

# Mutual Fund Market Intelligence & AMC Performance Dashboard

Data Visualization & Analytics Capstone

## Project Details

Institute: Newton School of Technology

Team: Section E – Group 3

Dataset: "India's Ultimate Mutual Fund Dataset"

## Team & Mentor

Team Members: Ranajeet Roy, Yatin Singh, Pratham Malhotra, Ved Pawar, Abhijeet Kumar, Pushkar Jain

Roles: Project Lead, Strategy Lead, Data Lead, Dashboard Lead, Analytics Lead, PPT & Quality Lead

Faculty Mentor: TBA

## Sector Context & Problem Statement

### Sector Context

- Rapid growth in India's mutual fund industry with rising retail participation.
- Competitive AMC landscape operating under SEBI oversight and category norms.
- Need for transparent, comparable performance and product breadth visibility.

### Decision-Makers

- AMC leadership: Strategy, Product, and Distribution heads.
- Institutional and Retail Advisory teams guiding investor allocations.

### Business Problem

- How can AMCs benchmark market position and optimize product and distribution decisions using current mutual fund data?

### Project Objective

- Build an evaluator-ready Google Sheets-based dashboard for AMC performance intelligence.
- Inform product mix prioritization, pricing thresholds (minimum investment), and distribution focus using data-backed KPIs.

# Data Engineering (Source to Sink)

## Source

- Dataset: "India's Ultimate Mutual Fund Dataset" (mutual\_fund\_data.csv)
- Size: 16,319 rows, 16 columns
- Snapshot: Point-in-time (no live NAV updates)
- Tooling: Google Sheets (pivots, slicers, calculated KPIs)

## Cleaning (Google Sheets)

Trim and normalize text (AMC, Scheme names)  
Parse and standardize dates (Launch\_Date)  
Handle nulls and outliers in NAV and Scheme\_Min\_Amt using rule-based fixes  
Enforce numeric data types (NAV, Average\_AUM\_Cr, Scheme\_Min\_Amt)  
Derive dashboard-ready pivots and calculated KPIs

## Data Dictionary (Key Fields)

**AMC:** Asset Management Company (issuer)  
**Scheme\_Category:** Category label (Equity, Debt, Hybrid, etc.)  
**NAV:** Net Asset Value per unit (price)  
**Average\_AUM\_Cr:** Average assets under management (₹ crore)  
**Scheme\_Min\_Amt:** Minimum investment amount  
**Launch\_Date:** Scheme inception/vintage

## KPI & Metrics Framework

TOTAL AUM

**8,271,110.904 Cr**

Market scale proxy across AMCs and categories.

AVERAGE NAV

**1,639.34**

Price per unit benchmark to contextualize category pricing.

NUMBER OF SCHEMES PER AMC

**52**

Product breadth indicator for portfolio complexity.

AVERAGE MINIMUM INVESTMENT

**3,470,374.13**

Accessibility threshold influencing retail participation.

### Why these KPIs

- AUM captures competitive scale and market share potential.
- NAV serves as a price marker to compare categories and vintages.
- Schemes/AMC reflects portfolio breadth and potential overlap.
- Min Investment indicates investor accessibility and entry barriers.

### Link to Problem

- Enables AMC benchmarking on size (AUM) and product breadth (schemes).
- Guides product mix and pricing thresholds via NAV and entry amounts.
- Supports distribution focus by aligning accessibility with target segments.
- Forms the executive view tiles mirrored in the dashboard for quick decisions.

## Key Insights (EDA)

Business-focused observations derived from dashboard KPIs and pivot drill-downs

### 1 Market scale is substantial

Total AUM stands at **8,271,110.904 Cr**, providing a benchmark for AMC size and share comparisons.

Evidence: Dashboard KPI (Total AUM)

### 2 Pricing patterns center around the average NAV

The portfolio-wide **Average NAV = 1,639.34** serves as a reference point to contextualize category-level NAVs during drill-down.

Evidence: Dashboard KPI (Average NAV)

### 3 AMCs offer broad product shelves

**Schemes per AMC = 52** (dashboard indicator), signalling significant product breadth and potential overlap areas to rationalize.

Evidence: Dashboard KPI (Number of Schemes per AMC)

### 4 Entry thresholds influence retail access

The **Average Minimum Investment = 3,470,374.13** (dataset units) highlights the need to calibrate minimums by target investor segments.

Evidence: Dashboard KPI (Average Minimum Investment Amount)

### 5 Category mix guides portfolio positioning

Pivot drill-down by **Scheme\_Category** surfaces the equity/debt/hybrid distribution, clarifying where product depth is concentrated.

Evidence: Dashboard operational view (Sheets pivot by Scheme\_Category)

### 6 Vintage patterns distinguish legacy vs. newer schemes

Drill-down by **Launch\_Date** helps separate long-standing funds from recent launches to support life-cycle benchmarking.

Evidence: Dashboard operational view (Sheets pivot by Launch year)

# Advanced Analysis: Segmentation, Concentration & Risk Profiling

Objective: Move beyond descriptive KPIs to profiles that inform strategy and execution

## AMC Segmentation (Tier 1 / Tier 2)

**Definition:** Tag AMCs into **Tier 1** (higher AUM cohort) and **Tier 2** (emerging) using a quantile/rule-based threshold in Google Sheets.

**Method (Sheets):** Group by **AMC** → sum **Average\_AUM\_Cr** → compute quantiles (e.g., top 25%) → assign tier labels.

**Evidence Linkage:** Uses dashboard KPIs and the same pivots/filters (AMC level), no external data.

### New Understanding

Clarifies who are scale leaders vs. challengers, guiding product shelf breadth, pricing thresholds, and distribution intensity by tier.

## Market Concentration (AUM Share)

**Metric:** **Top-N AUM Share** (e.g., CR3/CR5) derived from AMC-level AUM totals.

**Method (Sheets):** Sort AMCs by AUM → compute cumulative shares → calculate Top-N percentage of total AUM (dashboard's Total AUM is the denominator).

**Evidence Linkage:** Relies on dashboard Total AUM tile and AMC pivots for consistent benchmarking.

### New Understanding

Quantifies competitive intensity and headroom for challengers; informs whether to differentiate via niche categories or deepen share in core segments.

## Risk Profiling (NAV Variability by Category)

**Metric:** Category-level variability using **STDEV.S(NAV)** by **Scheme\_Category**.

**Method (Sheets):** Pivot by **Scheme\_Category** → compute standard deviation of NAV → compare bands across Debt, Equity, Hybrid, etc.

**Interpretation:** Expect lower variability in Debt vs. higher in Equity; validate on the dataset and use for investor segment alignment.

### New Understanding

Connects product categories to relative risk bands, helping tailor communication, channel targeting, and minimum investment calibration.

## Strategic Takeaway

Combining **tiering**, **concentration**, and **risk bands** elevates the dashboard from status reporting to decision support—clarifying where to expand product breadth, how to position pricing thresholds, and which channels to prioritize by investor risk profile.

All analyses are performed in Google Sheets using the same source as the dashboard; no external assumptions or new KPIs beyond dashboard-aligned metrics.

# Dashboard Walkthrough

Executive view (KPIs) and operational drill-down (pivots & slicers)

## Executive View — KPI Tiles

Mirrors dashboard summary tiles

TOTAL AUM

**8,271,110.904**

Cr

Market scale benchmark across  
AMCs.

SCHEMES PER AMC

**52**

Product breadth indicator.

AVERAGE NAV

**1,639.34**

Portfolio-wide pricing marker.

AVG MINIMUM INVESTMENT

**3,470,374.13**

Investor accessibility threshold.

Operational Layer	Metric / Dimension	Dashboard Value	Operational Insight
Top KPIs		₹8,271,110.90 Cr	Operatioand Insight
Total AUM	Total AUM	₹1,669.34	Large but concentrated market
Average NAV	Mature pricing levels	₹1,639.34	Risk & valuation comparison
Schemes per AMC Avg Min Investment	52	High product diversity analysis	Investor obaarding
AMC Drill-Down	Legacy AMC domrinance		Stabiity-focussed selection
AUM by AMC	Variacy AMC Amc	Equity > Debid	Growth-orierited market
Scheme_Category	Scheme Category	Debt > Hybrid	Retail market expansion
Scheme_Min Amt	₹500-₹८,5000 cluster	₹3,400 barrier	Risk profing for clients
Accessibility	NAV Variance	Equity funded risk	Equity > Hybrid > Debt
Fund Age	Older funds stable	Older funds stable	Trust & brand advastiage
Maturity			

1 Select slicers (AMC, Scheme\_Category, Launch Year) →

2 Review KPI tiles for context →

3 Drill to scheme list and export

All elements align with the provided dashboard: four KPI tiles and pivot-based drill-down in Google Sheets.

## Business Recommendations

Actionable moves linked to EDA and Advanced Analysis

### 1 Product Portfolio Optimization

- Tier 1 AMCs: Rationalize overlapping schemes; prioritize scale categories where breadth is excessive.
- Tier 2 AMCs: Focus on 2–3 high-demand categories before expanding shelf.

Links: Schemes/AMC (dashboard), AMC Tiering (advanced segmentation)

### 2 Pricing & Accessibility Strategy

- Where **Scheme\_Min\_Amt** is above the dataset average, introduce lower-ticket variants or SIP-first onboarding.
- Maintain clear thresholds by investor segment to expand retail participation.

Links: Avg Minimum Investment (dashboard), EDA accessibility insight

### 3 Distribution Focus by Risk Profile

- Emphasize debt/low-variability categories in mass retail channels.
- Position higher-variability equity categories via advisory/HNI-led channels.

Links: NAV variability by category (advanced risk profiling), Average NAV (dashboard)

### 4 Governance & Refresh Cadence

- Institute quarterly data refresh, version control, and snapshot archiving.
- Document cleaning rules (text trims, date parsing, outlier handling) for auditability.

Links: Methodology (Sheets cleaning), dashboard consistency

## Impact & Value

The "So What?" for stakeholders



### Decision Speed

Single source of truth enables faster AMC benchmarking and product reviews.

How: Executive KPI tiles (Total AUM, Avg NAV, Schemes/AMC, Avg Min Investment) reduce manual compilation.



### Consistency

Standardized KPIs and documented cleaning rules improve comparability across AMCs and categories.

How: Google Sheets pivots + controlled definitions prevent metric drift in reviews.



### Targeting Capability

Segmentation (Tier 1/2), concentration checks, and category risk bands guide product and channel focus.

How: Advanced analysis aligns scheme breadth and distribution to investor risk profiles.



### Adoption Factors

Lightweight setup in Google Sheets with pivots and slicers fits existing workflows.

How: No new tools needed; easy handover with versioning and refresh cadence.

## Why Stakeholders Should Approve

### Direct link to decisions

Enables benchmarking, product rationalization, and channel prioritization using dashboard evidence.

### Low change cost

Built in Google Sheets; minimal training and rapid rollout.

Note: Impact statements are qualitative and align with the existing dashboard; no new KPIs beyond the four executive tiles.

### Governance-ready

Documented cleaning steps and refresh cadence support repeatable reviews.

# Limitations & Next Steps

Transparent constraints with a practical improvement roadmap



## Limitations

- **Point-in-time dataset**

The data is a snapshot with **no live NAV updates**, limiting time-series trend analysis.

- **Potential survivorship bias**

Closed or merged schemes may be absent, skewing comparisons toward currently active funds.

- **Limited risk proxies**

Risk profiling relies on **NAV variability** only; no returns, drawdowns, or benchmarks are included.



## Next Steps

- **Periodic refresh cadence**

Adopt **monthly/quarterly** snapshots to enable trend views and reduce staleness.

- **Add benchmark indices**

Include category benchmarks and returns to contextualize NAV levels and risk bands.

- **Enhance dashboard features**

Incorporate **concentration tiles** (Top-N AUM share), **tier filters** (AMC segments), and **risk bands** by category.

- **Governance controls**

Establish version control, data-quality checks, and documented cleaning rules for repeatable reviews.