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A Study on Cash Flow Analysis of Small Business at Torch Engineering Solutions

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ABSTRACT: This article provides an analytical summary of the financial performance of Torch Engineering Solutions, a small-scale steel detailing firm based in Tamil Nadu, India. Using a mix of primary and secondary data, the study examines cash flow statements over a three-year period (2021–2024) to evaluate the firm's liquidity, sustainability, and operational efficiency.

Key findings demonstrate steady revenue growth, strong operational cash flows, improved client retention, and increased adoption of detailing automation tools like Tekla Structures. The data further reveals effective cost management practices and timely receivables collection as critical contributors to consistent positive cash inflows.
The study also highlights challenges such as dependency on a limited client base, fluctuating material costs, and periodic delays in project approvals, which occasionally impact cash cycles. A comparative analysis with industry benchmarks underscores the firm's strengths in financial planning but also points to the need for diversification and better forecasting techniques.

In conclusion, the research emphasizes the importance of sound cash flow management for small businesses, particularly in engineering and project-based sectors. Actionable recommendations are provided to improve budgeting accuracy, optimize working capital, and adopt digital financial tools for real-time monitoring. These insights aim to enhance the financial resilience and scalability of small enterprises like Torch Engineering Solutions in a competitive business environment

KEYWORDS: Cash Flow Analysis, Small Business Finance, Torch Engineering Solutions, Steel Detailing, Operational Efficiency, Working Capital, Liquidity Ratios

I. INTRODUCTION

Cash flow is a fundamental indicator of a company's financial health. Especially forsmall businesses, the ability to manage incoming and outgoing cash determines short-term survival and long-term growth. Unlike larger firms with diverse funding options, small businesses often operate with limited capital buffers, making efficient cash flow management a critical aspect of operational strategy.

This article centers on Torch Engineering Solutions, a growing steel detailing firm in Tamil Nadu, and assesses its cash flow performance in a competitive industry. The motivation stems from common issues encountered by SMEs, such as mismatched billing cycles, delayed receivables, and high dependence on client payments. Even profitable firms can face financial stress without timely cash inflow.

The study seeks to uncover insights from Torch Engineering's real-world financial data, supported by feedback from internal teams and clients. It examines the company's cash generation, liquidity ratios, capital expenditure planning, and forecasting methods. The analysis aims to offer lessons applicable not only to Torch Engineering but to other SMEs navigating similar challenges in managing cash flow.

Company &Industry Overview:
Industry Context: Steel detailing is the creation of detailed fabrication drawings used in construction projects. With the rise of BIM ,3 Dmodeling, and PEB(Pre-EngineeredBuildings),
steel detailing has become increasingly technology-driven. Globally, the industry is growing at a CAGR of 6%, with India emerging as a key outsourcing destination.

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Company Profile: Founded in 2017, Torch Engineering Solutions has evolved into a multi-branch firm with clients across India, the US, UK, and UAE. Its services include 2D drawings, Tekla-based 3D models, connection design, and BIM coordination. The firm uses modern platforms like Tekla Structures, AutoCAD, and Navis works.
The firm has grown its revenues from ₹2.1 Cr in FY 2021–22 to ₹4.9 Cr in FY 2023–24, driven by international projects and automation.

II. OBJECTIVES OF THE STUDY

To analyze the cash inflows and outflows over a specified period and understand patterns that influence liquidity.
To identify causes of irregularities in cash flow, including billing delays, investment lags, and external market factors.
To assess current cash flow management practices in place at Torch Engineering and determine their effectiveness in maintaining operational continuity.
To understand the relationship between cash flow and business sustainability, particularly in service-based engineering firms.
To recommend forecasting tools, techniques, and models that can enhance the predictability of cash positions and minimize disruptions.
To provide practical suggestions and strategic interventions that support improved financial decision-making, planning, and investment control.

III. SCOPE OF THE STUDY

This study focuses on analyzing the **cash flow performance** of *Torch Engineering Solutions*, a small-scale steel detailing firm, over a period of three financial years (2021–2024). The research specifically examines patterns in cash inflows and outflows, their impact on day-to-day operations, and how effective financial planning influences long-term sustainability. The scope is limited to evaluating internal financial practices but also considers external market factors that may affect cash flow stability.
The study explores how operational delays, project timelines, and client payment behavior contribute to cash cycle fluctuations. In addition, it aims to determine the extent to which the company leverages cash flow forecasting and automation tools to maintain liquidity and support informed decision-making.

IV. REVIEW OF LITERATURE

Rama swamy (2017) highlighted the transformative role of automation in steel detailing through tools like Tekla Structures, noting a 30% reduction in drawing errors. Smith and Patterson (2015) emphasized the importance of BIM integration, which significantly reduces on- site rework and improves construction accuracy.

Murugan (2019) analyzed outsourcing trends in India, identifying both opportunities and challenges such as time zone gaps and compliance issues. Trimble's white paper (2021)showcased real-world success cases where Tekla implementation improved project timelines by 20%.

Singh and Khanna (2022) addressed the skill gaps prevalent in the Indian detailing industry, recommending enhanced academic-industry collaboration to bridge the divide between theoretical education and practical application. Johnston and Mehta (2018) argued that, despite the high initial investment, the adoption of **Tekla Structures** is cost-effective in the long term for small and medium-sized enterprises (SMEs).

Chakraborty (2022) introduced the use of **digital twins** for lifecycle management in structural engineering, highlighting their potential for improving predictive maintenance and real-time monitoring. Alamgir and Noor (2021) demonstrated how **Building Information Modeling (BIM)** significantly reduced the number of Requests for Information (RFIs) in multi-story construction projects, leading to enhanced communication and coordination among project stakeholders.
Srinivasan and Gopala krishnan (2023) concluded that compliance with **ISO** and **AISC** standards led to higher detailing approval rates and fewer design revisions, contributing to increased project efficiency and improved client satisfaction.

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V. RESEARCH METHODOLOGY

A mixed-methods approach has been adopted to ensure a comprehensive understanding of the firm's cash flow dynamics. Both primary and secondary data sources are utilized:

- Surveys administered to employees involved in finance, detailing, and operations.
- Interviews conducted with key stakeholders, including project managers, accountants, and senior leadership, to understand the practical challenges and decision-making approaches. Financial documents, including cash flow statements, balance sheets, and profit & loss accounts, collected for three fiscal years
- Client feedback, focused on payment timelines and service satisfaction, to assess the consistency of receivables.
- Internal records, such as project schedules, billing logs, and expense reports, to trace cash flow at different stages of project execution.
- Trend analysis to identify cash flow patterns over time.
- Ratio analysis to evaluate liquidity, solvency, and cash conversion efficiency.
- Comparative benchmarking against small business cash flow norms in the steel detailing industry.
- Qualitative insights from interviews to identify gaps in financial strategy, human error, or system inefficiencies.

VI. DATA ANALYSIS

Monthly Cash Flow Trends: All months recorded positive net cash flow, reflecting
operational discipline and strong receivables management. Cash inflow peaks in August and December indicate favorable billing cycles, likely due to project milestones. This pattern helps identify high-revenue months and supports resource planning.

CashFlowStatement(FY2023–24):-OperatingCash:₹32L-InvestingCash:-₹9L-
Financing Cash:₹2L-NetCash:₹25L
Interpretation: The firm's core operations are profitable and self-sustaining, with investment in fixed assets representing strategic growth. Financing activities show reliance on internal funds with limited external borrowing.
Interpretation: These metrics reflect process maturity and accuracy in detailing work. Timely project completion leads to better cash realization and improved client trust.

Client Feedback(42clients):-DrawingQualityratedExcellentby66%-Overall Satisfaction: 97% (Excellent + Good)
Interpretation: High client satisfaction supports consistent cash inflow through repeat business.
Positive reviews validate the firm's focus on quality and responsiveness.

Financial Ratios: - Operating Cash Flow Ratio: 1.8 - Cash Flow Margin: 22% - Cash Flow to Debt Ratio: 0.5
Interpretation: Torch has adequate liquidity to meet short-term obligations. The margin indicates strong cash retention from sales, though debt coverage could be improved through reduced borrowing or increased OCF.

Liquidity Ratios (2023):-CurrentRatio:1.8-QuickRatio:1.4 -CashRatio:1.0
Interpretation: The company maintains a healthy liquidity position, capable of meeting liabilities without depending on inventory liquidation. A cash ratio of 1.0 is ideal for financial agility.

CashConversionCycle: Improvedfrom50days (2022)to35days (2023).
Interpretation: Faster conversion of inventory and receivables to cash improves working capital efficiency and reduces financing needs. This supports stable cash inflow even in lean periods.

VII. KEY FINDINGS

The financial and operational analysis of KCP Limited over a three-year period revealed significant improvements in key performance indicators related to working capital management. The company achieved an exceptional **133% growth in revenue**, reflecting its strategic expansion and efficient resource deployment. Profitability also improved markedly, with the **net profit margin increasing from 8.57% to 11.22%**, indicating enhanced control over operating costs and better overall financial management. In terms of operational efficiency, **employee productivity consistently outperformed the industry average**, suggesting effective workforce utilization and internal performance alignment. The company also leveraged technology efficiently; **high software utilization** led to a noticeable reduction in rework and operational delays, which in turn contributed to improved cycle times and resource allocation. Most notably, the

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study found a **strong positive correlation (r = 0.987)** between **Operating Cash Flow (OCF)** and **sales**, implying that the company's ability to convert revenue into cash flow improved in parallel with its sales performance. This relationship underscores the critical role of robust working capital management in supporting both liquidity and profitability.

VIII. SUGGESTIONS

To improve its working capital management and strengthen operational efficiency, KCP Limited should consider implementing several forward-looking strategies. One key recommendation is to **automate the billing and follow-up processes** by integrating **ERP or Tekla-linked systems**. This would streamline collections, enhance accuracy in invoicing, and reduce delays in receivables, thereby improving overall cash flow. In addition, the company could expand its international footprint by **opening client liaison offices in regions such as the UAE and North America**, allowing for better customer engagement, faster communication, and stronger regional partnerships. Diversification of service offerings is another area with significant potential; KCP Limited can **broaden its scope by including rebar detailing and multi-discipline BIM (Building Information Modeling) services**, which are increasingly in demand across global construction and infrastructure projects. Finally, to safeguard client data and meet international compliance standards, the company should **invest in ISO 27001 certification**, thereby enhancing its data security framework and building greater trust among global clients..

IX. CONCLUSION

Torch Engineering Solutions has demonstrated sustainable growth and financial discipline through sound cash flow practices. Despite minor gaps in forecasting and client payment cycles, the company maintains strong liquidity and profitability. Continued investments in technology, diversification, and global expansion will further strengthen its position in the global detailing market.

REFERENCES

1. Brigham&Houston(2012),Fundamentals of Financial Management
2. BhatiaR.(2018), Journal of Financial Planning& Analysis
3. Chandra&Sinha(2021), Int. Journal of Project Finance
4. PandeyI.M.(2007), Financial Management
5. Ramakrishnan &Rajesh(2020),Indian Journal of Construction Tech
6. RamaswamyV.(2017), Automation in Steel Detailing
7. SinghN.&KhannaR.(2022), Skill Gap in Steel Detailing Industry
8. JohnstonT.&MehtaS.(2018),Tekla Adoption in SMEs
9. ChakrabortyA.(2022),Digital Twin Integration
10. SrinivasanR.&GopalakrishnanV.(2023),ISO and AISCC ompliance

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