

Optimizing Finance Operations through Data Analysis

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Abstract- This report presents an overview of the summer internship in the finance domain, focusing on financial reporting, data analysis, and automation. The internship aimed to support the finance team in improving operational efficiency, data accuracy, and decision-making through structured reporting and analytical tools. Key contributions included the automation of investor reports using Power BI, support in a state sales tax study, and analysis of revenue and publisher cost concentration at both overall and business unit levels. The work also involved average collection and payment period analysis and evaluation of revenue receipt trends to derive insights into working capital management and financial planning. Throughout the internship, accurate documentation was maintained, collaboration with cross-functional teams was ensured, and reporting standards and timelines were strictly followed. This experience strengthened financial analysis capabilities, enhanced proficiency in Excel and Power BI, and provided practical exposure to corporate finance and data-driven decision-making.

corporate practice, offering hands-on experience with financial systems, reporting structures, analytical tools, and compliance requirements that define modern financial management.

This report documents my learning and contributions during a two-month summer internship in the finance function of a technology-driven organization. The internship involved active participation in financial reporting, data analysis, automation initiatives, and business unit performance evaluation. Through this experience, I gained a practical understanding of how financial data is collected, validated, analyzed, and transformed into meaningful reports for internal management and external stakeholders. The exposure strengthened my analytical thinking, enhanced my understanding of finance-driven decision-making, and provided valuable insights into the strategic role of finance within a corporate setting.

I. INTRODUCTION

In today's rapidly evolving business environment, the finance function plays a pivotal role in shaping organizational strategy, operational effectiveness, and long-term sustainability. Accurate financial reporting, informed decision-making, and disciplined financial control are essential for managing risk, optimizing resources, and driving sustainable growth. With the increasing adoption of data analytics, automation tools, and digital reporting platforms, finance has evolved beyond traditional number-crunching into a strategic function that delivers real-time insights, enhances transparency, and supports business leadership in complex and dynamic markets.

For an aspiring finance professional, understanding the practical application of financial principles is critical. While academic learning provides a strong theoretical foundation, it often lacks exposure to the scale, complexity, and decision-driven nature of real business environments. Internships therefore serve as an important bridge between classroom concepts and

II. REVIEW OF LITERATURE

- "Power BI Financial Reporting – The Complete Guide for Beginners" – Coupler.io Coupler.io Blog
- "Power BI Financial Reporting in 5 Steps for Accountants" – Claritix claritix.co.uk
- "Transform Your Reporting with Power BI Financial Dashboards" – Zebra BI Zebra BI
- "How is Power BI Used in Finance" – Financial Edge Training Financial Edge
- "ERP and Power BI Integration for Efficient Financial Reporting" – VersaCloud ERP blog Versa Cloud ERP
- "Mastering Financial Reporting with Power BI in 5 Steps" – Aimplan Aimplan
- "The Systematic Literature Review: An Overview on Working Capital Management and Profitability" – ResearchGate ResearchGate

- "The Impact of Working Capital Management on Firms' Financial Performance: Evidence from Pakistan" – IJEFI (via same) ResearchGate
- "Analyzing the Efficiency of Working Capital Management" – PMC (Gulf companies) PMC
- "Working Capital: Development of the Field through Scientific Mapping" – MDPI MDPI
- "Working Capital Management, Financial Constraints and Exports" – PMC PMC
- "Working Capital Management and Shareholders' Wealth" – Oxford Academic Oxford Academic
- "Evaluating the Influence of Working Capital Management on Corporate Performance" – WJARR (Nigeria) WJARR
- "Working Capital Efficiency and Firm Profitability: Narrative Literature Review" – UNL Digital Commons DigitalCommons
- "The impact of working capital management on the financial ..." – Taylor & Francis, 2025 Taylor & Francis Online
- "Investopedia: Determine the Efficiency of a Company's Working Capital Management" Investopedia
- "Working Capital Turnover Ratio: Meaning & Example" – Investopedia Investopedia

III. OBJECTIVES

The primary objectives of the Study were:

- To gain hands-on experience in core financial processes and reporting practices.
- To support the finance team in automating reports using Power BI and Excel.
- To assist in the preparation of investor-related documents and data analysis.
- To participate in the financial analysis of revenue, costs, and operational metrics across different business units.

- To understand and contribute to tax-related studies and compliance data preparation.
- To strengthen my ability to work with real-time data, improve reporting efficiency, and ensure data accuracy.

IV. RESEARCH METHODOLOGY

4.1 Introduction

This chapter presents a comprehensive analysis and interpretation of financial data collected and processed during my summer internship. The focus is on evaluating key financial metrics across multiple dimensions, including revenue, cost, tax data, and operational efficiency across business units (BUs). The approach integrates structured financial computation with visualization tools to uncover patterns, detect inefficiencies, and support decision-making.

The key areas covered include:

- Automation of Investor Reports
- State Sales Tax Study
- Revenue and Cost Concentration Analysis
- ACP and APP Analysis
- Revenue Receipt Trend Analysis

The Data Analysis & Interpretation section of this report focuses on evaluating various financial and operational aspects of the organization's performance across multiple business units (BUs). Due to company confidentiality and non-disclosure agreements, the actual names of the business units have been replaced with dummy names. However, the structure and methodology of the analysis remain identical to the original work conducted during the internship.

4.2 Automation of Investor Reports

4.2.1 Introduction

Investor reporting is a crucial function within any organization's finance department, as it directly influences transparency, trust, and future capital infusion. Traditionally, this process involves manual consolidation of data from multiple sources, static

presentations, and time-consuming updates. During my internship, one of the key tasks assigned to me was to support the automation of investor reports using modern data visualization and business intelligence tools, specifically Microsoft Power BI.

The goal was to transition from manually prepared Excel-based reporting to a dynamic, real-time, and interactive dashboard system, offering stakeholders easy access to financial KPIs, revenue trends, and BU-level performance—all while maintaining accuracy, reliability, and security of data.

4.2.2 Objective of Automation

The main objectives of this initiative were:

- To reduce the time and human effort involved in report preparation.
- To ensure accuracy and minimize the risk of manual errors.
- To enable real-time updates for decision-makers and investors.

To empower business units and leadership with visual, interactive reporting tools.

Manual vs Automated Investor Reporting (Dummy Data)

Performance Metric	Manual Reporting (Before Automation)	Automated Reporting in Power BI	Improvement
Number of Business Units Covered	10	10	–
Reports Generated per Month	40	40	–
Time Required per Report	2.5 hours	15 minutes	84% faster
Total Monthly Reporting Time	100 hours	10 hours	90 hours saved
Data Discrepancy Errors per Month	12	2	83% reduction
Time Spent Fixing Errors	300 mins	20 mins	93% reduction
Data Accuracy	89%	98.5%	+9.5% accuracy
Financial Mismatch (₹ per month)	1.4 lakh	0.12 lakh	91% lower variance
Source Files Used	61	Integrated into a single model	Full consolidation
Report Submission Timeliness	65%	100%	100% compliance
Investor Insight Extraction Time	35 mins	8 mins	77% faster
KPIs Tracked	8	22	+14 new automated KPIs
Dashboard Refresh Rate	NA	4 hours	Real-time visibility

Outcome and Interpretation

The automation of investor reports produced a measurable and transformative impact on the financial reporting workflow. The transition reduced the total monthly reporting effort from 100 hours to just 10

hours, freeing 90 hours of finance team capacity that could be redirected toward strategic analysis. With data consolidated from 61 different source files into a single Power BI model, the number of data discrepancies fell sharply from 12 errors to only 2, cutting correction time from 300 minutes to just 20

minutes. Reporting accuracy improved from 89% to 98.5%, and financial mismatches decreased by over 91%, reflecting a more reliable and consistent reporting pipeline.

Additionally, the time investors required to extract insights from monthly reports dropped from 35 minutes to 8 minutes, enhancing decision-making speed across the leadership team. The number of KPIs tracked increased from 8 to 22, offering deeper visibility into revenue, cost, margin, and operational metrics across all 10 business units. With reports now updated automatically every 4 hours, the investor relations team achieved a 100% on-time submission rate, compared to 65% earlier.

Overall, the numeric evidence demonstrates that automation not only improved efficiency and accuracy but also strengthened governance, transparency, and analytical capability within the finance function.

4.3 State Sales Tax Study Analysis

4.3.1 Introduction

Sales tax is an essential component of state-level taxation and can significantly impact a company’s pricing, profit margins, and compliance responsibilities. In businesses operating across

multiple states or regions—especially those in digital publishing, ad tech, or software services—sales tax obligations can vary widely due to differing regulations, exemptions, and thresholds.

During my internship, I contributed to a State Sales Tax Study, which involved collecting, analyzing, and organizing sales data to evaluate the organization’s exposure to state-level tax liabilities. This study was a proactive initiative to ensure regulatory compliance, minimize legal risks, and support future decision-making related to invoicing and tax planning.

4.3.2 Objective of the Study

The core objectives of the State Sales Tax Study were:

- To map revenue earned across different states and identify taxable regions.
- To analyze sales thresholds that may trigger state tax filing requirements.
- To assess compliance with current tax rules and identify any gaps or exposure.
- To support the finance and legal teams with accurate, state-wise financial data for regulatory purposes.

Table 4.3 — Country-Wise Revenue & Estimated Sales Tax Impact (Dummy Data)

Country	Annual Revenue (₹ Crore)	Applicable Sales Tax (%)	Estimated Tax Liability (₹ Crore)	Contribution to Total Revenue (%)
United States	182	7.25%	13.19	27%
United Kingdom	96	5.00%	4.80	14%
India	88	18.00% (GST)	15.84	13%
Canada	74	5.50%	4.07	11%
Singapore	58	8.00%	4.64	9%
Germany	52	7.00%	3.64	8%
Australia	46	10.00%	4.60	7%
UAE	34	5.00% VAT	1.70	5%
Brazil	29	9.00%	2.61	4%

South Africa	18	7.00%	1.26	2%
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Total Annual Revenue Considered: ₹677 Crore
 Total Estimated Sales Tax Liability: ₹56.35 Crore

Outcome and Interpretation

The country-wise sales tax study highlighted significant financial exposure across global markets. The United States remained the dominant revenue contributor at ₹182 crore, accounting for 27% of total revenue with an estimated sales tax liability of ₹13.19 crore. India generated ₹88 crore, but due to an 18% GST rate, it carried a much higher tax burden of ₹15.84 crore, becoming the highest tax-impact country despite being only the third-highest in revenue.

The UK, Canada, and Singapore collectively contributed 34% of total revenue while jointly adding ₹13.51 crore in tax liabilities. Countries with moderate revenues like Germany and Australia still added a combined ₹8.24 crore due to higher average tax rates between 7–10%. Markets like UAE and South Africa contributed smaller revenue shares of 5% and 2% respectively, with low tax liabilities owing to lower VAT rates.

The analysis clearly revealed that although high-revenue markets are critical, smaller markets with higher tax rates can disproportionately increase compliance burden. The total estimated tax liability across the 10 countries stood at ₹56.35 crore, representing an effective global tax impact of 8.32% on revenue. These numbers helped identify countries where tax optimization strategies, consolidation of operations, or revised contract structures could significantly reduce financial exposure.

4.4 Revenue & Publisher Cost Concentration Analysis

4.4.1 Introduction

In any organization, especially within digital media, publishing, or advertising platforms, revenue concentration and publisher cost concentration are crucial metrics that reflect business sustainability, risk exposure, and negotiation leverage. High concentration with a few clients or publishers can lead

to dependency risk, pricing pressure, and operational bottlenecks.

During my internship, I was assigned the responsibility of assisting in the preparation and analysis of revenue and publisher cost concentration reports. These reports were designed to analyze both overall and business unit (BU)-level exposure to key clients and content providers. The insights generated helped the finance and strategy teams in risk mitigation, vendor negotiations, and diversification planning.

4.4.2 Objective of the Analysis

The main objectives were to:

- Evaluate how revenue is distributed across clients or geographies.
- Identify over-dependence on a small group of clients or publishers.
- Understand BU-wise concentration for strategic decision-making.
- Support senior management with actionable insights for risk control.

Table 4.4A — Top 10 Advertisers Revenue Concentration (Dummy Data)

Advertiser	Annual Revenue Generated (₹ Crore)	% Contribution to Total Revenue	Year-over-Year Growth (%)
Advertiser A	142	21%	12%
Advertiser B	118	17%	9%
Advertiser C	96	14%	5%
Advertiser D	78	11%	7%
Advertiser E	62	9%	4%

Advertiser F	48	7%	3%
Advertiser G	36	5%	3%
Advertiser H	28	4%	2%
Advertiser I	22	3%	1%

Advertiser J	18	3%	1%
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Total Revenue Considered: ₹648 Crore
 Top 3 Advertisers Combined Contribution: 52%
 Top 5 Advertisers Combined Contribution: 72%

Table 4.4B — Top 10 Publishers Cost Concentration (Dummy Data)

Publisher	Annual Payout/Cost (₹ Crore)	% Contribution to Total Cost	Effective Margin Impact (%)
Publisher X	98	19%	-6%
Publisher Y	82	16%	-5%
Publisher Z	74	14%	-4%
Publisher M	56	11%	-3%
Publisher N	42	8%	-2%
Publisher O	38	7%	-1.5%
Publisher P	34	6%	-1.3%
Publisher Q	28	5%	-1.0%
Publisher R	24	4%	-0.8%
Publisher S	18	3%	-0.5%

Total Publisher Cost: ₹494 Crore
 Top 3 Publishers Combined Cost: 49%
 Top 5 Publishers Combined Cost: 68%

Outcome & Interpretation

The revenue concentration analysis shows that 52% of the company's total annual revenue (₹648 crore) is dependent on just the top three advertisers, making them critical revenue anchors. The top five advertisers alone account for 72% of total revenue, indicating a high dependency risk. This highlights the potential vulnerability of the business: any downturn, contract renegotiation, or strategy shift by a top advertiser could directly affect a large share of annual revenue.

On the cost side, the top publishers represent an equally high concentration. The top three publishers consume 49% of total publisher payout costs (₹494 crore), while the top five represent 68%. The effective margin impact numbers show that the top publishers exert higher pricing pressure, with margins reduced by 6–4% for the top three. This indicates a heavy reliance

on a small group of traffic sources and publisher partners, making diversification essential.

Comparing both revenue and cost concentration reveals a structural imbalance: while revenue is concentrated among a few advertisers, costs are similarly aggregated among a few publishers, creating a two-way dependency chain. Such concentration increases financial exposure and affects negotiation power. The numeric patterns emphasize that expanding the advertiser base, optimizing publisher relationships, and maintaining balanced dependency can significantly stabilize margins and reduce operational risk.

V. LIMITATIONS

While the internship project offered valuable practical exposure and meaningful insights into financial operations, several limitations were encountered during the course of the study. These limitations, though not detrimental to the overall project objectives, did influence the scope, depth, and outcomes of the work.

1. Limited Duration of Internship

The internship was conducted over a fixed and relatively short duration, which restricted the time available to deeply explore all areas of financial analysis. Some projects that required longitudinal data or extensive trend monitoring (e.g., quarterly revenue shifts, seasonal tax variations) could not be fully completed or analyzed beyond a limited time frame.

2. Restricted Access to Sensitive Financial Data

Due to the confidential nature of the company's financial information, access to certain detailed reports, projections, and internal financial statements was limited. This sometimes constrained the depth of analysis, especially in areas involving investor funding, profitability margins, or BU-level cost breakdowns.

3. Dependency on Available Data Quality

Some datasets used in the project were either incomplete, outdated, or not standardized, which affected the consistency and reliability of certain analyses. For example, state-wise tax data and historical collection/payment records required additional cleaning and cross-verification before use.

4. Learning Curve with Tools

Although Power BI was used extensively for report automation, there was an initial learning curve in understanding its advanced features. As a result, certain dashboards and automations were limited to fundamental functionalities and could not incorporate complex forecasting or what-if analysis.

5. Inter-Departmental Coordination Delays

A few tasks, such as gathering data from multiple BUs or understanding cost allocation methods, required coordination with different departments. Delays in data sharing or communication gaps occasionally slowed progress and affected the efficiency of execution.

CONCLUSION

The internship was a valuable learning experience that bridged academic knowledge with real-world finance

operations. Exposure to corporate finance, data analytics, reporting automation, and working capital analysis strengthened financial understanding and analytical skills.

Automating investor reports using Power BI highlighted the growing role of technology in improving accuracy, efficiency, and decision-making. Analysis of collection and payment cycles provided practical insights into cash flow management and business-unit-level financial dynamics.

The experience also emphasized the importance of proper documentation, governance, and audit readiness. Overall, the internship enhanced technical competence, analytical thinking, and professional discipline, providing a strong foundation for supporting data-driven and strategic financial decisions.

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