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Comparative Liquidity Analysis of TANGEDCO vs. Other SEBs (BESCOM, UPPCL, MSEDCL)

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Abstract: This paper provides a detailed analysis of the liquidity position of Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), a key player in the Indian power sector. Through comparative analysis with three other State Electricity Boards (SEBs)—BESCOM, UPPCL, and MSEDCL—this study identifies financial challenges, assesses short-term solvency, and presents strategic recommendations for improved liquidity management. It uses financial ratios, working capital trends, and benchmarking to analyses TANGEDCO's liquidity performance over time. The goal is to assist policymakers, financial planners, and utility managers in formulating sustainable financial strategies.

I. INTRODUCTION

Liquidity is a crucial financial indicator of an organization's ability to meet its short-term liabilities. For power distribution companies, adequate liquidity ensures continuity in operations, timely payments to suppliers, and enhanced stakeholder confidence. The Indian power sector, despite its growth in renewable capacity and electrification, is burdened with structural inefficiencies, delayed subsidies, and tariff-related challenges. TANGEDCO, operating under the Tamil Nadu Electricity Board (TNEB), faces significant issues in maintaining a healthy liquidity position. This paper examines TANGEDCO's liquidity against other SEBs to derive actionable insights and solutions.

NEED FOR THE STUDY

TANGEDCO's recurring cash flow difficulties have drawn the attention of regulatory bodies and the state government. The utility has faced repeated borrowing, delay in payment to suppliers, and inability to recover dues on time. The financial stress has led to increased interest expenses and loss of creditworthiness. A comparative analysis with BESCOM, UPPCL, and MSEDCL is necessary to determine whether these issues are isolated or sector-wide. Understanding the nature and extent of liquidity constraints will help design better reforms and strategies.

OBJECTIVES OF THE STUDY

1. To evaluate the short-term solvency of TANGEDCO using key liquidity ratios.
2. To compare TANGEDCO's liquidity with BESCOM, UPPCL, and MSEDCL.
3. To identify operational inefficiencies affecting liquidity.
4. To suggest recommendations for improving liquidity and financial planning.

MISSION

The Government of India, Mop have planned to give "Power for all by 2012". To achieve this, Tamil Nadu Generation and Distribution Corporation limited is making progress in Generation and Distribution sector. It is happy to inform that the electrification of all villages and towns were completed and electrification of all households is under progress.

VISION

To make TANGEDCO Synonymous with availability of quality and reliable power at competitive rates

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II. REVIEW OF LITERATURE

A literature review is an essential component of any research study as it provides a theoretical foundation, identifies gaps in existing research, and highlights key findings from previous studies. In the context of Comparative Liquidity Analysis of TANGEDCO vs. Other SEBs (BESCOM, UPPCL, MSEDCL), this review will explore past research, financial theories, and empirical studies related to liquidity analysis, financial health of power distribution companies, & benchmarking in the power sector.

III. RESEARCH METHODOLOGY

This study is based on secondary data collected from annual reports, regulatory filings, and published financial statements of TANGEDCO and other SEBs. The data covers a 5- year period, and ratios such as current ratio, quick ratio, cash ratio, working capital, and operating cash flow ratio are computed and analyzed. Trend analysis and inter-company comparisons are performed to assess relative financial performance. A ratio-based approach helps highlight both liquidity strengths and weaknesses for all the utilities considered.

RESEARCH DESIGN

A research gap represents the unexplored or underexplored areas within a given research field. In the context of liquidity analysis in State Electricity Boards (SEBs), particularly TANGEDCO, several aspects remain inadequately addressed. Existing literature provides insights into liquidity management in public sector utilities, yet comprehensive comparative studies on liquidity challenges faced by SEBs in different states remain scarce. Furthermore, there is limited research linking liquidity constraints to broader financial sustainability and operational efficiency in power distribution companies. The identification of these gaps will help in shaping strategies for improving financial stability and operational excellence within SEBs.

ANALYSIS OF KEY FINANCIAL RATIOS

TANGEDCO’s current ratio is significantly below 1, indicating insufficient current assets to meet short-term liabilities. Quick ratio and cash ratio are similarly weak, reflecting limited liquid reserves. Its working capital remains negative, and its receivables turnover is poor due to delays in collections. In contrast, BESCOM and MSEDCL maintain stable liquidity with current ratios above 1, efficient receivables management, and positive working capital. UPPCL, while holding higher liquidity ratios, demonstrates inefficiencies due to under-utilized assets.

TANGEDCO’s cash ratio remains between 0.01 and 0.02, clearly indicating immediate cash shortages. Meanwhile, MSEDCL and BESCOM manage moderate ratios of 0.05– 0.08, while UPPCL holds up to 0.28, suggesting idle funds. The operating cash flow ratio of TANGEDCO (~0.02) shows operational inefficiency, while UPPCL and MSEDCL perform better, converting operations into cash consistently. Inventory turnover and receivables turnover further reflect inefficiencies in TANGEDCO’s internal systems.

COMPARATIVE FINDINGS

UPPCL, though it maintains high liquidity ratios, has been criticized for inefficiency due to idle assets. MSEDCL excels in inventory and receivables turnover. TANGEDCO lags in every major metric. For example, TANGEDCO’s operating cash flow ratio remains close to 0.02, while MSEDCL records higher operational cash generation. BESCOM balances its debt and liquidity better, keeping its interest coverage ratio above the minimum standard.

DATA ANALYSIS AND INTERPRETATION

CURRENT RATIO

AIM:

To assess the short-term liquidity position of each SEB. formula = Current Ratio = Current Assets / Current Liabilities
Current Assets (CA): These are all assets that a company expects to convert into cash or use up within one year—like cash, receivables, and inventory.

Current Liabilities (CL): These are all short-term obligations that a company must pay within one year—like trade payables, short-term loans, and accrued expenses.
Current Ratio (CR): This ratio shows the company’s ability to pay its short-term obligations using its short-term assets.

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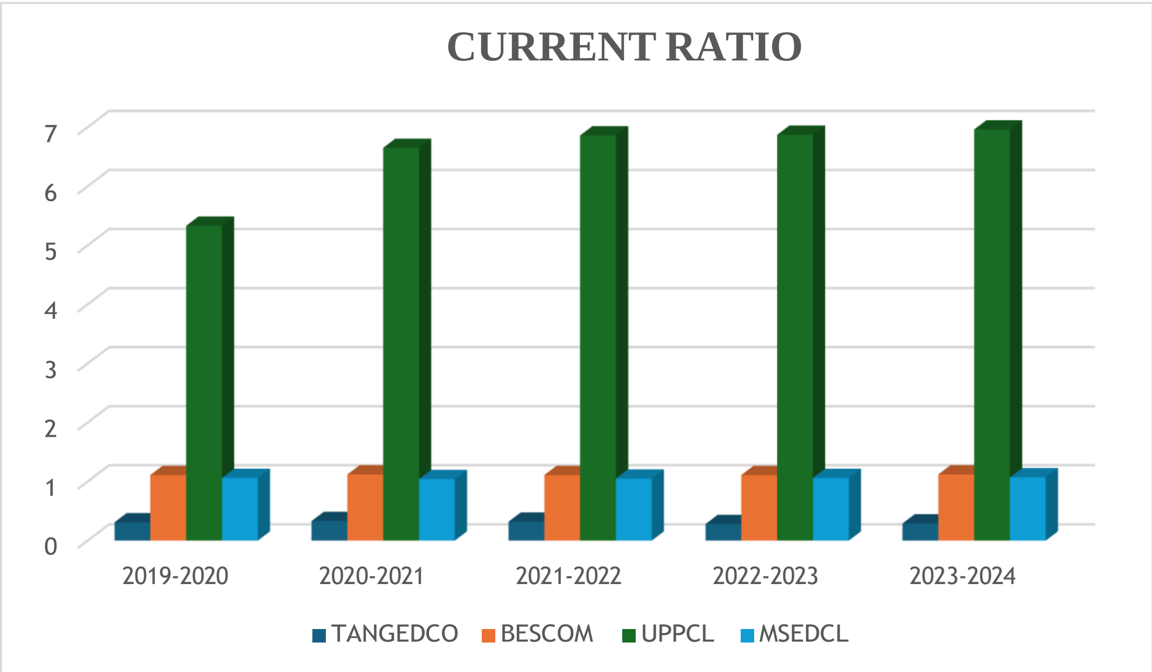
This shows whether the company can meet its short-term obligations with its short-term assets.

DATA TABLE:

YEAR	TANGEDCO	BESCOM	UPPCL	MSEDCL
2019-20	0.31	1.11	5.33	1.06
2020-21	0.33	1.12	6.65	1.04
2021-22	0.32	1.11	6.85	1.04
2022-23	0.27	1.11	6.86	1.06
2023-24	0.28	1.12	6.95	1.06

VISUALIZATION TOOL:



INTERPRETATION:

TANGEDCO's alarming trend:
The Current Ratio for TANGEDCO remains well below the ideal benchmark of 1, indicating poor short-term solvency. The decline in recent years (from 0.33 to 0.28) reflects worsening liquidity conditions.
BESCOM shows steady control:
BESCOM maintained a stable ratio around 1.11–1.12, which is a sign of balanced working capital. This reflects a well-managed current asset-to-liability position.
UPPCL again too high:
UPPCL's ratio is excessively high (5.33 to 6.95), signalling significant idle current assets. While it shows strong liquidity, it may also indicate inefficient capital utilization.
MSEDCL consistently just above 1:
MSEDCL's Current Ratio lies around 1.04–1.06, reflecting ideal short-term solvency. It demonstrates financial discipline in managing payables and inventories.

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QUICK RATIO

AIM:

To evaluate the immediate short-term liquidity position of the SEBs by measuring their ability to pay current liabilities using the most liquid assets (excluding inventory and prepaid items). This helps determine how efficiently each SEB can meet urgent obligations without relying on stock clearance.

Quick Ratio = (Current Assets − Inventories − Prepaid Expenses) ÷ Current Liabilities

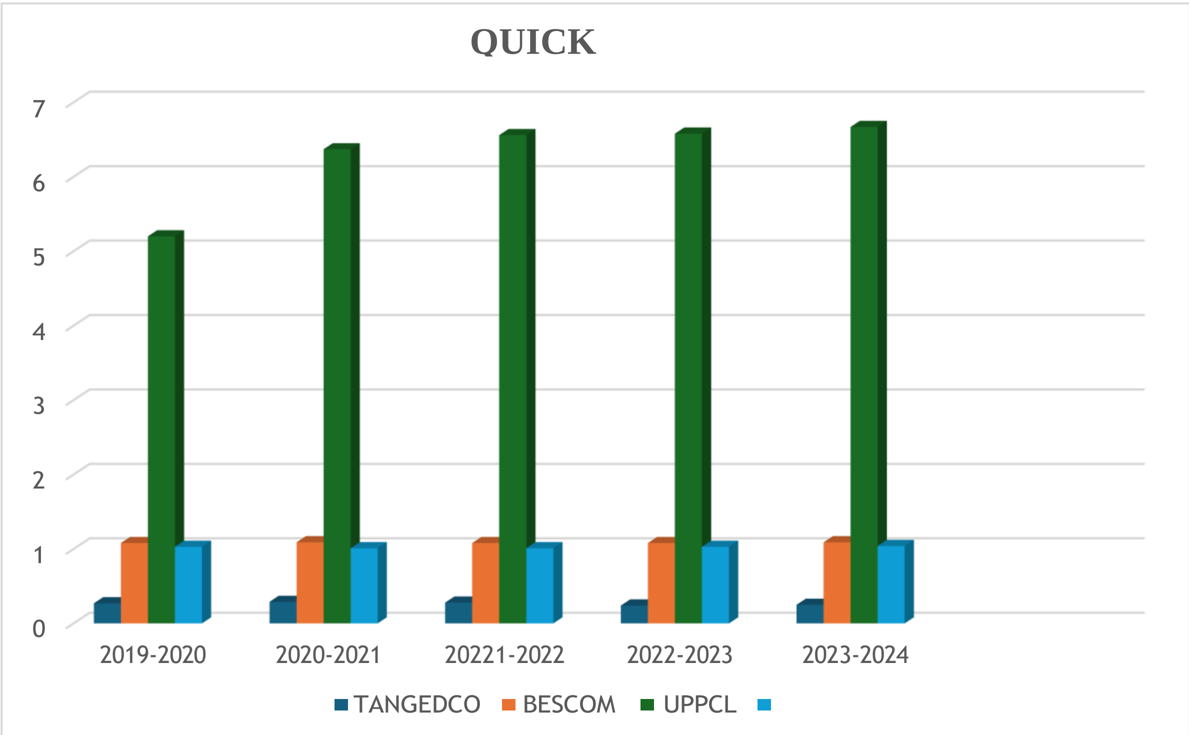
Quick Ratio measures how well a company can cover its short-term liabilities using only its quick assets (cash, bank, receivables).

Inventories and prepaid items are excluded because they are not easily convertible to cash. A ratio >1 is generally considered strong.
A ratio <1 may indicate possible short-term liquidity issues.

DATA TABLE:

YEAR	TANGEDCO	BESCOM	UPPCL	MSEDCL
2019-20	0.27	1.08	5.20	1.03
2020-21	0.29	1.09	6.37	1.01
2021-22	0.28	1.08	6.56	1.01
2022-23	0.24	1.08	6.58	1.03
2023-24	0.25	1.09	6.67	1.04

VISUALIZATION TOOL:



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INTERPRETATION:

TANGEDCO consistently below 1:
TANGEDCO's Quick Ratio remained between 0.24 and 0.29, indicating inadequate quick assets to cover its current liabilities. This reflects a weak liquidity position and dependence on external or delayed funding to meet short-term obligations.
BESCOM stable and healthy:
BESCOM maintained a steady Quick Ratio of around 1.08–1.09 across all five years. This suggests strong short-term liquidity and efficient management of cash, receivables, and liabilities.
UPPCL extremely high ratios:
UPPCL's Quick Ratio ranged from 5.20 to 6.67, indicating excess quick assets. While this shows excellent liquidity, it could also mean inefficient use of resources, possibly due to idle cash or slow investments in productive areas.
MSEDCL slightly above benchmark:
MSEDCL hovered just above the standard benchmark (1.00–1.04). This indicates adequate liquidity, but the consistency in low variation suggests tight but controlled working capital.

DISCUSSION

The results indicate that TANGEDCO's challenges are rooted in poor financial planning, delayed subsidy inflows, and poor collection efficiency. Government-regulated tariffs restrict pricing flexibility, further exacerbating the problem. Lack of digital adoption in billing and collections has worsened receivables. Meanwhile, peers like BESCOM have invested in automation, resulting in stronger liquidity control.

TANGEDCO must understand that its liquidity crisis is not just a financial issue but also a reflection of operational inefficiency. Poor asset utilization, slow collection cycles, and limited use of technology create a compounding effect. Addressing these core problems will lead to sustainable liquidity improvements. Peer comparison shows that strategic decisions in automation, funding mix, and working capital management yield visible results.

RECOMMENDATIONS

TANGEDCO must implement the following:

- Automate billing and receivables using advanced ERP systems to ensure faster payments.
- Renegotiate supplier terms to improve payable cycles and maintain cash buffers.
- Improve digital payment adoption and consumer engagement through incentives.
- Reduce reliance on short-term debt through financial restructuring and better planning.
- Align with central government's financial bailout schemes with strict fiscal discipline.
- Regularly monitor liquidity ratios to ensure financial health.
- Establish internal cash reserve policies to deal with seasonal cash flow gaps.
- Consider equity-based funding or infrastructure investment trusts (InvITs) for reducing debt burden.

These strategies are not only necessary but urgent. TANGEDCO must learn from BESCOM's consistent receivables management and MSEDCL's inventory efficiency. UPPCL must work on using its liquidity more productively. The collective goal should be sustainable operations through disciplined financial management.

To improve its financial resilience, TANGEDCO must adopt a multidimensional liquidity management strategy grounded in operational efficiency, technological integration, and strategic financial restructuring. Firstly, automation of billing systems and integration of real-time payment tracking tools will drastically reduce the receivables collection period. Implementation of smart meters and mobile-based payment applications can increase consumer compliance and accelerate cash inflows. Secondly, renegotiating supplier terms to establish staggered or performance-based payment schedules will ease pressure on immediate cash requirements.

FINDINGS

This study presents a comprehensive liquidity and efficiency analysis of four State Electricity Boards (SEBs): TANGEDCO, BESCOM, UPPCL, and MSEDCL, using 15 financial ratios.
TANGEDCO's current ratio consistently remained below 0.33, signaling poor short-term solvency. BESCOM and MSEDCL maintained a stable ratio above 1, while UPPCL's extremely high ratio (6+) reflects excess idle assets and liquidity inefficiency.

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SUGGESTIONS

TANGEDCO should focus on improving its short-term liquidity by either reducing current liabilities or increasing liquid assets. Efforts must be made to speed up receivables collection and lower inventory holding periods to improve cash availability. Cash management strategies need strengthening through enhanced revenue collection, renegotiation of payable terms, and streamlining operational cash flows. Given its large negative working capital, TANGEDCO should consider financial restructuring options or seek support from the government. Collection efficiency must be improved by automating billing systems and enforcing penalties for delayed payments. Asset utilization can be enhanced by deploying idle assets more effectively and aligning capital investments with operational needs.

IV. CONCLUSION

This comparative liquidity study reveals TANGEDCO's critical financial weaknesses when compared with other SEBs. By learning from BESCOM's and MSEDCL's practices—including receivables management, automation, and prudent debt usage— TANGEDCO can significantly improve its financial health. Addressing structural inefficiencies and adopting technology-driven solutions will be essential for long-term liquidity improvement and service delivery enhancement in Tamil Nadu's power sector.

The power sector cannot survive without stable cash flow, and TANGEDCO's long-term survival depends on adopting the right reforms. With policy support, operational discipline, and lessons from peers, TANGEDCO can turn around its financial position and build a path toward sustainable electricity distribution in the state.

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