

The Impact Study of Liquidity Analysis on Profitability of Nabil Bank Limited

Apekshya Thakulla^{1*}, Namrata Gautam²

¹BBS Graduate, Orchid International College, Kathmandu, Nepal

²Lecturer, Orchid International College, Kathmandu, Nepal

Corresponding Author:

Apekshya Thakulla

Email: thakullaapekshya@gmail.com

Abstract:

This study examines the impact of liquidity analysis on the profitability of Nabil Bank Limited over a five years period (2018/19–2022/23). Liquidity management is critical for financial institutions as it ensures operational stability while maintaining profitability. This research employs key liquidity indicators such as the Current Ratio, Quick Ratio and Loan-to-Deposit used to measure profitability. The findings reveal that Nabil Bank maintains a strong liquidity position, with an average current ratio of 2.36 and an LDR of 84.96%, indicating effective liquidity management. However, the study identifies a negative correlation between liquidity and profitability, as both ROA and ROE exhibit a declining trend over the study period. While higher liquidity enhances short-term financial stability, excessive liquidity may hinder profitability by limiting investment opportunities. The study suggests that an optimal balance between liquidity and profitability is essential for long-term financial sustainability. Given the study's reliance on secondary data and a limited timeframe, future research should incorporate primary data and a broader sample to enhance the findings.

Key Words: Assets utilization, banking sector, commercial banks, financial performance, Nepalese banking industry.

1. Introduction:

The liquidity of an organization is considered as the most important component for it to pay its current liabilities. It includes payment of obligation and the other financial expenses which are considered as short term (Pandey and Budhthoki, 2020).

There is an inverse relationship between liquidity and profitability; increasing one often requires sacrificing the other. Liquidity is the ease of converting assets into cash without impacting market price (Hayes, 2023a). It involves managing current assets and liabilities. A firm that meets financial obligations promptly is deemed liquid, enhancing its reputation (Li et al., 2020). Liquidity analysis assesses a company's ability to cover short-term obligations using liquid assets.

Profit is a financial benefit that is realized when the amount of revenue gained from a business activity exceeds cost and taxes needed to sustain the activity (B. Adhikari, 2024). Profitability suggests the capability of the company in earning income on its property. Profitability is defined as an ability to make profit from all the business activities of an enterprise (Khatri, 2020).

In other words, it is an ability of a company to generate

revenues in excess of its expenses. Furthermore, profitability is a reflection of how banks are operating under a given environment.

Liquidity is essential for business survival, requiring a balance to ensure profitability and operational effectiveness (Pandey and Budhthoki, 2020). Excess liquidity reduces profitability, while inadequate liquidity disrupts operations. The Nepal Commercial Bank Act 2031, 1(f) defines liquidity as including bank vault cash, deposits, and specified liquid assets, with minimum stock ratios regulated by Nepal Rastra Bank (Bhusal, 2022).

According to Gautam (2020), liquidity is a financial institution's ability to meet cash and collateral obligations without incurring significant losses. It reflects the ease with which securities can be converted into cash without impacting their market value. Liquidity depends on the balance between cash assets, quickly convertible assets, and liabilities due for payment. It also indicates a company's capacity to meet short-term obligations like bills and payroll, as well as long-term commitments like loan repayments. Key factors influencing liquidity include asset quality, funding sources, and market conditions.

Shafana (2015) noted that holding a high proportion of current assets strengthens liquidity but may reduce profitability.

Umobong (2015) emphasized that a firm's survival depends on generating profits and attracting investors. Lartey et al. (2013) described bank profitability as the ability to generate revenue exceeding costs relative to the capital base, essential for a stable financial system. Evaluating past, current, and future profitability is crucial, with revenue and expenses reflected in the income statement.

Nabil Bank is Nepal's first foreign joint venture bank, began operations in 1984. It was earlier known as Nepal Arab Bank Limited, which was established to offer international-standard banking services. Nabil Bank has over 200 international correspondent banking relationships and a subsidiary, Nabil Investment Banking Ltd., for investment services. It acquired Nepal Bangladesh Bank in July 2022 and introduced "n bank", a neo-banking virtual service, in December 2022. With a mission to be the "1st Choice Provider of Complete Financial Solutions, for all its stakeholders; Customers, Shareholders, Regulators, Communities and Staff".

This Bank renders services such as:

- Loan, advance, and overdraft
- Agency services
- Clearing services
- Foreign currency exchange
- Deposits
- Guarantees
- Credit cards
- Telebanking
- Remittance service
- SWIFT service
- Deposit locker
- ATMs

Few studies have examined the impact of liquidity on Nabil Bank's profitability, but they lack recent data from its annual reports. Liquidity management is critical for banks, as inadequate liquidity signals financial trouble (Rose, 2002). Liquidity refers to assets readily convertible to cash for meeting obligations, either stored on the balance sheet or available through purchased funds. Both liquidity surplus and deficit indicate financial health issues (Sthapit and Maharjan, 2012).

The study tries to address the research questions related to Nabil Bank's liquidity position, the impact of liquidity on its profitability, and the relationship between liquidity and profitability.

This study has some limitations, which include:

- a) The study is based on secondary data.
- b) It analyzes and evaluates the data of the last five years only.
- c) Only a few ratios are used for analysis.
- d) Only the annual data is used for analysis, although monthly data is needed.

2. Methods And Methodology:

This study has utilized secondary sources of data published as annual audit reports, journals, and other reports related to Nabil Bank. Data were obtained through internet sources and the official website of Nabil Bank. Among the 20 commercial banks operating in Nepal, Nabil Bank Limited was selected as the sample for this study, given the impracticality of analyzing the entire banking sector. The research is based on a sample of five fiscal years' annual reports of the bank.

The primary objective of this study was to conduct a systematic and empirical analysis of the liquidity position of Nabil Bank Limited and its impact on profitability. Liquidity management is represented by key financial indicators, including the Cash-Deposit Ratio (CDR), Credit-Deposit Ratio (CRDR), and Investment-Deposit Ratio (DR), which serve as independent variables. Profitability is measured using Return on Assets (ROA) and Return on Equity (ROE) as dependent variables (Mishra & Pradhan, 2019).

To assess the liquidity position, the study employs three key liquidity ratios: the current ratio, quick ratio, and cash ratio. It is assumed that understanding the relationship between liquidity and profitability contributes to effective working capital management and profit maximization. The study considers the following financial indicators:

1. Current Ratio:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

2. Quick Ratio:

$$\text{Quick Ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

3. Net Working Capital (NWC):

$$\text{NWC} = \text{Current Assets} - \text{Current Liabilities}$$

4. Credit-to-Total-Deposit Ratio:

$$\text{Credit-to-Total-Deposit Ratio} = \frac{\text{Total Credit}}{\text{Total Deposits}}$$

Table 1: Empirical Review: Liquidity Analysis and Profitability

S.N	Author	Topic	Findings
1	Pradhan et al. (2016)	The impact of liquidity on the profitability	A positive relationship between liquidity, loans, and profitability, with fluctuating liquidity ratios over time.
2	Abdullah and Jahan (2014)	The effect of liquidity on the profitability of five Bangladeshi private commercial banks	Using regression analysis, they found no significant relationship between liquidity and profitability.
3	Shrestha (2018)	Liquidity management and profitability in Nepalese commercial banks	No significant impact of liquidity measures such as the credit deposit ratio (CDR) and cash reserve ratio (CRR) on profitability.
4	Ibrahim (2017)	Liquidity on five Iraqi banks	Used OLS model and found that liquidity positively impacted profitability, as increased liquidity ratios improved the return on assets (ROA).
5	Lartey et al. (2013)	Relationship between liquidity and profitability in seven Ghanaian banks	Declining trends in both and a weak positive relationship between liquidity and profitability.
6	Paul et al. (2021)	Liquidity's effect on the profitability of 40 Bangladeshi banks	Certain liquidity measures, such as LDR and DAR, significantly influenced profitability, while others did not.
7	Rijal (2022)	Study on liquidity ratios of NABIL and Everest Bank	Certain liquidity ratios positively influenced profitability, while others had a negative impact.
8	K. Adhikari (2020)	Liquidity and profitability indicators in 27 Nepalese banks	No significant association between liquidity and profitability.
9	Mishra (2019)	Liquidity and profitability relationship among 10 leading Nepalese banks	ADBL and NABIL had better liquidity and profitability compared to others.
10	Al Nimer et al. (2015)	Liquidity on Jordanian banks	Liquidity, measured by the quick ratio, significantly influenced profitability, represented by ROA.
11	A. Adhikari (2010)	Financial performance of Nepal Bank Limited and NABIL Bank	Nepal Bank excelled in liquidity, NABIL showed superior profitability.

The impact of Liquidity on profitability of Nabil bank is analyzed using both financial and statistical tools. Under financial tools, liquidity and profitability ratios are examined to assess the bank's financial position and the effect of liquidity on profitability.

Under financial tools, the study used two different types of ratios (Liquidity Ratios and Profitability Ratios) to analyze the liquidity and profitability position along with the impact of liquidity on profitability of the bank.

Liquidity ratios measure the firm's short-term solvency and its ability to meet current obligations. These ratios provide insight into the bank's financial health by evaluating its capacity to fulfill short-term liabilities (Gautam,

2020).

The statistical methods employed in the study include:

- a) Arithmetic Mean
- b) Standard Deviation
- c) Coefficient of Variation
- d) Correlation Coefficient

By integrating financial and statistical analysis, this study aims to provide a comprehensive evaluation of the relationship between liquidity management and profitability in Nabil Bank Limited.

Data Summary and Presentation:

Current Ratio: The current ratio measures the relationship between a bank's current assets and current liabilities, reflecting its ability to meet short-term obligations. A higher ratio generally indicates a stronger liquidity position.

Table 2: Ratio of current assets to current liabilities

(Rs. in million)

Year	Current Assets	Current Liabilities	Current Ratio
2018/19	594,457,319	308,193,548	1.93
2019/20	911,090,132	450,988,821	2.02
2020/21	1,291,777,136	359,394,225	3.59
2021/22	1,606,662,960	498,432,011	3.22
2022/23	1,606,662,960	545,317,347	2.95
Mean			2.36
S.D.			0.74
C.V.			31.34

(Source: Annual report of Nabil Bank, 2022/23)

The current ratio shows a generally strong liquidity position. It increased from 1.93 in 2018/19 to a peak of 3.59 in 2020/21, before slightly declining to 2.95 in 2022/23. Despite the slight drop, the bank maintained a healthy average current ratio of 2.36, indicating that it had Rs 2.36 in current assets for every Rs1 in current liabilities. The coefficient of variation (31.34%) suggests moderate variability, which is acceptable.

Current Assets vs. Current Liabilities: The ratio of current assets to current liabilities is important in determining a company's ongoing ability to pay its debts as they are due.

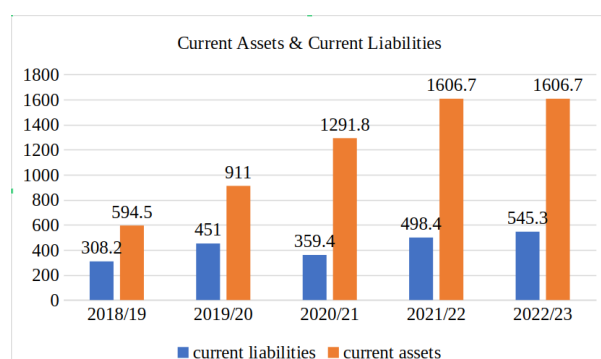


Figure 1: Current Assets vs. Current Liabilities

Current assets steadily increased from Rs 594.5 million in 2018/19 to Rs 1606.7 million by 2021/22, remaining constant thereafter. Meanwhile, current liabilities fluctuated, starting at Rs 308.2 million in 2018/19, dropping in 2020/21, and then rising again to Rs 545.3 million in 2022/23. This fluctuation indicates dynamic financial management, with assets consistently surpassing liabilities, ensuring strong liquidity.

Overall, Nabil Bank demonstrated strong short-term financial stability, despite minor variations in the current ratio and liabilities.

Quick Ratio: The quick ratio, also called an acid-test ratio, measures a company's short-term liquidity against its short-term obligations.

Table 3: Quick Ratio Analysis for Different Years

(Rs. in million)

Year	Current Liabilities	Quick Assets	Quick Ratio
2018/19	308.2	594.5	1.93
2019/20	451.0	911.0	2.02
2020/21	359.4	1291.8	3.59
2021/22	498.4	1606.7	3.22
2022/23	545.3	1606.7	2.95
Mean			2.36
S.D.			0.74
C.V.			31.34

(Source: Annual report of Nabil Bank, 2022/23)

Loan to Deposit Ratio: Loan to deposit ratio measures the bank's capability to fulfill its financial obligations through deposits. It is calculated as total loan divided by total deposits, & banks with a lower loan to deposit ratio tend to have higher liquidity.

Table 4: Loan to Deposit Ratio

(Rs. in billion)

Year	Total Loans	Total Deposits	Loans to Deposits Ratio (%)
2018/19	331.1	403.1	82.14
2019/20	300.2	329.6	91.08
2020/21	206.6	228.0	90.61
2021/22	153.9	193.04	79.72
2022/23	133.56	164.37	81.26
Mean			84.96
S.D.			5.44
C.V.			6.41

(Source: Annual report of Nabil Bank, 2022/23)

Liquidity Performance: Nabil Bank has maintained strong short-term liquidity over the years. The current ratio increased from 1.93 in 2018/19 to 2.95 in 2022/23, averaging 2.36, indicating the bank's ability to meet short-term obligations. Similarly, the quick ratio peaked at 3.59 in 2020/21 before slightly declining to 2.95, ensuring a stable liquidity position. The loan to deposit

ratio (LDR) fluctuated between 79.72% and 91.08%, averaging 84.96%, which suggests a balanced approach to lending while maintaining sufficient liquidity. Despite minor fluctuations, Nabil Bank has effectively managed its liquidity, ensuring financial stability and operational efficiency.

Return on Assets: Return on Assets is a profitability ratio that provides how much profit a company can generate from its assets.

Table 5: Return on Assets

(Rs. in billion)

Year	Net Income	Total Assets	Return on Assets (%)
2018/19	4.24	201.14	2.11
2019/20	3.46	237.68	1.46
2020/21	4.53	291.24	1.56
2021/22	4.26	419.82	1.01
2022/23	6.40	481.20	1.33
Mean			1.49
S.D.			0.40
C.V.			26.77

(Source: Annual report of Nabil Bank, 2022/23)

Return on Equity (ROE): Return on equity (ROE) is a measure of a company's financial performance. It is calculated by dividing net income by shareholders' equity. Return on equity is considered a gauge of a corporation's profitability and how efficiently it generates those profits. It indicates how effectively management is using a company's assets to create profits.

Table 6: Return on Equity

(Rs. in billion)

Year	Net Income	Total Equity	Return on Equity (%)
2018/19	4.24	23.19	18.28
2019/20	3.46	25.86	13.38
2020/21	4.53	34.01	13.32
2021/22	4.26	52.98	8.04
2022/23	6.40	56.91	11.25
Mean			12.85
S.D.			3.73
C.V.			29.04

(Source: Annual report of Nabil Bank, 2022/23)

Profitability Performance: While the bank has maintained strong liquidity, its profitability has shown a declining trend. The return on assets (ROA) decreased

from 2.11% in 2018/19 to 1.33% in 2022/23, averaging 1.49%, indicating reduced efficiency in utilizing assets to generate profit. Similarly, the return on equity (ROE) declined from 18.28% to 11.25% over the same period, with an average of 12.85%, reflecting decreasing shareholder returns. The negative correlation between liquidity and profitability suggests that higher liquidity does not necessarily lead to better financial performance. However, the positive correlation between LDR and profitability highlights the importance of balanced lending strategies. To improve profitability, the bank should focus on optimizing asset utilization, cost control, and revenue diversification to sustain long-term financial growth.

Correlation Analysis: The correlation analysis examines the relationship between liquidity and profitability indicators at Nabil Bank Limited. A negative correlation (-0.58) exists between ROA and both the current and quick ratios, indicating that higher liquidity does not necessarily enhance profitability. Similarly, ROE has a negative correlation (-0.64) with the current and quick ratios, suggesting that as liquidity increases, profitability decreases. However, a positive correlation is observed between the loan to deposit ratio and both ROA (0.17) and ROE (0.27), implying that an increase in lending activities contributes to improved profitability. These findings confirm that liquidity has both positive and negative effects on profitability, highlighting the importance of maintaining a balanced financial strategy.

3. Study Findings:

Table 7: Summary of the ratios calculated

Date	Current Ratio	Quick Ratio	LDR	ROA	ROE
2018/19	1.93	1.93	82.14	2.11	18.28
2019/20	2.02	2.02	91.08	1.46	13.38
2020/21	3.59	3.59	90.61	1.56	13.32
2021/22	3.22	3.22	79.72	1.01	8.04
2022/23	2.95	2.95	81.26	1.33	11.25
Mean	2.36	2.36	84.96	1.49	12.85
S.D.	0.74	0.74	5.44	0.40	3.73
C.V.	31.34	31.34	6.41	26.77	29.04

Nabil Bank has maintained a strong liquidity position over the past five years, with the current ratio rising from 1.93 in 2018/19 to 2.95 in 2022/23, averaging 2.36, which is considered healthy. The quick ratio mirrors this trend, as the bank lacks prepaid expenses and inventories, ensuring stable short-term liquidity. The loan to deposit ratio (LDR) fluctuated between 79.72% and 91.08%, averaging 84.96%, indicating an optimal balance between lending and liquidity.

However, the bank's profitability has declined, with return on assets (ROA) dropping from 2.11% to 1.33% over the period, averaging 1.49%, signaling a decrease in asset utilization efficiency. Similarly, return on equity

(ROE) fell from 18.28% to 11.25%, averaging 12.85%, reflecting reduced shareholder returns. The correlation analysis indicates a negative relationship between liquidity (current and quick ratios) and profitability (ROA: -0.58, ROE: -0.64), suggesting that increased liquidity does not necessarily enhance profitability. However, a positive correlation exists between LDR and profitability (ROA: 0.17, ROE: 0.27), implying that increased lending contributes to improved returns. To address declining profitability, the bank should optimize asset utilization and implement strategies for sustainable financial growth.

4. Conclusion:

This study examined the relationship between liquidity and profitability of Nabil Bank Ltd. using data from 2018/19 to 2022/23. Findings indicate that liquidity significantly impacts profitability, with current and quick ratios consistently above 2.0, reflecting strong liquidity management. The bank also maintained a healthy loan-to-deposit ratio, ensuring sufficient liquidity for withdrawals.

Despite stable liquidity, ROA and ROE showed a declining trend, suggesting that while the bank remained profitable, asset and equity utilization efficiency varied. The study found a negative relationship between liquidity

ratios (current and quick ratios) and profitability (ROA, ROE), while loan-to-deposit ratio positively correlated with profitability. These findings support the study's hypotheses.

However, reliance on secondary data and a limited five-year period restricts the study's depth. Future research should incorporate primary data sources such as surveys and interviews and extend the study period for more robust insights. Additionally, including more financial ratios (e.g., EPS, cash ratio) and advanced statistical methods like regression analysis could enhance understanding of liquidity-profitability dynamics.

5. Funding Statement:

The authors confirm that they have no competing interests to declare.

6. Completing Interest:

The authors confirm that they have no competing interests to declare.

7. Acknowledgment:

The authors would like to thank all the respondents for participating in this study.

References

- Abdullah, M., & Jahan, N. (2014). The impact of liquidity on profitability in banking sector of bangladesh: A case of chittagong stock exchange. *International Journal of Economics and Business Review*, 2(10), 17–22.
- Adhikari, A. (2010). *Comparative analysis of financial performance of nepal bank limited and nabil bank limited* [(Unpublished Master's Degree Thesis)].
- Adhikari, B. (2024). *Profitability analysis of jyoti bikash bank* [(Unpublished bachelor's project report)].
- Adhikari, K. (2020). Impact of liquidity on profitability in nepalese commercial banks. *Journal of Management*, 3(1), 52–62.
- Al Nimer, M., Warrad, L., & Al Omari, R. (2015). The impact of liquidity on jordanian banks profitability through return on assets. *European Journal of Business and Management*, 7(7), 229–232.
- Beers, B. (2024). Regression: Definition, analysis, calculation & example. <https://www.investopedia.com/terms/r/regression.asp>
- Bhusal, P. (2022). *Liquidity and profitability of nabil bank limited* [(Unpublished bachelor's project report)].
- Dangol, R. (2021). *Profitability analysis of nabil bank limited* [(Unpublished bachelor's project report)].
- Devkota, P., & Bhandari, N. (2020). *Business research methods (1st ed.)* Advance Saraswati Prakashan Pvt. Ltd.
- Fernando, J. (2024a). Current ratio explained with formula and examples. <https://www.investopedia.com/terms/c/currentratio.asp>

- Fernando, J. (2024b). Return on equity calculations and what it means. <https://www.investopedia.com/terms/r/returnonequity.asp>
- Gajurel, P. (2022). *Profitability analysis of nabil bank ltd* [(Unpublished bachelor's project report)].
- Gautam, P. (2020). *Liquidity management of global ime bank limited* [(Unpublished bachelor's project report)].
- Ghimire, S. (2022). *Financial analysis of nabil bank ltd* [(Unpublished bachelor's project report)].
- Girardin, M. (2023). What is quick ratio [Retrieved March 17, 2023, from <https://www.theforage.com/blog/skills/quick-ratio>].
- Hargrave, M. (2024). Return on assets (roa): Formula and definition. <https://www.investopedia.com/terms/r/returnonassets.asp>
- Hayes, A. (2023a). Understanding liquidity and how to measure it. <https://www.investopedia.com/terms/l/liquidity.asp>
- Hayes, A. (2023b). What is correlation. <https://www.investopedia.com/terms/c/correlation.asp#toc-what-is-correlation>
- Hayes, A. (2024). Understanding liquidity ratios; types and their importance. <https://www.investopedia.com/terms/l/liquidity.asp>
- Ibrahim, S. (2017). The impacts of liquidity on profitability in banking sectors of iraq: A case of iraqi commercial banks. *Journal of Finance & Banking Studies*, 6(1), 113–121. <https://doi.org/10.20525/ijfbs.v6i1.650>
- JMP. (n.d.). What is correlation? https://www.jmp.com/en_ca/statistics-knowledge-portal/what-is-correlation.html
- Khati, P. (2020). Impact of liquidity on profitability of nepalese commercial banks [www.iosrjournals.org]. *Journal of Economics and Finance*, 11(5), 26–33.
- Kothari, P. (2006). Research methodology. <http://www.rnlkwc.ac.in/pdf/study-material/economics/rmdse.pdf>
- Lartey, V. C., Antwi, S., & Boadi, E. K. (2013). The relationship between liquidity and profitability of listed banks in ghana. *International journal of business and social science*, 4(3), 48–56.
- Li, K., Musah, M., Kong, Y., Adjei Mensah, I., Antwi, S. K., Bawuah, J., Donkor, M., Coffie, C. P. K., & Andrew Osei, A. (2020). Liquidity and firms' financial performance nexus: Panel evidence from non-financial firms listed on the ghana stock exchange. *Sage Open*, 10(3), 2158244020950363.
- Mishra, R. (2019). Relationship between liquidity and profitability of commercial banks in nepal. *Patan Pragya*, 5(1), 143–153.
- Pandey, C., & Budhthoki, R. K. (2020). Impact of liquidity on the profitability of the commercial banks of nepal. *Pravaha*, 26(1), 39–44.
- Paul, S. C., Bhowmik, P. K., & Famanna, M. N. (2021). Impact of liquidity on profitability: A study on the commercial banks in bangladesh. *Advances in Management and Applied Economics*, 11(1), 73–90.
- Pradhan, P., Shyam, R., & Shrestha, D. (2016). Impact of liquidity on bank profitability in nepalese commercial banks. *Radhe Shyam and Pradhan, Prof. Dr. Radhe Shyam and Shrestha, Deepanjali, Impact of Liquidity on Bank Profitability in Nepalese Commercial Banks (June 9, 2016)*.

- Rijal, M. (2022). Relation between liquidity and profitability of nabil bank and everest bank limited. *Journal of Kathmandu BernHardt College*, 17–27.
- Rose, P. S. (2002). Commercial bank management.
- Shafana, M. (2015). Liquidity and profitability of financial institutions in sri lanka.
- Shrestha, B. (2018). Liquidity management and profitability of commercial banks in nepal. *International Journal of Management and Applied Science*, 4(7), 98–102.
- Sthapit, A., & Maharjan, G. (2012). Impact of liquidity management on profitability: A comparative study between nabil and scbn. *Economics (ISSN: 2091-1467)*, 2(2), 59–72.
- Umobong, A. A. (2015). Assessing the impact of liquidity and profitability ratios on growth of profits in pharmaceutical firms in nigeria. *European Journal of Accounting, Auditing and Finance Research*, 3(10), 97–114.