, the banking industry's asset turnover is typically lower than other industries since banks often hold large amounts of assets; therefore, a low asset turnover ratio is not a necessary problem for a bank.

With a Return on Assets of 0.81%, HSBC can generate profit from its assets, outperforming Citigroup and closely matching Bank of America. However, compared to JP Morgan Chase's ROA of 1.30%, HSBC's ability to convert its assets into profits is less effective.

HSBC's Return on Invested Capital of 7.88% indicates a strong capital efficiency, outperforming Citigroup and JP Morgan Chase while being slightly lower than Bank of America. This ratio indicates HSBC's effectiveness in generating returns from its invested capital, which could suggest strategic investment and capital management.

Table 8. solvency ratios of HSBC, Citigroup, Bank of America, and JP Morgan Chase in 2023

Company name	Debt to Asset Ratio	Times Interest Earned
HSBC	93.59%	1.47
Citigroup	92.64%	1.15
Bank of America	90.8%	1.39
JP Morgan Chase	91.54%	1.76

93.59% of the debt-to-asset ratio suggests that 93.59% of HSBC's assets are financed by debt, indicating the company has a significant risk of defaulting on a loan. Moreover, HSBC's debt-to-asset ratio is the highest among its major competitors. This could suggest that HSBC is more leveraged and has higher risk exposure to debt, implying it relies more on debt to finance its assets than its major competitors. However, for the same reason mentioned in the ratio analysis, the banking industry's debt-to-asset ratio is usually high, above 90%. Therefore, this high ratio cannot be concluded as to why HSBC is at a severe disadvantage, but the bank is still inferior to its main competitors. (Table 8).

HSBC has a times interest earned ratio of 1.47, suggesting it earns 1,47 times its interest expenses. HSBC has the second highest times interest earned ratio compared to its major competitors, indicating that it is in a preferable position in terms of debt-servicing capacity compared to Citigroup and Bank of America, but lower than that of JP Morgan Chase.

2.5 Segment Reporting Analysis

Table 9. Segment reporting of HSBC in 2023 and 2022

Financial results (in million)	2023		2022	
By segments	profit/-loss	Proportion	profit/loss	Proportion
Total operating income	66,100	100%	51,700	100%
Wealth and personal banking	27,300	41%	22,200	43%
Commercial banking	22,900	35%	16,200	31%
Global banking and markets	16,100	24%	15,300	30%
Others	-200	NA	-1,900	NA
Operating profit before credit impairment & ECL	34,000	100%	18,400	100%
Wealth and personal banking	12,500	37%	7,100	39%
Commercial banking	15,300	45%	9,300	51%
Global banking and markets	6,300	18%	5,700	31%
Others	-100	NA	-3,700	NA
Operating profit after credit impairment & ECL	30,500	100%	14,800	100%
Wealth and personal banking	11,500	38%	6,000	41%
Commercial banking	13,300	43%	7,400	50%
Global banking and markets	5,900	19%	5,100	34%
Others	-100	NA	-3,800	NA

According to Table 9, HSBC achieved a total operating income of 66,100 million in 2023, a 28% rise from 51,700 million in 2022. This significant growth in total operating income reflects that the bank is in a preferable position regarding profit-earning ability. HSBC offers customers a all-around range of banking and related financial services based on three global businesses: wealth and personal banking, commercial banking, and global banking and markets.

HSBC's wealth and Personal Banking segment aims to provide clients with a comprehensive scope of retail banking and wealth products, from personal banking to ultra-high net worth individuals. Retail banking goods contain personal and mortgage loans, current and savings accounts, debit and credit cards, and local and international payment services. In addition, HSBC provides investment management, private wealth solutions, global asset management services, insurance and investment products, and investment management. In 2023, the Wealth and Personal Banking segment took the most significant proportion of HSBC's total operating income, generating 27,300 million in profit, up from 22,200 billion in 2022. However, its proportion slightly declined from 43% to 41% in 2023. Despite this slight proportional decrease, the segment still shows a solid rising trend in the amount of profit, which could suggest that the profitability of other segments presents a significant improvement, therefore leading to a decline in the proportion of wealth and personal banking. These changes indicate a successful expansion of services or increased client activity in wealth management and personal banking.

Commercial banking, a division of HSBC, offers a wide range of goods and services to satisfy the needs of its commercial clients, which include corporates, mid-market businesses, and small and medium-sized businesses. Credit and lending, foreign trade and receivables financing, treasury management and liquidity solutions, commercial insurance, and investments are among the services and goods offered. It also provides customers with access to products and services offered by other international companies, such as Global Banking and Markets, which provides consulting services, debt and stock market capital raising, and foreign exchange products. The Commercial Banking segment showed a remarkable performance in 2023, with operating income rising to 22,900 million from 16,200 million in 2022. The segment's proportion of total operating income increased from 31% to 35%, indicating HSBC has successfully expanded its commercial banking activities through increased lending and enhanced services to corporate customers.

Global Banking and Markets offer customized financial solutions to central administration, institutional and corporate customers, as well as individual investors worldwide [9]. A wide scope of banking capabilities, such as financing, advice, and transaction supports, a markets division offering credit, rates, foreign exchange, stocks, etc. are all provided by the client-focused business lines [10]. Based on the data in the table, global banking and markets represent an operating income of 16,100 million in 2023, slightly up from 15,3 million in 2022. However, the segment's contribution to total operating income decreased from 30% to 24% in 2023. This decline in proportional contribution suggests that while the segment improves its profitability, its growth rate is lower than other segments.

Table 10. Wealth and personal banking by business units of HSBC in 2023 and 2022

Financial results (in million)	2023		2022	
Wealth and personal banking by business units	profit/-loss	Proportion	profit/-loss	Proportion
Total operating income	27,300	100%	22,200	100%
Banking operations	22,300	82%	19,300	87%
Life insurance	1,500	5%	1,900	9%
Global private banking	2,300	8%	2,000	9%
Asset management	1,300	5%	1,100	5%
Others	-	0%	-2,200	NA

Table 10 shows more detailed wealth and personal baking data by business units. Banking operations are the most significant income source in the wealth and personal banking segment, at 82%. The proportion of banking operations is lower than the previous accounting year, 87%. However, the profit increased to 22,300 million from 22,200 million, which implies an improvement in profitability. Global private banking is the second largest income source of the wealth and personal banking segment, 8%, which is much lower than the proportion of banking operations.

Among all sources of income, except for life insurance, all other sources have increased compared with the previous accounting year. Life insurance has dropped from 1,900 million to 1,500 million, and the proportion has dropped from 9% to 5%. This suggests that HSBC's performance worsened with life insurance in 2023.

3. Conclusion

Despite being the basis of the world economy, the banking sector nonetheless experiences volatility and contagion effects. Banks with substantial deficiencies in their business models, governance, and risk management are worse at handling banking crises. However, the events in 2023 have acted as a warning about how quickly banking crises might transpire. This essay is analysed based on the perspective of the income statement through vertical and horizontal analysis, ratio analysis, segment reporting analysis, and benchmarking, which aim to provide investors with investment suggestions for HSBC. HSBC's overall ability generally represents a more substantial improvement than the previous accounting year.

The financial performance of HSBC improved significantly compared to the last accounting year, with a 51% rise in profit for the year and a 33% increase in net operating income. While in the banking industry, the overall level of HSBC is in the upper-middle level. Although it is slightly disadvantaged in some aspects, it maintains good profitability, solvency, and liquidity, implying HSBC has enough capacity to meet banking crises. Despite some of HSBC's strengths being weaker than those of its rivals or slightly weaker than last year's performance, it remains a big player in the banking industry. Therefore, the future development of HSBC could be promised, and investment could be considered.

Finally, this essay mainly focuses on the changes in income statements, while the balance sheet is also an important indicator of banking sectors' performance.

References

[1] Karem A A, Azzahra M S. Analyzing the Impact of Regulatory Policies on Financial Stability and Market Dynamics in the Banking Industry[J]. Inspirasi & Strategi (INSPIRAT): Jurnal Kebijakan Publik & Bisnis, 2024, 14(2): 83-91.

[2] D'Orazio P. Navigating Financial Stability Through the Dual Challenges of Climate Change and Pandemics[J]. Current Opinion in Environmental Sustainability, 2023, 65: 101386.

[3] Nahar S, Meero A, Rahman A A A, et al. Analysis on the Marketing Strategy and Competitive Advantage of Banking Industry in Bangladesh: An Entrepreneurial Case Study of HSBC Bank[J]. Academy of Entrepreneurship Journal, 2021, 27(4): 1-7.

[4] HSBC Holdings plc. Annual Report and Accounts 2024[R]. 2023.

[5] Asiyah B N, Huda Q, Adlan M A, et al. Profitability Analysis of Coal Mining Companies Based on Indonesia Sharia Stock Index: A Review of Net Profit Margin, Total Asset Turnover and Company Size[C]//International Joint Conference/Seminar. 2024, 1(2): 13-30.

[6] Singh R. Defining Return on Assets (ROA) in Empirical Corporate Finance Research: A Critical Review[J]. Empirical Economics Letters, 2023

[7] Kaur J, Vij M, Chauhan A K. Signals Influencing Corporate Credit Ratings—A Systematic Literature Review[J]. Decision, 2023, 50(1): 91-114.

[8] Suu N D, Luu T Q, Pho K H, McAleer M. Net Interest Margin of Commercial Banks in Vietnam[J]. Advances in Decision Sciences, 2020, 24(1): 1-27.

[9] Oriji O, Shonibare M A, Daraojimba R E, Abitoye O, Daraojimba C. Financial Technology Evolution in Africa: A Comprehensive Review of Legal Frameworks and Implications for AI-Driven Financial Services[J]. International Journal of Management & Entrepreneurship Research, 2023, 5(12): 929-951.

[10] Yeaser M R. Post COVID Impact and Future Endeavours of Banking Sector: A Case Study on Trust Bank Limited[R]. 2023.