Financial, Operational, and Market Performance of Romanian Retail Companies *(2015–2024)*

David-Cristian Mătaru

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Preface

The choice of this project topic was motivated by both my academic background and professional aspirations. I graduated from the Faculty of Economic Cybernetics, Statistics and Informatics at the University of Bucharest, where I built a strong foundation in economics, quantitative analysis, and information systems. Currently, as a Master's student in Business Data Analytics, I am specializing in transforming data into actionable knowledge that supports decision-making in complex business environments.

Retail appeared as a natural choice for this project: it is one of the most dynamic and competitive sectors of the Romanian economy, with a direct impact on everyday life. The industry generates large volumes of structured financial and operational data, making it an ideal field for testing analytical skills and visualization techniques. Moreover, the last decade (2015–2024) has been marked by significant transformations—international expansion, modernization of local companies, shifts in consumer behavior, and external shocks such as the COVID-19 pandemic—that make this period especially relevant for study.

The purpose of this work is not only to analyze the financial and operational results of the main retail companies, but also to demonstrate how modern tools such as Power BI can be used to create interactive dashboards that integrate financial, operational, and market perspectives. In this sense, the project represents both an academic exercise in applying methods learned during my studies, and a practical step toward my professional development as a data analyst.

By connecting economic knowledge with data science and business intelligence techniques, I aim to better understand the mechanisms behind company performance and to contribute to strategic decision-making processes. This project is part of that effort, illustrating how carefully processed and visualized data can provide not only descriptive insights, but also valuable perspectives for business strategy and future directions.

1. Introduction and Objectives

In the last decade, the Romanian retail sector has experienced rapid expansion, stimulated by the growth of domestic consumption, the entry of major international players, and the consolidation of strong local companies. Between 2015 and 2024, the market underwent significant transformations: the expansion of hypermarket and supermarket chains, diversification of store formats, digitalization of operations, and intensified competition for consumer attention.
In this context, analyzing the financial and operational performance of the main retail companies becomes essential for understanding market dynamics. Indicators such as turnover, net profit, margin, return on equity (ROE), and debt ratio provide a clear picture of stability and efficiency, while operational data—such as number of stores and employees—reflect organizational scale and expansion strategies.

General objective:

To evaluate the financial, operational, and market performance of the main retail companies in Romania during the period 2015–2024.

Specific objectives:

1. Identify market leaders based on turnover and net profit.
2. Analyze profitability and return on equity (ROE).
3. Assess the debt ratio and its implications for financial stability.
4. Evaluate operational performance in relation to the number of stores and employees.
5. Provide a visual and interactive tool that facilitates comparative analysis across companies and years.

To achieve these objectives, the project integrates key financial and operational indicators into an interactive Power BI dashboard. The dashboard is structured on three levels: an overview of the main KPIs, a detailed analysis of financial and operational indicators, and an “advanced insights” section with complex visualizations that capture relationships and hidden trends in the data.

2. Data and Methodology

2.1. Data Sources

The data used in this project was primarily collected from the National Institute of Statistics (INS) database and complemented through manual collection and processing. The information was consolidated into an Excel file, which served as the main source for Power BI, enabling both financial and operational analyses.

2.2. Data Structure

The Excel file was organized into three main datasets:

- **Financial data**: turnover (lei), net profit (lei), net margin (%), return on equity – ROE (%), debt ratio (%).
- **Operational data**: number of stores, number of employees.
- **Macroeconomic data**: contextual variables (GDP, inflation, unemployment, etc.).

These datasets were connected into a relational data model in Power BI, allowing their integration and combined analysis.

2.3. Data Processing

The data preparation process included:

- Cleaning and validating the data in Excel, removing missing or inconsistent values.
- Importing and transforming the data in Power BI using Power Query.
- Standardizing numerical formats and converting absolute values into millions of lei for improved readability.
- Creating auxiliary tables for derived measures (e.g., market share, weighted indicators).

2.4. DAX Measures and Calculations

To provide a more relevant comparative analysis, several DAX measures were

defined, including:

- **Total Turnover (CA Total)** = sum of turnover by company and year.
- **Total Net Profit** = sum of net profit.
- **Weighted Average Net Margin** = ratio of net profit to turnover.
- **Weighted Average ROE** = ratio of net profit to equity.

These measures allow for direct comparison between companies regardless of size, highlighting both absolute performance and relative efficiency.

2.5. Visualizations and Tools

The dashboard was developed entirely in Microsoft Power BI Desktop, using standard and selected custom visualizations such as Box & Whisker and Radar Chart. The main visualizations include:

- **KPI cards** – to display key indicators.
- **Stacked/clustered bar and column charts** – for trends and comparisons over time.
- **Scatter plot with Play Axis** – for the dynamic relationship between ROE and turnover.
- **Box & Whisker** – for analyzing the relationship between turnover per employee and unemployment.
- **Double line chart** – for the evolution of weighted net margin versus inflation.
- **Line and clustered column chart** – to illustrate the relationship between total turnover and GDP.

2.6. Interactivity

To enhance analytical value, the dashboard includes slicers for:

- **Company** – enabling the selection of an individual company or all companies.
- **Year** – enabling filtering by time period.

This interactivity allows users to explore data at different levels of detail and to dynamically compare companies and years.

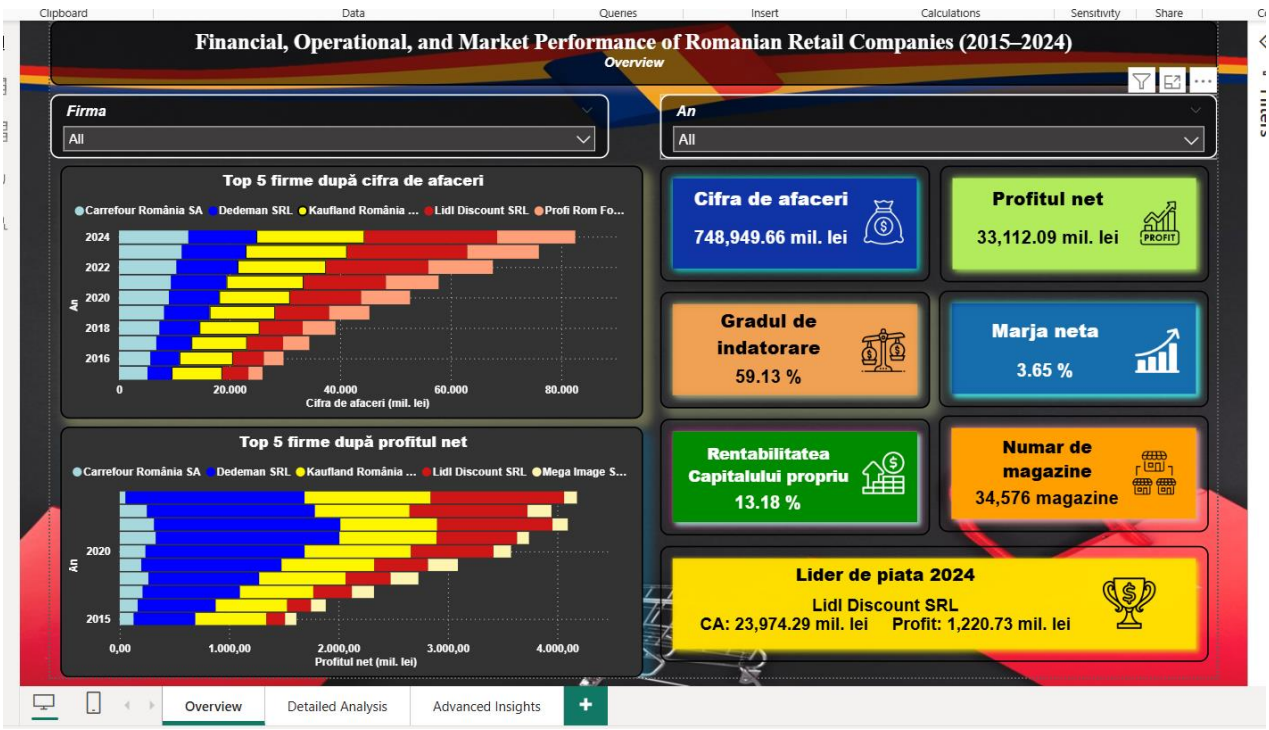
3. Dashboard Structure

The dashboard was structured into three pages, each serving a distinct role in the analysis: providing an overview, enabling detailed examination, and offering advanced insights.

Page 1 – Overview

The first page provides a general overview of the main financial and operational indicators for the retail companies under analysis. Its purpose is to highlight the overall market situation and identify key players. It includes:

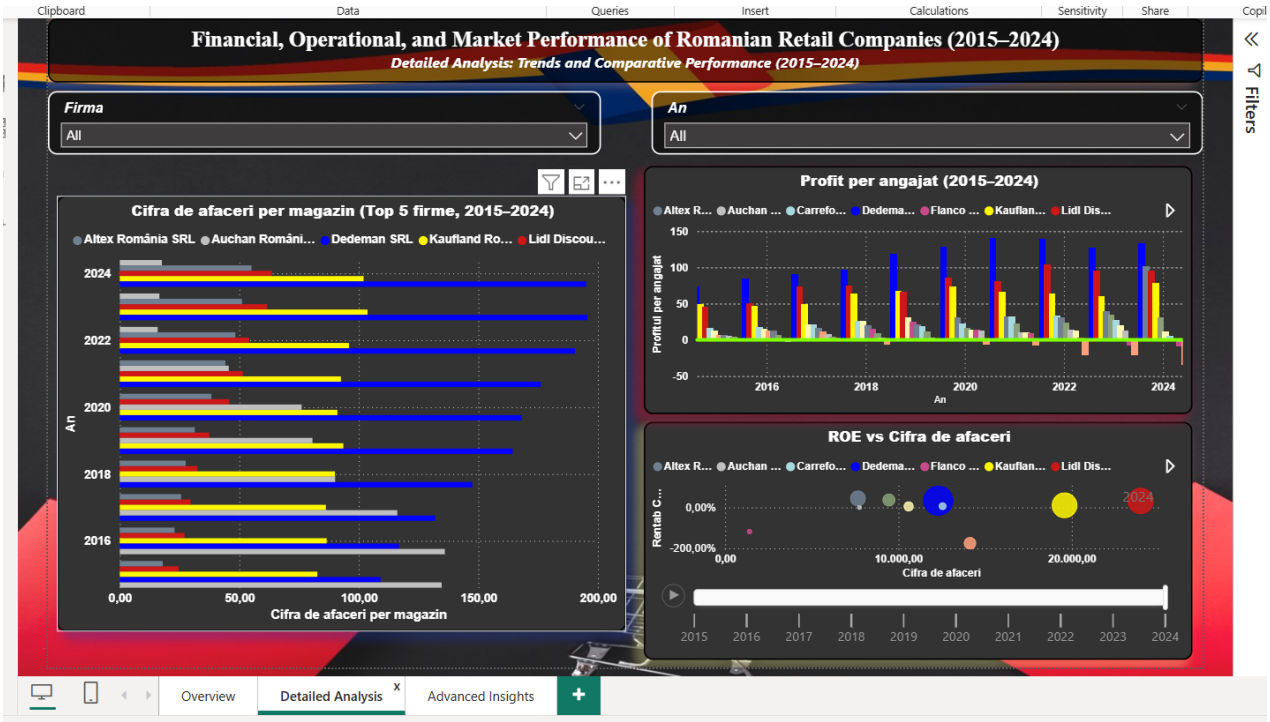
- *2 slicers*: company and year.
- *7 KPI cards*: turnover, net profit, debt ratio, net margin, return on equity (ROE), number of stores, and market leader in 2024.
- *Stacked bar chart*: top 5 companies by turnover and net profit.



Page 2 – Detailed Analysis

The second page offers a deeper level of analysis, focusing on year-to-year dynamics and weighted averages. This section allows for trend identification and performance comparison across companies. It includes:

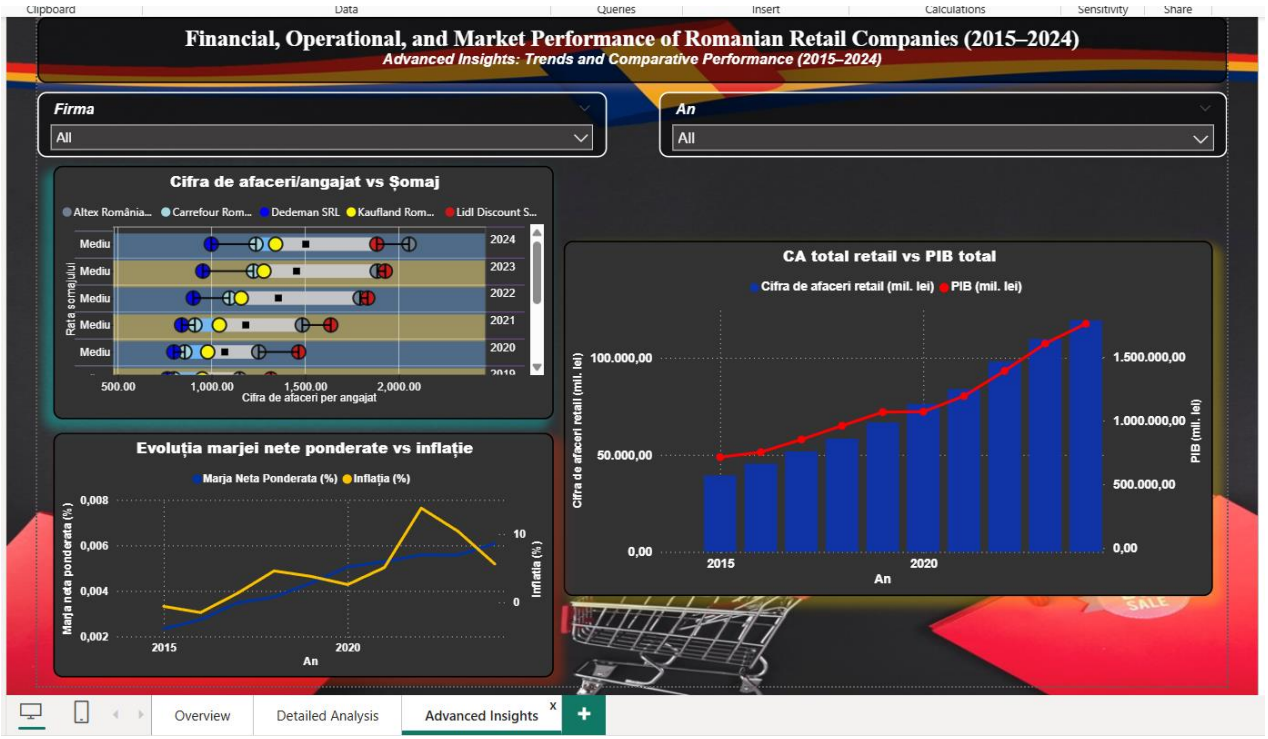
- *2 slicers:* company and year.
- *Clustered bar chart:* evolution of turnover per store for the top 5 companies.
- *Clustered column chart:* evolution of net profit per employee for the 10 companies analyzed.
- *Scatter chart with Play Axis:* dynamic relationship between ROE and turnover over time.



Page 3 – Advanced Insights

The final page brings together more complex visualizations, designed to capture comparative dynamics and the interaction between company-level and macroeconomic indicators. It includes:

- *2 slicers:* company and year.
- *Box & Whisker chart:* relationship between turnover per employee and unemployment.
- *Dual line chart:* evolution of weighted net margin versus inflation.
- *Line and clustered column chart:* total turnover of all companies compared with national GDP.



4. Results and Interpretations

Page 1 – Overview

The first dashboard page provides an overview of the largest retail companies in Romania between 2015 and 2024. The market leader in 2024 was **Lidl Discount SRL**, with a turnover of 23,974.29 million lei. The overall ranking, based on turnover and net profit, places Lidl, Kaufland Romania SCS, Carrefour Romania SA, Dedeman SRL, and Profi Rom Food SRL in the top five positions.

Turnover trends show steady growth for all major players, confirming the consolidation of the retail sector and the increase in purchasing power. However, profit analysis reveals significant differences:

- *Profi Rom Food* recorded a continuous decline in profit after 2018, despite network expansion, suggesting margin pressure or a volume-driven growth strategy with limited efficiency.
- *Dedeman SRL* stands out as an exception: with fewer stores than international food retailers, it achieves the highest net margin and ROE, reflecting exceptional financial efficiency.
- *Lidl and Kaufland* successfully combined expansion with sustained profitability, consolidating their role as stable market leaders.
- *Carrefour Romania* occupies an intermediate position, with high turnover but relatively lower profitability compared to Lidl and Kaufland.

KPI cards complement this analysis by summarizing key market indicators such as total turnover, cumulative net profit, debt ratio, net margin, and ROE. An additional KPI – "Market Leader in 2024" – enables quick identification of the dominant company in the most recent year. Overall, this page provides a concise synthesis of company positioning, market dynamics, and strategic differences.

Page 2 – Detailed Analysis of Retail Companies

The second page shifts the focus to indicators that combine financial and operational data, offering insights into efficiency.

- *Turnover per store* highlights differences in sales productivity across retailers. Dedeman consistently records higher values, suggesting strong strategy execution and effective use of resources.
- *Net profit per employee* reflects workforce productivity, with large disparities between companies, influenced by organizational structure, automation, and wage policies.
- *ROE vs turnover* reveals that larger size does not necessarily mean higher profitability; some mid-sized companies achieve higher ROE, pointing to more efficient use of equity.

This page enables direct comparison between companies and provides a deeper understanding of how operational size correlates with financial efficiency.

Page 3 – Linking Retail Performance with Macroeconomic Indicators

The final page integrates macroeconomic data to illustrate how broader economic trends affect the retail sector.

- *Total retail turnover vs GDP (Line and Clustered Column Chart)* – highlights the strong correlation between retail market dynamics and Romania's economic growth, despite occasional fluctuations caused by external shocks such as inflation or the pandemic.
- *Weighted net margin vs inflation (Double Line Chart)* – shows the direct impact of inflation on profitability. In years of high inflation, net margins became more volatile, with several companies experiencing significant declines.
- *Turnover per employee vs unemployment (Box and Whisker)* – captures the relationship between labor market conditions and store-level performance. Lower unemployment tends to boost consumption and revenues, while higher unemployment reduces purchasing power.

This analysis demonstrates that retail performance is deeply interlinked with the national economic context.

5. Conclusions and Contributions

5.1 Conclusions

The analysis of Romanian retail companies' performance during 2015–2024 highlights several key trends:

- *Market leaders:* Kaufland Romania and Lidl Discount consistently dominate turnover rankings, while Dedeman SRL, with a smaller network, achieves the highest profitability (net margin and ROE), proving an efficiency-based business model.
- *Turnover evolution:* The largest companies registered steady growth, though at different paces, reflecting varied expansion and positioning strategies.
- *Profitability:* Dedeman and Lidl stand out with solid results, while Carrefour and Mega Image faced difficulties, especially after 2020. Profi Rom Food, with negative margins since 2018, indicates structural vulnerabilities.
- *COVID-19 impact:* The 2020–2021 period brought visible declines in profitability and margins, confirming the pressure of the health crisis on consumption and operating costs.
- *Synthetic indicators:* Weighted averages of net margin, ROE, and net profit show gradual sector consolidation, but also polarization between high performers and weaker players.
- *Debt ratio:* Most companies maintain stable financing structures, though strategies differ between aggressive expansion and cautious management.
- *Operational efficiency:* KPIs such as turnover per store and profit per employee show that major players manage to combine scale with productivity, while others face efficiency challenges.
- *Retail and national economy:* The correlation between total retail turnover and GDP confirms the sector's strategic role as both a driver of economic growth and a barometer of macroeconomic health.

Overall conclusion: Romanian retail remains dynamic and competitive, yet polarized between strong market leaders and companies struggling with profitability and efficiency.

5.2 Contributions

The project provides both methodological and practical contributions:

- **Data integration**
  - Structured and comparable financial data (turnover, net profit, equity, assets, liabilities).
  - Operational data (number of stores and employees) centralized into a single framework.
  - Macroeconomic data (GDP, inflation, unemployment) integrated to highlight links between company performance and national context.
- **Interactive Power BI Dashboard**
  - Organized into three thematic pages: Overview, Detailed Analysis, and Macro-Sector Link.
  - Page 1: rankings and key KPIs.
  - Page 2: efficiency (turnover/store, profit/employee, ROE vs turnover).
  - Page 3: innovative micro-macro mix (scatter, box-and-whisker, comparative lines).
- **Advanced KPIs:** Calculation of turnover/employee, profit/employee, turnover/store, and weighted indicators for fairer comparisons.
- **Modern visualizations:** Use of advanced visuals (dynamic scatter with Play Axis, box and whisker, ribbon chart, heatmap) for nuanced insights.
- **Practical value:** Usable by entrepreneurs, investors, and analysts to evaluate competitiveness and anticipate trends.
- **Educational value:** Published on GitHub and developed entirely in Power BI with Excel-prepared data, it serves as a demonstrative resource for students and professionals.