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Financial Performance Analysis of Universitas Negeri Malang Using Ratio, Vertical, and Horizontal Analyses for Fiscal Years 2023–2024

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Abstract

This study aims to analyze the financial performance of Universitas Negeri Malang (UM), a public university operating under the State University Legal Entity (PTN-BH) system, by applying financial ratio analysis, vertical analysis, and horizontal analysis for the fiscal years 2023–2024. The analysis is based on the university's Statement of Financial Position, Statement of Activities, and Statement of Cash Flows to evaluate liquidity, operational efficiency, liability structure, funding sources, and financial sustainability. The findings indicate that UM experienced significant improvement in its overall financial performance during 2024. The expense ratio decreased from 0.913 in 2023 to 0.810 in 2024, indicating improved operational efficiency. Liquidity remained exceptionally strong, with current, quick, and available funds ratios all exceeding 12, demonstrating the university's excellent ability to meet short-term obligations. The debt-equity ratio remained very low at 0.028, reflecting minimal dependence on external financing and strong financial independence. Horizontal analysis revealed substantial growth in cash, total revenue, and annual surplus, while vertical analysis showed a more diversified revenue structure and stronger liquidity. . Despite these positive results, the declining proportion of expenditures allocated to educational service programs and the high level of liquid assets suggest the need for more productive resource allocation. Overall, Universitas Negeri Malang demonstrates a healthy and sustainable financial condition supported by effective financial management and prudent resource utilization.

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1. INTRODUCTION

Financial statement evaluation has become an essential instrument for assessing organizational performance, particularly in nonprofit institutions such as public universities. Financial statements provide comprehensive information on an institution's financial position, operational performance, and resource utilization, enabling stakeholders to evaluate whether financial resources are managed efficiently, transparently, and sustainably. Unlike business organizations, higher education institutions are expected to maintain financial stability while fulfilling their educational, research, and community service missions. Therefore, financial performance evaluation should emphasize sustainability, accountability, and effective resource management rather than profitability alone (Chabotar, 1989).

Financial sustainability has become an increasingly important issue for higher education institutions, especially those operating under greater financial autonomy. Altalibi

(2024) argues that universities must develop sustainable financial strategies that balance operational needs, institutional development, and accountability to stakeholders. This challenge is particularly relevant for Indonesian public universities operating under the State University Legal Entity (*Perguruan Tinggi Negeri Badan Hukum* or PTN-BH) framework, where institutions have broader authority to manage their financial resources while remaining responsible for ensuring transparency and long-term institutional sustainability.

Universitas Negeri Malang (UM) is one of Indonesia's public universities operating under the PTN-BH governance system. The implementation of this governance model provides greater flexibility in financial management, allowing the university to diversify funding sources, optimize resource allocation, and improve institutional performance. However, greater autonomy also requires more comprehensive financial evaluation to ensure that institutional resources are utilized efficiently and support the university's strategic objectives.

Financial ratio analysis is widely recognized as one of the most effective approaches for evaluating financial performance in nonprofit organizations. Chabotar (1989) proposed a comprehensive framework consisting of investment performance, liquidity, liability structure, funding sources, fund utilization, and organizational efficiency. These indicators provide valuable information for assessing institutional financial health and supporting strategic decision-making. Similarly, Rustam and Adil (2022) emphasize that financial sustainability should be evaluated through financial ratios that reflect an organization's ability to maintain operational continuity while effectively managing available resources.

In addition to financial ratio analysis, horizontal and vertical analyses are widely applied to evaluate financial statement performance. Horizontal analysis measures changes in financial statement components across accounting periods, enabling researchers to identify growth trends and financial developments over time. Meanwhile, vertical analysis examines the proportion of each financial statement component relative to a common base within the same reporting period, providing insight into the composition of assets, liabilities, revenues, and expenses. Previous studies by Purwasih and Munandar (2023) and Andriyanti et al. (2024) demonstrate that combining horizontal and vertical analyses provides a clearer understanding of financial performance because the analyses reveal both structural composition and year-to-year financial changes.

Several previous studies have applied financial ratio analysis and financial statement analysis to evaluate organizational performance. However, most studies focus on profit-oriented companies or specific business sectors. Studies by Agustini et al. (2022), Purwasih and Munandar (2023), and Andriyanti et al. (2024), for example, applied ratio analysis as well as horizontal and vertical analyses to manufacturing and hospitality companies. Although these studies confirm the usefulness of financial statement analysis for evaluating financial performance, their findings cannot be directly generalized to public universities because higher education institutions operate under different organizational objectives, funding structures, and accountability mechanisms.

Research specifically examining the financial performance of PTN-BH universities using an integrated analytical framework remains limited. Most previous studies evaluate only selected financial ratios or apply trend analysis without comprehensively examining liquidity, liability structure, funding diversification, expenditure allocation, and organizational efficiency within a single analytical framework. Consequently, there is still a need for studies that integrate financial ratio analysis with horizontal and vertical analyses to provide a more comprehensive assessment of financial performance in autonomous public universities.

Therefore, this study analyzes the financial performance of Universitas Negeri Malang for the 2023–2024 fiscal years by integrating financial ratio analysis, horizontal analysis, and vertical analysis. The analysis evaluates investment performance, liquidity, liability structure, funding sources, fund utilization, organizational efficiency, and changes in financial statement composition. The findings are expected to provide practical information for university management in strengthening financial governance, improving resource allocation, supporting financial sustainability, and enhancing institutional accountability.

2. METHOD

This study employs a descriptive quantitative approach using financial statement analysis to evaluate the financial performance of Universitas Negeri Malang (UM) for the fiscal years ending 31 December 2023 and 2024. The research uses secondary data obtained from the university's officially published financial statements, including the Statement of Financial Position, Statement of Activities, and Statement of Cash Flows. These financial reports provide comprehensive information for assessing the university's financial condition and operational performance.

The analysis follows the nonprofit financial evaluation framework developed by Chabotar (1989), which has been widely applied in financial performance assessment for higher education institutions. The financial ratios used in this study include: (1) Investment Performance Ratio (Expense Ratio); (2) Liquidity Ratios consisting of Current Ratio, Quick Ratio, and Available Funds Ratio; (3) Liability Structure Ratio represented by the Debt-Equity Ratio; (4) Sources of Funds Ratios; (5) Use of Funds Ratios consisting of Performance Efficiency Ratio, Net Operating Results, and Simplified Net Operating Results; and (6) Non-program Activity Efficiency Ratio. These indicators are employed to evaluate financial sustainability, operational efficiency, liquidity, funding dependence, and financial independence.

In addition to financial ratio analysis, this study applies vertical and horizontal analyses to obtain a more comprehensive evaluation of the university's financial performance. Vertical analysis is used to determine the proportion of each financial statement component relative to its corresponding total within the same accounting period, while horizontal analysis measures changes in financial statement components between fiscal years 2023 and 2024. These analytical techniques enable the identification of financial trends, changes in resource allocation, and structural developments in the university's financial position.

The results obtained from the ratio calculations and financial statement analyses are interpreted descriptively to evaluate the financial health of Universitas Negeri Malang. The interpretation emphasizes operational efficiency, liquidity strength, funding diversification, liability structure, and long-term financial sustainability. This analytical approach is expected to provide practical information for supporting strategic financial decision-making and improving institutional financial management.

3. RESULTS AND DISCUSSION

The following sections present the results of analysis based on the financial ratio framework and discussion for each ratio category.

3.1 Investment Performance (Expense Ratio)

The first analysis evaluates the university's investment performance through the expense ratio, which measures the proportion of total expenses to total revenue. This ratio reflects the efficiency of financial resource utilization in supporting institutional operations. The calculation results for fiscal years 2023 and 2024 are presented in Table 1.

Table 1. Investment Performance

Ratio	Formula	2024	2023	Change
Expense Ratio	Total Expenses / Total Revenue	0.810	0.913	−11.3%

Based on Table 1, the expense ratio declined from 0.913 in 2023 to 0.810 in 2024. This decrease indicates a considerable improvement in operational efficiency. In 2023, Universitas Negeri Malang required IDR 0.913 of operating expenses to generate every IDR 1 of revenue. In contrast, during 2024 only IDR 0.810 was required to generate the same amount of revenue, resulting in a wider operational surplus.

The lower expense ratio suggests that the university managed its operational expenditures more efficiently while maintaining revenue growth. The improvement may reflect stronger budget control, more efficient resource utilization, and better financial planning throughout the fiscal year. Unlike many nonprofit organizations that experience increasing operating costs, UM successfully reduced the proportion of expenses relative to total revenue, strengthening its overall financial performance.

Furthermore, an expense ratio substantially below 1 indicates that total revenue remained higher than total operating expenses throughout both fiscal years. The improved ratio also supports the increase in the university's operating surplus, providing greater financial capacity for future academic development, infrastructure improvement, research activities, and institutional investment. Overall, the investment performance of Universitas Negeri Malang improved significantly during the 2024 fiscal year, indicating healthier financial management and stronger financial sustainability.

3.2 Liquidity (Liquidity Ratios)

The second analysis evaluates the liquidity position of Universitas Negeri Malang. Liquidity analysis measures the university's ability to meet its short-term obligations using current assets without relying on additional external financing. The calculation results of the Current Ratio, Quick Ratio, and Available Funds Ratio are presented in Table 2.

Table 2. Liquidity

Ratio	Formula	2024	2023	Change
Current Ratio	Total Unrestricted Current Assets / Total Current Liabilities	12.566	11.060	+13.6%
Quick Ratio	(Current Assets – Inventory) / Current Liabilities	12.442	10.931	+13.8%
Available Funds Ratio	(Cash and Cash Equivalents + Short-Term Investments) / Current Liabilities	12.014	10.223	+17.5%

Based on Table 2, Universitas Negeri Malang maintained a very strong liquidity position throughout both fiscal years. The Current Ratio increased from 11.060 in 2023 to 12.566 in 2024, indicating that the university possessed approximately IDR 12.57 of unrestricted current assets for every IDR 1 of short-term liabilities. This ratio is substantially higher than the commonly accepted benchmark for nonprofit organizations, demonstrating an excellent capacity to satisfy current obligations.

Similarly, the Quick Ratio increased from 10.931 to 12.442, suggesting that even after excluding inventories, the university retained highly liquid assets that were more than sufficient to cover all short-term liabilities. This condition reflects the dominance of cash and other liquid assets within the university's current asset structure, reducing liquidity risk and enhancing financial flexibility.

The Available Funds Ratio also improved significantly, increasing by 17.5% during the study period. This ratio indicates that cash and short-term investments alone were adequate to settle current liabilities multiple times over. Such a strong liquidity position provides substantial financial security and enables the university to respond effectively to unexpected operational or economic challenges.

Horizontal analysis further supports these findings. Cash and cash equivalents increased from approximately IDR 520.2 billion in 2023 to IDR 706.8 billion in 2024, representing an increase of 35.87%. At the same time, short-term investments declined to zero. This pattern may indicate that liquid investments were converted into cash to strengthen short-term liquidity and improve financial flexibility during the reporting period. Although this strategy enhances financial security, maintaining excessively high cash balances may reduce opportunities for productive long-term investment. Therefore, future financial policies should seek an appropriate balance between liquidity preservation and strategic asset utilization.

3.3 Liability Structure (Debt Structure)

The third analysis evaluates the university's liability structure using the Debt-Equity Ratio (DER). This ratio measures the proportion of liabilities relative to equity and reflects the degree of dependence on external financing.

Table 3. Liability Structure

Ratio	Formula	2024	2023	Change
Debt-Equity Ratio	Total Liabilities / Total Equity	0.028	0.027	+3.7%

As presented in Table 3, the Debt-Equity Ratio remained very low during both fiscal years. The ratio increased slightly from 0.027 in 2023 to 0.028 in 2024, representing only a marginal change of 3.7%. This indicates that Universitas Negeri Malang relied minimally on debt financing while maintaining substantial equity to support its operations.

The ratio implies that every IDR 1 of equity was supported by only IDR 0.028 of liabilities. Such a capital structure reflects strong financial independence and a conservative financing strategy. The university primarily finances its educational activities through internally generated funds and accumulated equity rather than external borrowing.

Although the Debt-Equity Ratio increased slightly during 2024, the change is too small to indicate any deterioration in financial stability. Instead, the results suggest that the university successfully maintained a healthy balance between financial obligations and institutional assets. A low leverage position also minimizes financial risk and provides greater flexibility for future strategic investment should additional funding become necessary.

Overall, the liability structure demonstrates that Universitas Negeri Malang possesses a stable financial foundation supported by high institutional equity and limited dependence on external creditors. This condition contributes positively to long-term financial sustainability.

3.4 Sources of Funds

The fourth analysis examines the university's funding sources to evaluate revenue diversification and the contribution of grants to institutional financing. The calculation results are summarized in Table 4.

Table 4. Sources of Funds

Ratio	Formula	2024	2023	Interpretation
Total Grants / Total Expenses	Total Grants and Donations / Total Expenses	0.016	0.000	Initial contribution from grants
Total Grants / Total Revenue	Total Grants and Donations / Total Revenue	0.013	0.000	Revenue diversification

The analysis indicates a positive development in funding diversification during 2024. Unlike the previous fiscal year, Universitas Negeri Malang began receiving grants and donations that contributed to both total revenue and operational financing. Although the contribution remained relatively small, the emergence of grant income represents an important step toward reducing dependence on internally generated revenue.

Grant funding also reflects increasing confidence from external stakeholders, including government agencies, research sponsors, and institutional partners. Expanding external funding sources can strengthen the university's financial resilience while supporting research, community engagement, innovation, and institutional development.

Vertical analysis of the Statement of Activities further illustrates the university's revenue composition. Educational service income remained the dominant source of revenue, accounting for approximately 80.77% of total income in 2024. Collaboration activities contributed 11.40%, while other operating income accounted for 7.68%. Although educational services continue to be the primary funding source, the gradual increase in grants and collaborative income demonstrates initial progress toward a more diversified and sustainable revenue structure.

3.5 Use of Funds (Operational Performance)

The fifth analysis evaluates how effectively financial resources were allocated to support the university's operational activities. Three financial indicators were employed to measure expenditure allocation and operational performance.

Table 5. Use of Funds

Ratio	Formula	2024	2023	Change
Performance Efficiency	Service Programs / Total Expenses	0.540	0.573	−5.8%
Net Operating Results	(Revenue − Expenses) / Revenue	0.190	0.087	+118.4%
Simplified Net Operating Results	Revenue / Expenses	1.234	1.095	+12.7%

Table 5 shows mixed but generally positive financial performance. The Performance Efficiency Ratio declined from 0.573 to 0.540, indicating that a slightly smaller proportion of total expenditures was allocated directly to educational service programs. Nevertheless, more than half of total operating expenses continued to support the university's core mission, demonstrating that educational services remained the primary expenditure priority.

Conversely, the Net Operating Results ratio improved substantially, increasing from 0.087 to 0.190. This indicates that the university generated a surplus equivalent to 19.0% of total revenue after covering all operating expenses. The significant increase reflects stronger financial management, improved expenditure control, and more efficient utilization of institutional resources.

The Simplified Net Operating Results ratio also increased from 1.095 to 1.234, confirming that total revenue continued to exceed total operating expenses by a wider margin than in the previous year. This stronger financial margin provides additional capacity for future investment, infrastructure development, academic innovation, and strategic institutional planning.

Overall, the results indicate that although expenditure allocation toward service programs declined slightly, the university substantially improved its operational efficiency and financial sustainability through better revenue generation and cost management.

3.6 Organizational Efficiency

The final ratio analysis evaluates organizational efficiency by examining the relationship between non-program expenditures and institutional revenue.

Table 6. Organizational Efficiency

Ratio	Formula	2024	2023	Change
Non-program Activity Efficiency	Total Revenue / Non-program Expenses	41.930	41.101	+2.0%

The efficiency ratio increased from 41.101 in 2023 to 41.930 in 2024, indicating a modest improvement in the efficiency of non-program expenditures. For every IDR 1 allocated to administrative and supporting activities, the university generated approximately IDR 41.93 of total revenue.

Although the increase was relatively small, the results suggest that administrative expenditures remained well controlled while institutional revenue continued to grow. Efficient management of non-program costs allows a larger proportion of financial resources to be directed toward academic activities, research, and community service.

The findings also indicate that Universitas Negeri Malang successfully maintained efficient financial governance without increasing administrative costs disproportionately. This balanced expenditure pattern supports institutional sustainability by ensuring that financial resources continue to prioritize the university's core educational mission while maintaining effective organizational support systems.

3.7 Horizontal Analysis

Horizontal analysis was conducted to evaluate year-to-year changes in the financial performance of Universitas Negeri Malang between fiscal years 2023 and 2024. The analysis focuses on major financial statement components that represent liquidity, operating performance, institutional growth, and long-term financial sustainability.

Table 7. Horizontal Analysis of Financial Performance

Components	2024 (IDR Billion)	2023 (IDR Billion)	Change
Cash and Cash Equivalents	706.8	520.2	+35.87%
Short-Term Investments	0.0	21.1	−100.00%
Prepaid Expenses	10.3	3.6	+183.25%
Endowment Funds	25.4	5.0	+406.68%
Total Revenue	1,028.8	839.4	+22.56%
Operating Expenses	449.8	439.0	+2.45%
Annual Surplus	195.3	73.1	+167.08%

The horizontal analysis reveals several significant improvements in Universitas Negeri Malang's financial performance during the 2024 fiscal year. Total revenue increased by 22.56%, while operating expenses grew by only 2.45%. The considerable difference between revenue growth and expenditure growth demonstrates improved cost efficiency and stronger financial management. Consequently, the annual operating surplus increased substantially by 167.08%, indicating a significant enhancement in institutional financial performance.

The liquidity position also improved considerably. Cash and cash equivalents increased by 35.87%, strengthening the university's capacity to finance day-to-day operations and respond to short-term financial requirements. Meanwhile, short-term investments declined to zero during 2024. Based on the available financial statements, this change coincided with the increase in cash and cash equivalents. Although the statements do not explicitly explain the reason for this movement, the pattern suggests a shift toward maintaining higher liquid assets during the reporting period.

Another notable development is the substantial increase in endowment funds, which expanded by more than 400% compared with the previous fiscal year. This growth indicates a stronger commitment to long-term institutional sustainability and reflects the university's effort to strengthen financial resilience beyond annual operational activities.

Prepaid expenses also increased significantly during the reporting period. Although the monetary value remains relatively small compared with total assets, the increase may reflect greater advance payments for operational activities or long-term institutional projects. Because the financial statements do not provide detailed explanatory notes regarding this account, further interpretation should be made cautiously.

Overall, the horizontal analysis demonstrates that Universitas Negeri Malang achieved stronger financial growth, improved operational efficiency, enhanced liquidity, and increased long-term financial capacity during the 2024 fiscal year.

3.8 Vertical Analysis

Vertical analysis was performed to examine the composition of assets and revenue sources, providing a clearer understanding of the university's financial structure during the study period.

Table 8. Composition of Assets

Components	**2024**	**2023**
Current Assets	33.44%	28.03%
Non-current Assets	66.56%	71.97%

The composition of assets indicates a moderate shift toward greater liquidity. The proportion of current assets increased from 28.03% in 2023 to 33.44% in 2024, reflecting stronger short-term financial capacity. Although non-current assets declined proportionally, they continued to account for more than two-thirds of total assets, demonstrating that Universitas Negeri Malang remains an asset-intensive institution supported by substantial long-term infrastructure and educational facilities.

The increase in current assets complements the liquidity ratios discussed earlier, confirming that the university strengthened its short-term financial position without significantly reducing its investment in long-term institutional assets. This balanced asset composition contributes positively to financial stability and operational flexibility.

Table 9. Composition of Revenue

Revenue Sources	**2024**	**2023**
Educational Service Revenue	80.77%	84.20%
Collaboration Revenue	11.40%	10.68%
Grants	0.09%	0.04%
Other Revenue	7.68%	5.08%

The vertical analysis of revenue demonstrates that educational service revenue remained the university's principal source of income, contributing more than 80% of total revenue during both fiscal years. Nevertheless, its proportional contribution declined slightly in 2024, indicating the beginning of revenue diversification.

Collaboration income and other operating revenue both increased during the study period. These improvements suggest that the university has gradually expanded alternative funding sources through institutional partnerships and non-academic activities. Although grant revenue continues to represent only a small proportion of total income, its increasing contribution indicates growing opportunities for external financial support.

Overall, the revenue composition reflects a healthier funding structure than in the previous fiscal year. While tuition and educational services remain the dominant source of income, the gradual increase in collaboration, grants, and other revenues contributes to stronger financial sustainability by reducing dependence on a single revenue source.

4. CONCLUSION

This study evaluated the financial performance of Universitas Negeri Malang for the 2023–2024 fiscal years using financial ratio analysis, vertical analysis, and horizontal analysis. The findings demonstrate that the university maintained a healthy and sustainable financial condition throughout the study period.

Operational efficiency improved considerably, as reflected by the decline in the Expense Ratio from 0.913 in 2023 to 0.810 in 2024 and the substantial increase in the Net Operating Results ratio. Revenue growth substantially exceeded the increase in operating expenses, resulting in a significant improvement in the university's annual operating surplus.

Liquidity remained exceptionally strong. The Current Ratio, Quick Ratio, and Available Funds Ratio all exceeded 12, indicating that the university possessed sufficient liquid assets to meet its short-term obligations. The Debt-Equity Ratio also remained very low, demonstrating limited dependence on external financing and strong institutional financial independence.

Horizontal analysis confirmed positive developments in cash balances, total revenue, endowment funds, and annual surplus, while vertical analysis showed stronger liquidity and a gradually more diversified revenue structure. Nevertheless, the declining proportion of expenditures allocated to educational service programs and the large amount of liquid assets suggest opportunities to optimize resource allocation for long-term institutional development.

Overall, Universitas Negeri Malang has established a strong financial foundation that supports operational sustainability and future institutional growth. Continued efforts to diversify revenue sources, improve productive investment, and maintain balanced expenditure allocation will further strengthen the university's long-term financial resilience.

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