



Advanced Financial Data Analysis

Presented by Mahmoud Ali – Data Analysis Challenge 2025

Project Objective & Tools

Goal:

- Analyze financial
- Operational.
- Customer.
- risk data to generate actionable insights.

Tools Used:

- Power BI (primary).
- Excel for data pre-processing.
- DAX for KPIs and Measures...

Dashboard Structure

1. **Company Overview** – High-level financial snapshot.
2. **Financial Performance** – Deep-dive into revenue, expenses, profit.
3. **Revenue Breakdown** – Analyze income streams by segment and region.
4. **Client Retention & Satisfaction** – Retention, churn, and NPS analysis.
5. **ESG & Sustainability** – Emissions, energy usage, and cost savings.
6. **Loan Portfolio** – Performance of active and historical loans.
7. **Investment Performance** – ROI and portfolio performance over time.
8. **HR & Employee Performance** – Training, rating, and productivity.
9. **Operational KPIs** – Burn rate, cost efficiency, performance gaps.
10. **Compliance & Tax** – Tax analysis and risk categorization.

Company Overview

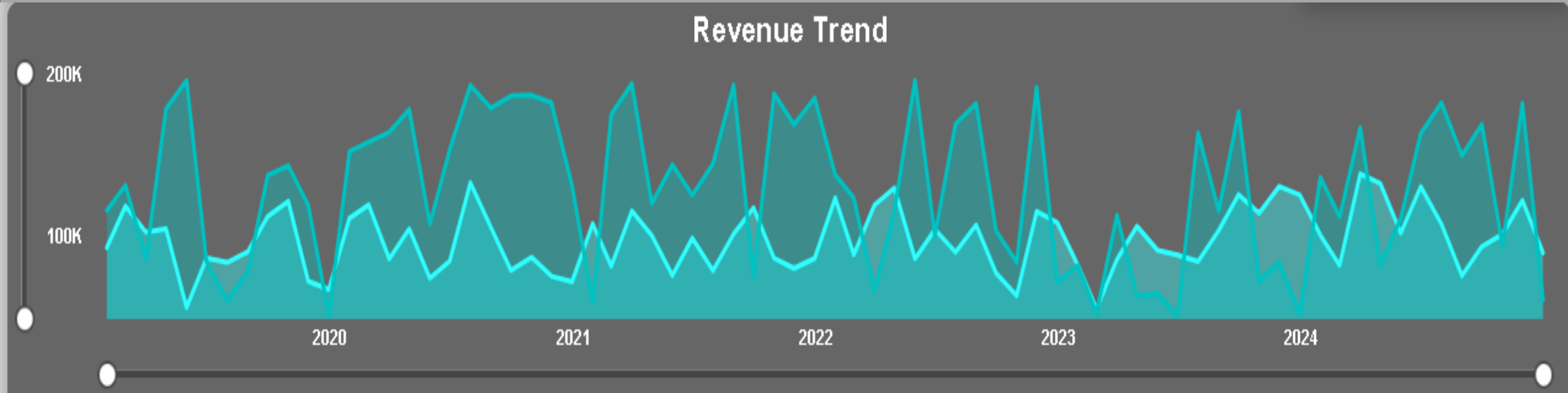
Insights:

- Revenue increased consistently from 2019–2023.
- Gross and Net Profit followed similar trend, with stable margins.
- Market Share grew slightly in 2022 due to digital sales growth.

Recommendations:

- Continue driving growth via corporate clients.
- Monitor expenses closely to sustain profitability.
- Boost brand presence to expand market share faster.

Revenue Trend



Financial Performance

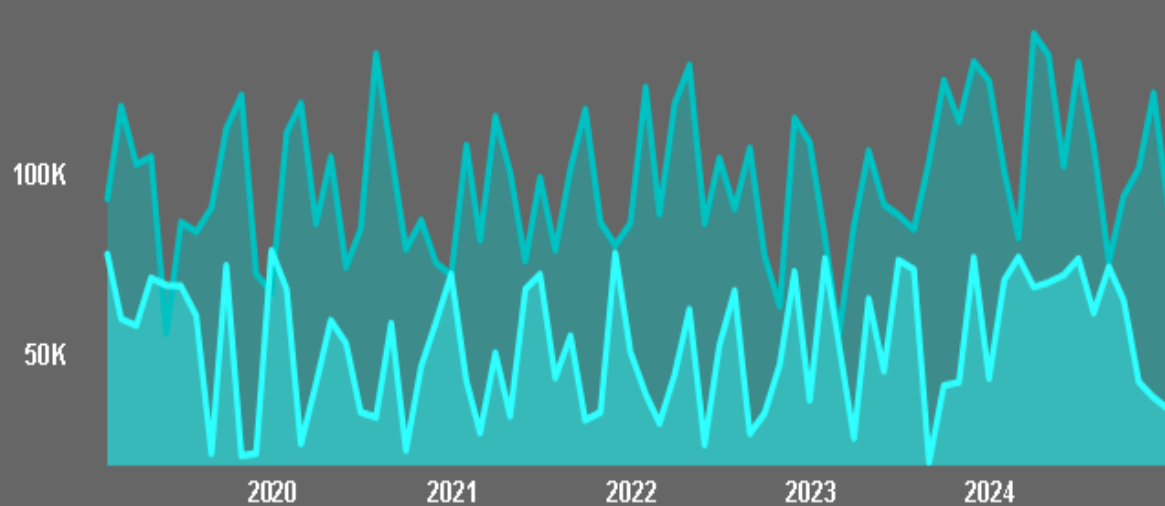
Insights:

- Operating Expenses peaked in Q3 2022.
- Online revenue has the highest growth rate YoY.
- Retail and Wholesale are flat, underperforming segments.

Recommendations:

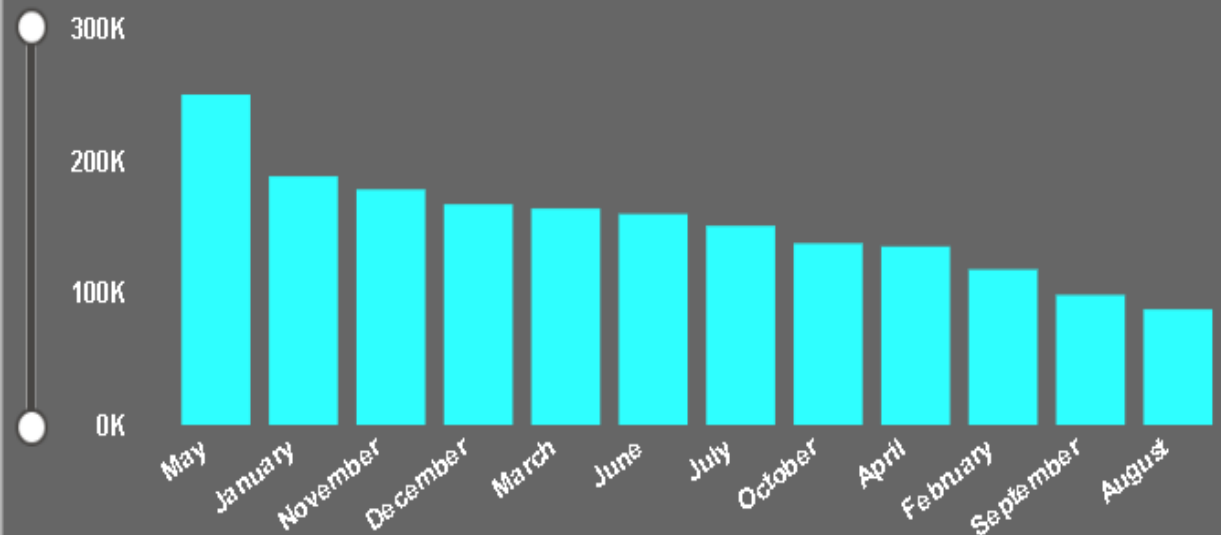
- Allocate more resources to e-commerce channels.
- Restructure traditional retail approach.
- Set monthly caps for department expenses.

Revenue vs Expenses Over Time



Revenue consistently outpaces expenses, securing margin

Net Profit by Month



Clear seasonality in profits, highest in Q2

Client Retention & NPS

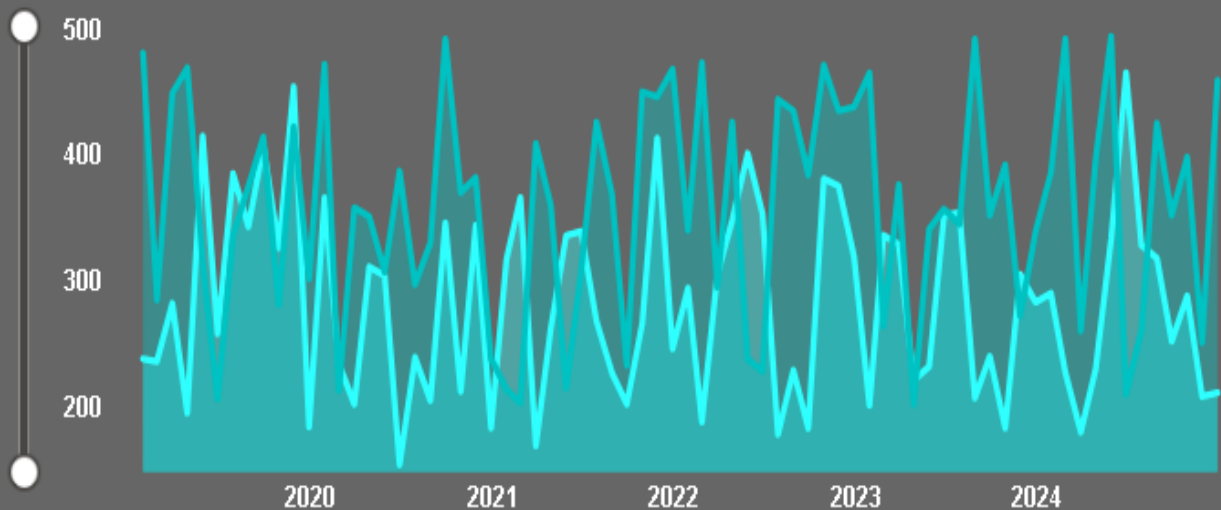
Insights:

- Client retention is above 80%.
- NPS is currently 43, below target (50).
- CLV distribution shows majority of clients are mid-value.

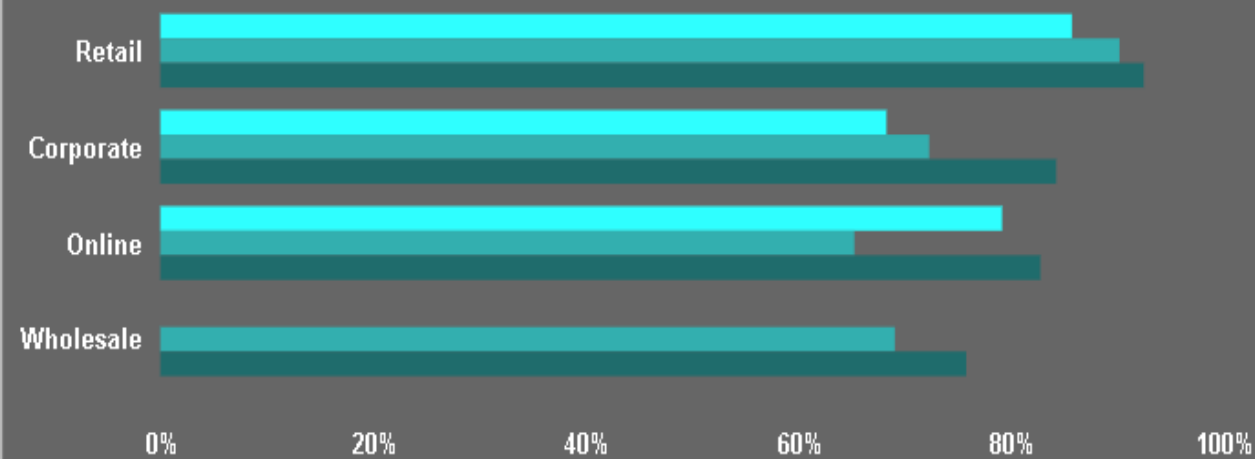
Recommendations:

- Implement loyalty programs for mid-tier clients.
- Introduce customer satisfaction surveys.
- Focus support on churn-prone industries (e.g., Retail).

Client Retention Over Time



Client Retention Rate by Industry



Loan Insights

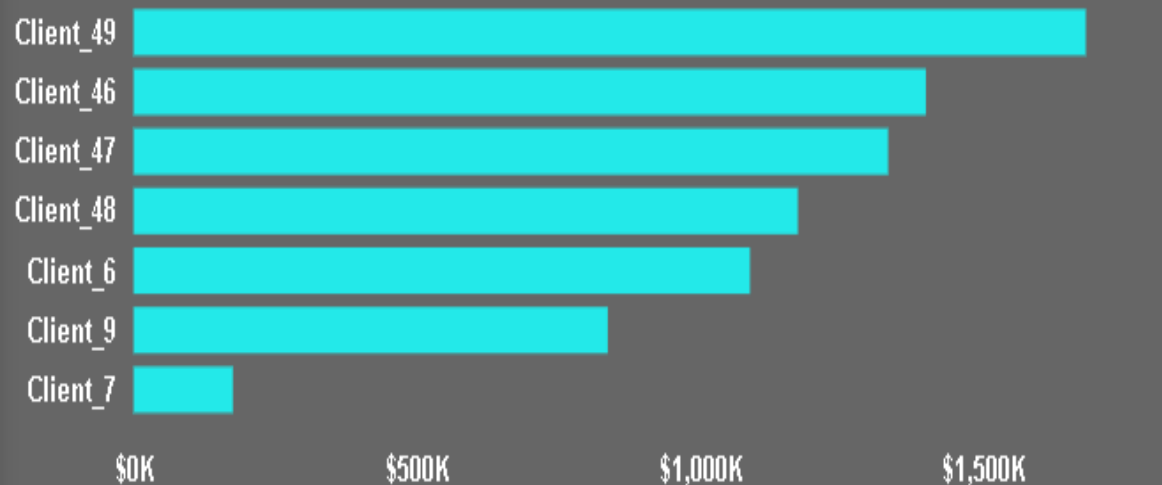
Insights:

- ESG score improved by 18% over 2 years.
- Carbon emissions dropped, while energy usage stabilized.
- Top 5 loan clients = 80% of total active loans.

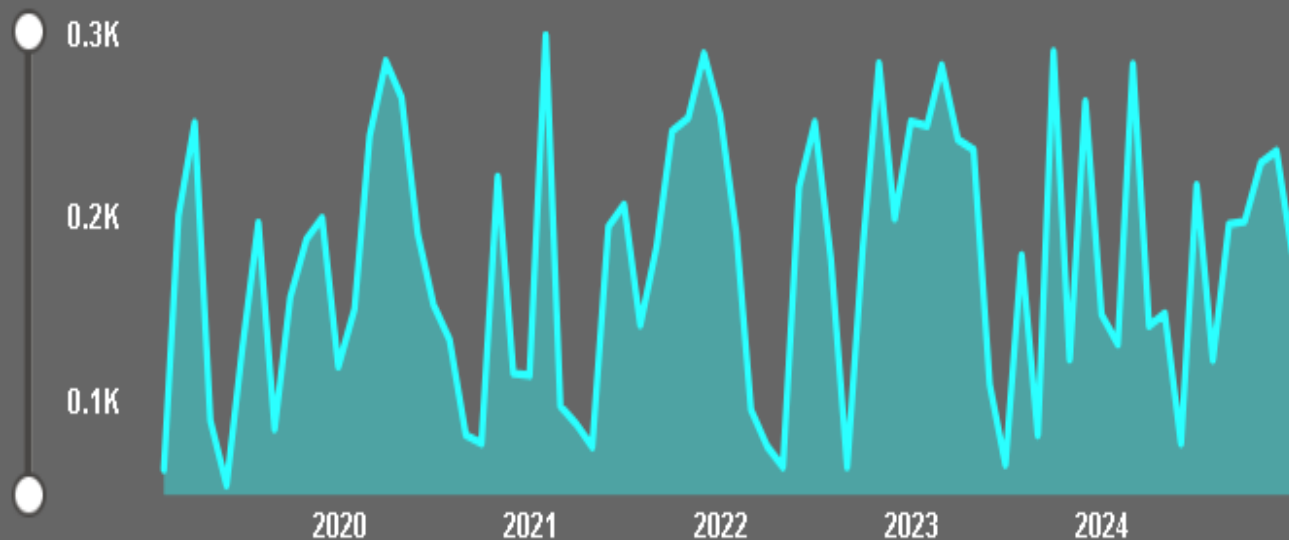
Recommendations:

- Publicize ESG progress for investor appeal.
- Spread loan risk across more clients.
- Link sustainability savings to department budgets.

Top Clients by Loan Amount



Carbon Emissions Over Time



Investment Performance

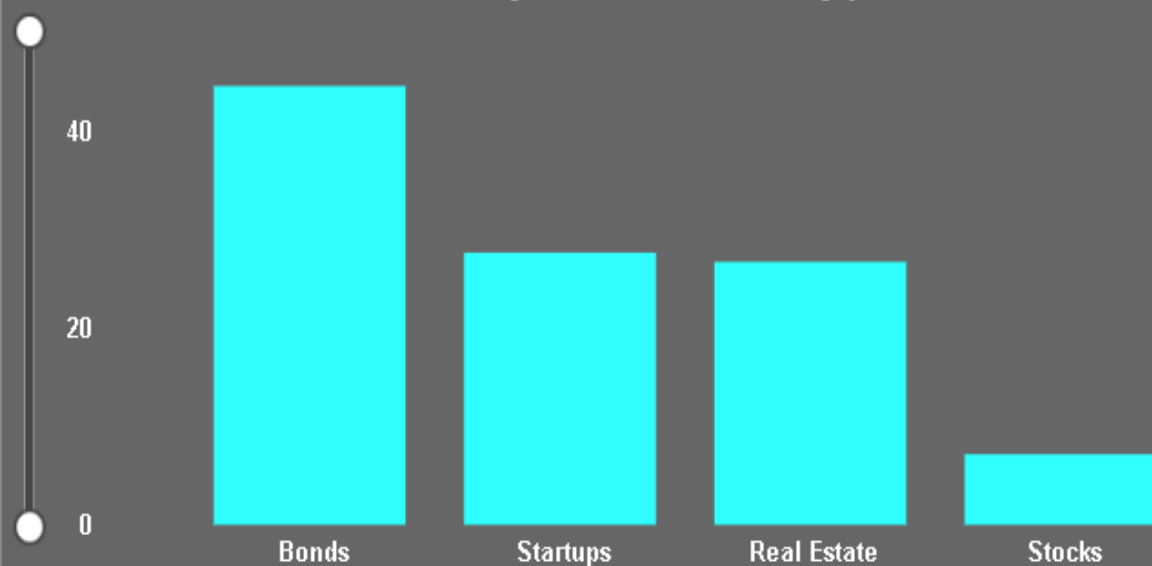
Insights:

- Equity and Startup investments offer 2x higher ROI.
- Insurance costs are high in Operational Risk.
- Losses exist in legacy investment assets.

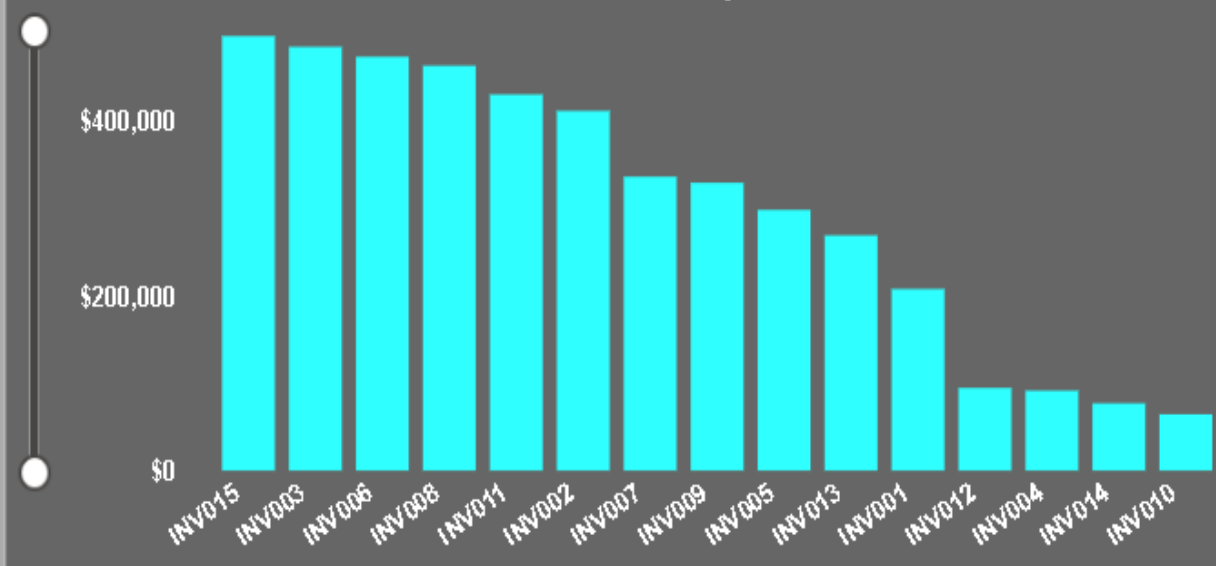
Recommendations:

- Reallocate from low-performing assets.
- Optimize insurance for risks with low claim history.
- Run quarterly ROI review sessions.

ROI by Investment Type



Current vs Initial Value per Investment



HR & Employee Performance

Insights:

- Training improves rating in 3 departments.
- R&D has highest expenditure with below-average performance.
- Top 10 employees bring 40% of revenue.

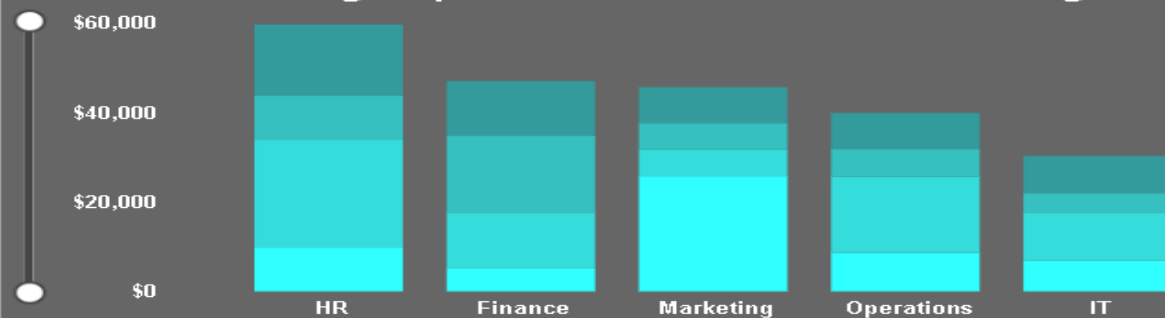
Recommendations:

- Focus training on low-rated departments.
- Set quarterly goals tied to performance bonus.
- Retain top performers with tailored growth plans.

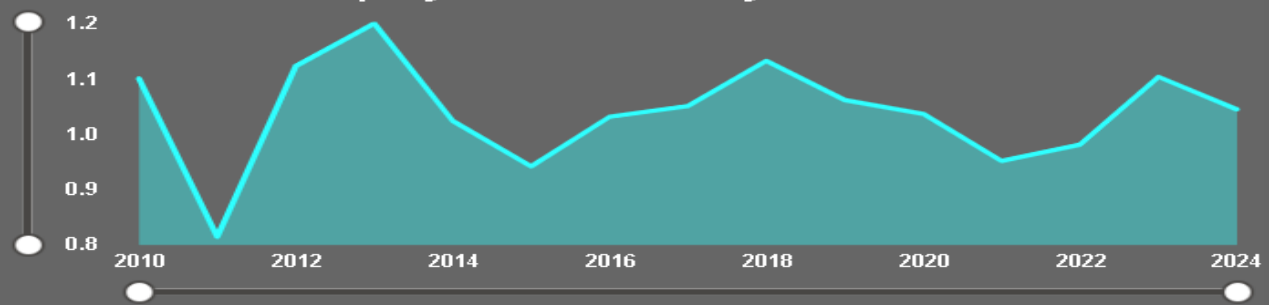
Performance Rating by Department



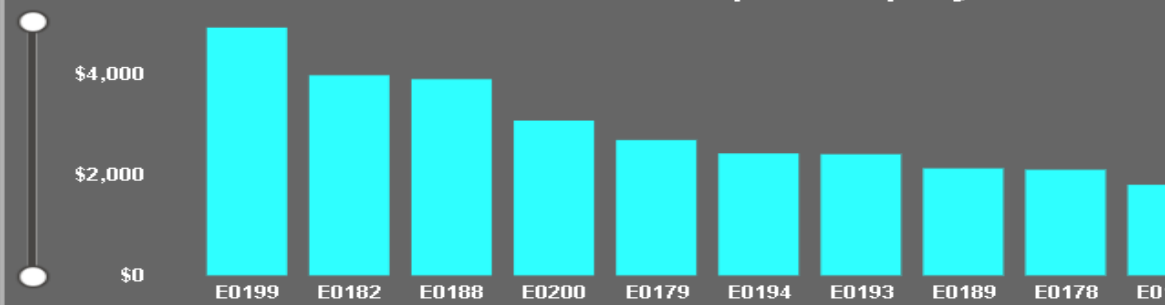
Training Expenses vs Performance Rating



Employee Productivity Over Time



Revenue Contribution per Employee



Compliance & Tax Analysis

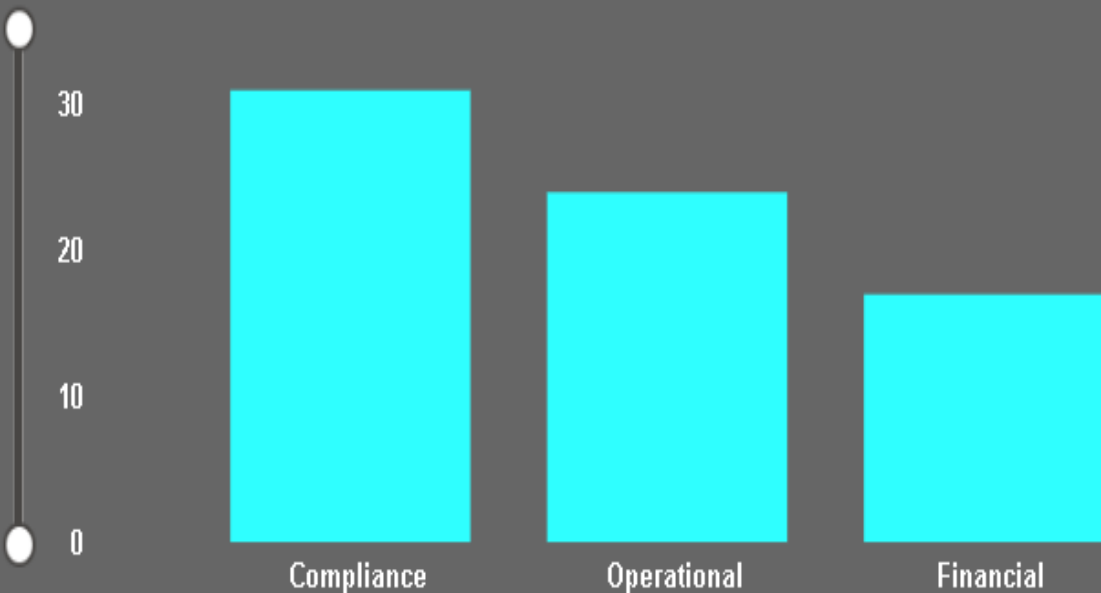
Insights:

- Deferred tax liabilities rising gradually.
- Tax Paid highest in domestic zone.
- Operational Risk most expensive to insure.

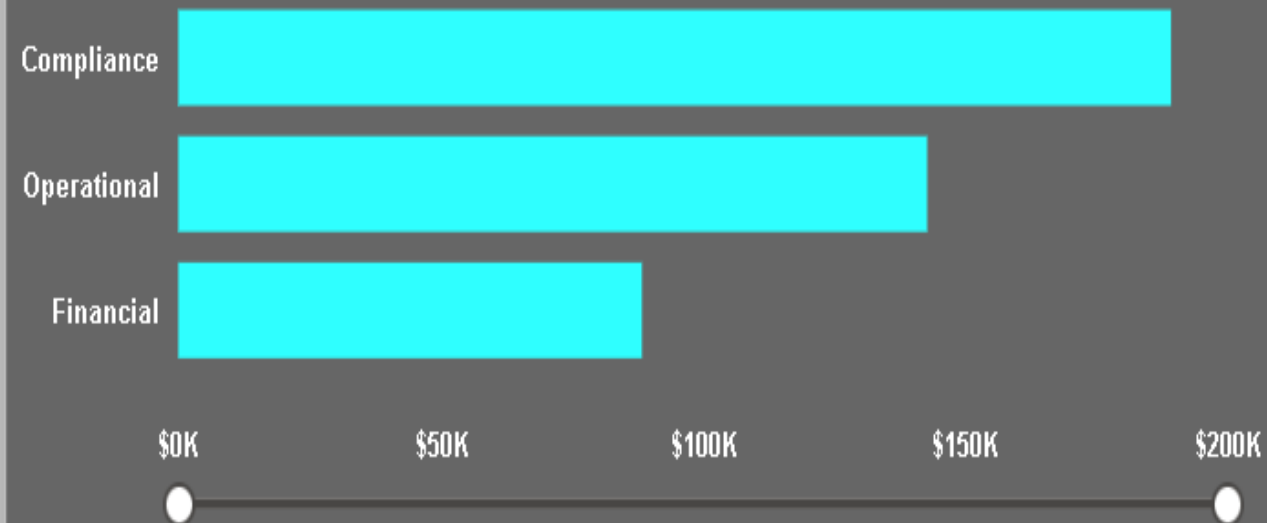
Recommendations:

- Optimize tax structure using regional benefits.
- Reassess mitigation cost of low-severity risks.
- Ensure up-to-date compliance reporting system.

Risk Category vs Impact Level



Cost of Insurance by Risk Category



Strategic Recommendations

Revenue & Financial Strategy

- Shift investment to Online & Corporate.
- Cut budget for stagnant Retail.
- Monitor margin monthly.
- Automate expense control.

Customer & Retention Strategy

- Launch NPS surveys.
- Loyalty program for mid-tier CLV.
- Proactive follow-up in Retail segment.

Operational Efficiency

- Track project costs in R&D.
- Benchmark Burn Rate.
- Budget shift to high-performing teams.

ESG & Sustainability

- Report ESG externally.
- Scale green cost-saving efforts.
- Invest in social initiatives

Risk & Compliance

- Audit insurance in low-risk.
- Prioritize high-impact risk mitigation.
- Digitize compliance checks.

Investment Portfolio

- Exit low ROI investments.
- Show dashboards to leadership.
- Diversify investment types.

Human Capital Strategy

- Train low-rating departments.
- Link pay to performance.
- Retain top revenue contributors.

Thank you for taking the time to review this analytical journey It has been a pleasure turning data into decisions and insights that matter
For more about me and my work:

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