

# CreditRisk

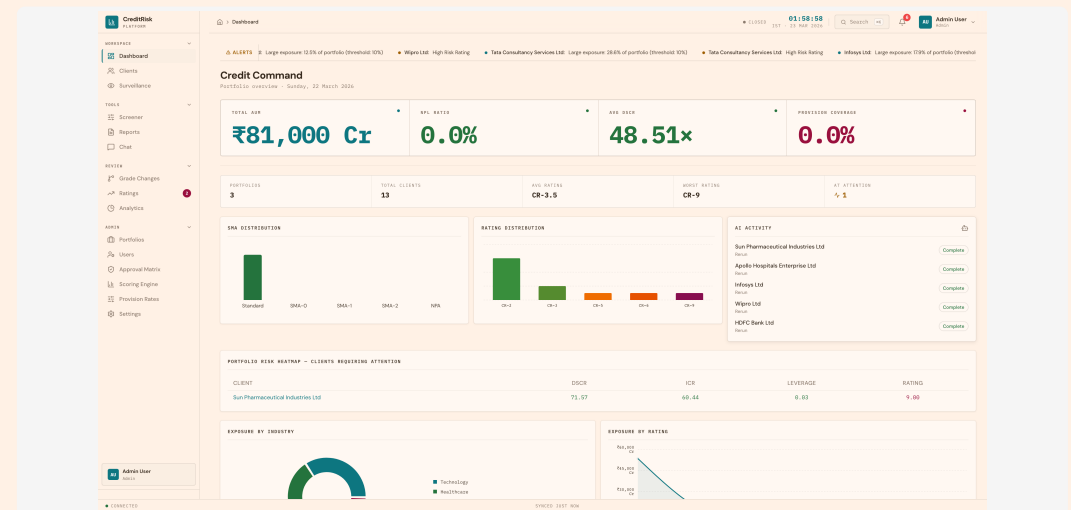
## Command Centre

AI-native credit risk assessment for Indian banks

14-Node LangGraph

5 Scoring Models

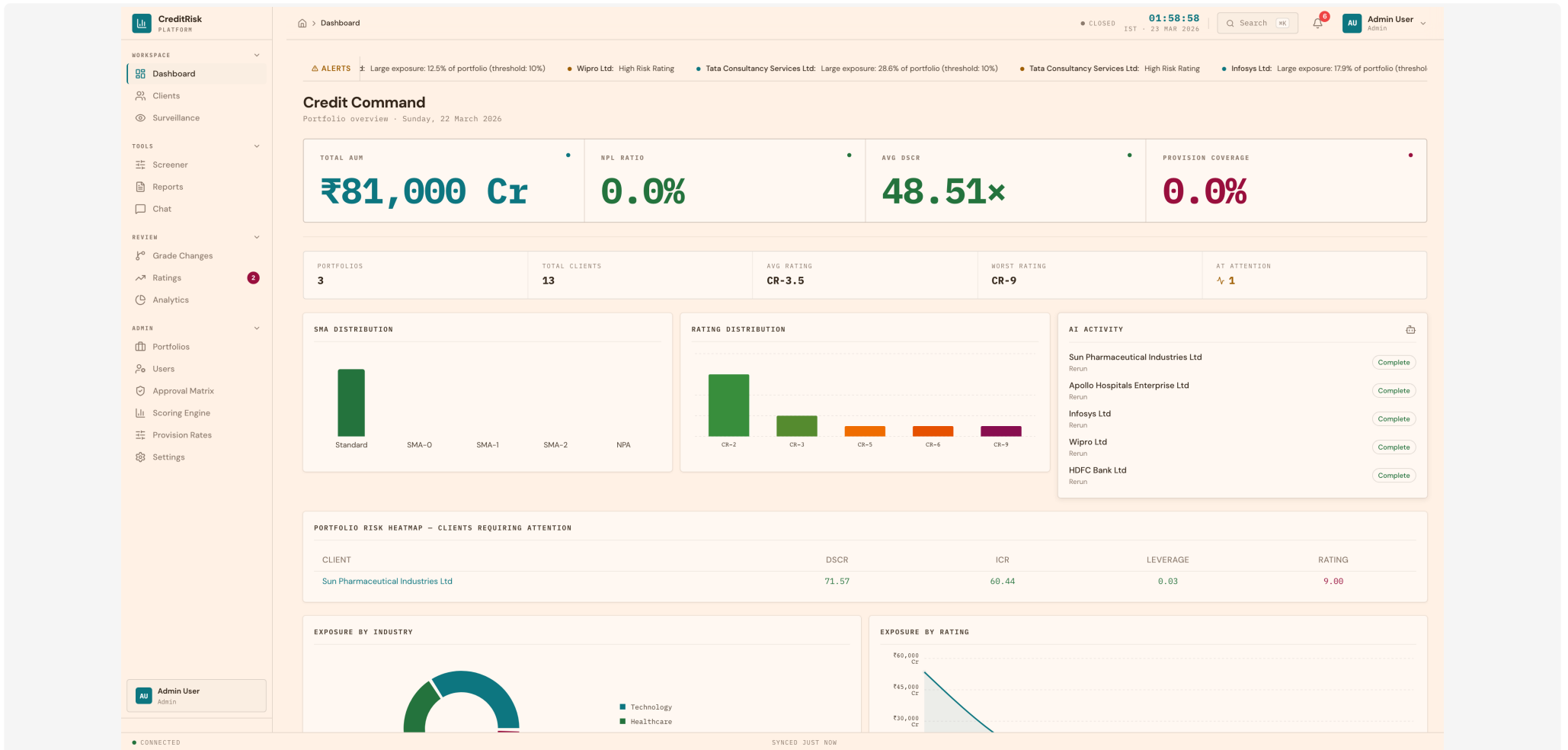
RBI/Basel III



UPDATED

# Portfolio Command — ■ 81,000 Cr Under Management

Real-time portfolio health: AUM, NPL ratio, rating distribution, AI activity, workflow health



Total AUM, SMA distribution, rating histogram, AI enrichment activity feed, workflow health metrics

FIXED

# Officer Dashboard — My Portfolio

Portfolio-scoped: my clients, suggestions pending, activity feed (was always empty)

The screenshot displays the 'My Portfolio' dashboard for an officer named Priya Sharma. The dashboard is divided into several sections:

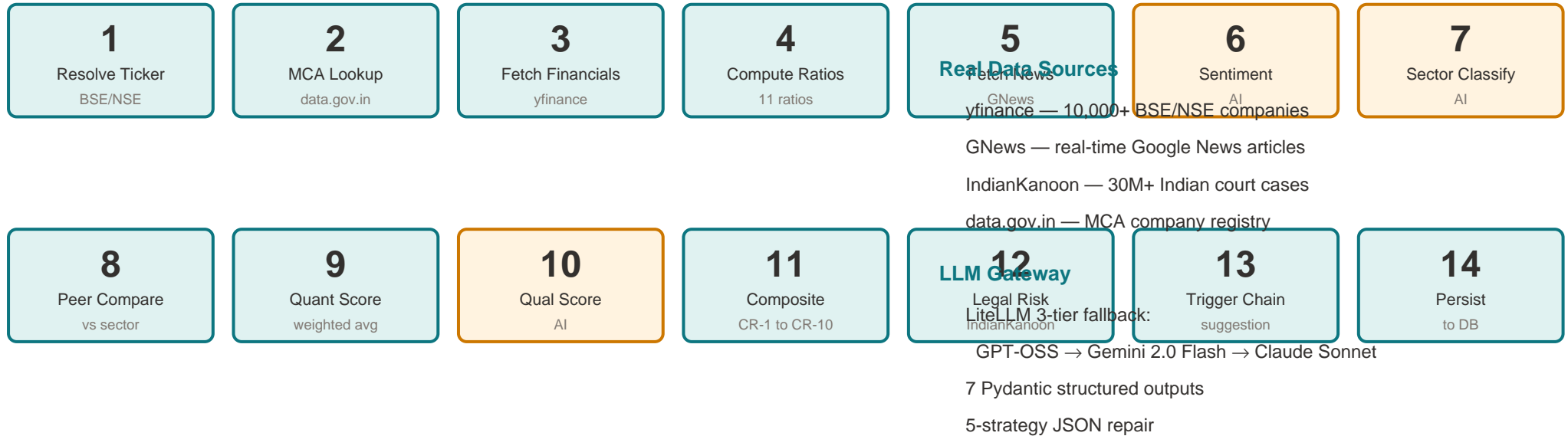
- Header:** Shows 'CreditRisk PLATFORM', 'Dashboard', 'CLOSED 02:00:05', 'IST - 23 MAR 2026', a search bar, and the officer's name 'Priya Sharma'.
- Left Sidebar:** Contains 'WORKSPACE' (Dashboard, Clients, Surveillance), 'MY PORTFOLIO' (Technology & IT Servi...), and 'TOOLS' (Screener, Reports, Chat).
- My Portfolio Summary:** Displays 'Your clients & coverage - Sunday, 22 March 2026' with five key metrics:
  - MY CLIENTS: 6
  - MY EXPOSURE: ₹28,000 Cr
  - AVG DSCR: 55.34x
  - PENDING REVIEWS: 0 (All up to date)
  - GRADE SUGGESTIONS: 0 (None pending)
- Clients Needing Review:** A table with 2 items:

CLIENT	RATING	LAST REVIEW
Test Corp	-	Never reviewed
Titan Company Ltd	-	12 months ago
- My Activity:** A list of recent actions:
  - Rating Submitted by Priya Sharma 1 day ago
  - Rating Submitted by Priya Sharma 2 days ago
- Footer:** Shows 'CONNECTED' and 'SYNCED JUST NOW'.

Grade Suggestions Pending + My Activity from audit log. RBAC-scoped to officer's assigned portfolio.

# Click "Enrich" → Full Credit Analysis in 30 Seconds

14-node LangGraph pipeline — real data first, AI analysis second



 Deterministic (real APIs)

 AI-Assisted

# Real Financials from BSE/NSE

yfinance API — 10,000+ listed companies, 3 years of data, zero hallucination

## How it works

### Source: yfinance (open-source, free)

- 3 years balance sheet, P&L, cash flow
- 11 ratios auto-computed:
  - DSCR, ISCR, D/E, Current Ratio
  - NPM, EBITDA Margin, ROA, ROE
  - Fixed Asset Coverage, TOL/TNW
  - Revenue Growth
- 

### Updated on every enrichment run

- No registration, no API key
- Covers ALL BSE and NSE listed firms

The screenshot displays the CreditRisk platform interface for Sun Pharmaceutical Industries Ltd. The main content area shows the company's profile, including its name, ticker symbol (SUNPHAR), and a credit rating of CR-9. Below this, there is a section for financial statements, with a table for the Income Statement. The table has columns for Revenue, COGS, EBITDA, Depreciation & Amortisation, EBT, Interest Expense, Tax Expense, and Net Income. All values are currently 0.00. To the right of the financial statements, there is a section for 'ISSUES' which includes 'KEY METRICS' (ROCE: 73.57, D/E: 0.83, IFR: 60.44), 'LEGAL RISK' (No legal risk found), and 'NEWS' (Sun Pharma Q4 Results, Sun Pharma's Shareholder Satisfaction Survey, Sun Pharma's 12th Anniversary, Sun Pharma's 1st JLF campaign, From Dr. Reddy's to Sun Pharma).

FINANCIAL STATEMENTS			
ADD FINANCIAL STATEMENT			
Income Statement			
Revenue	COGS	EBITDA	Depreciation & Amortisation
0.00	0.00	0.00	0.00
EBT	Interest Expense	Tax Expense	Net Income
0.00	0.00	0.00	0.00
Balance Sheet			
Total Assets	Current Assets	Cash & Equivalents	Total Liabilities
0.00	0.00	0.00	0.00
Current Liabilities	Total Debt	Long-term Debt	Short-term Debt

# 5 Configurable Scoring Models

Public-domain regression models — fully transparent, explainable, auditable. Switch anytime.

## 5 Models

### Weighted Average (RBI Default)

- 11 ratios weighted per RBI guidelines

### Altman Z'-Score

- Bankruptcy prediction for private firms
- $Z' = 0.717(WC/TA) + 0.847(RE/TA) + \dots$

### Ohlson O-Score

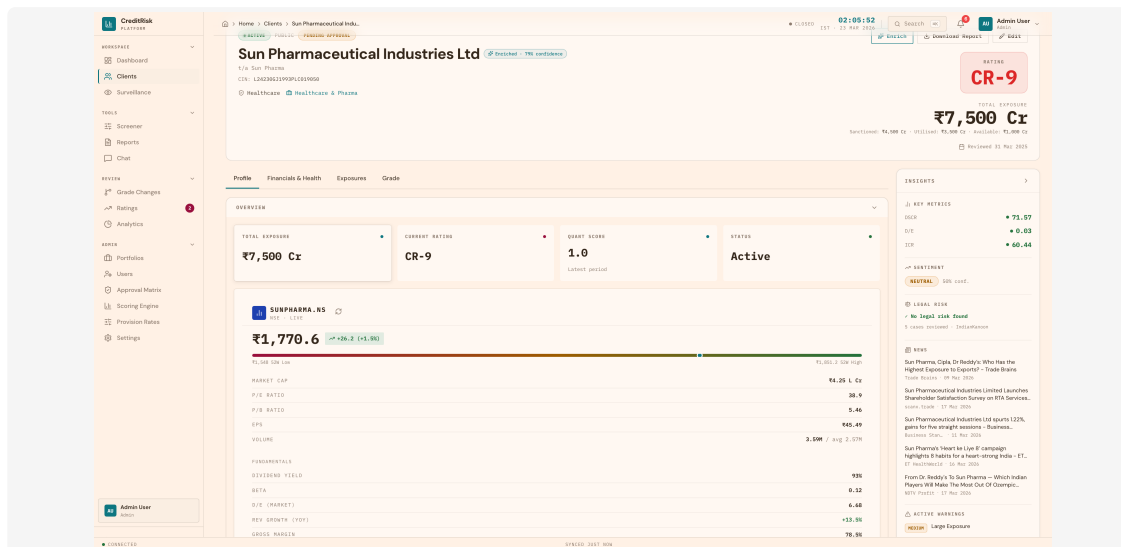
- Default probability via logistic regression

### Zmijewski Probit

- Financial distress prediction model

### Custom

- Bank defines own weights per ratio
- Admin switches model in Settings



FIXED

# News Sentiment — Credit Risk Lens

Real Google News articles classified per-article for credit impact

## How it works

### Source: GNews (Google News aggregator)

- 15 latest articles per company
- Free, no API key required

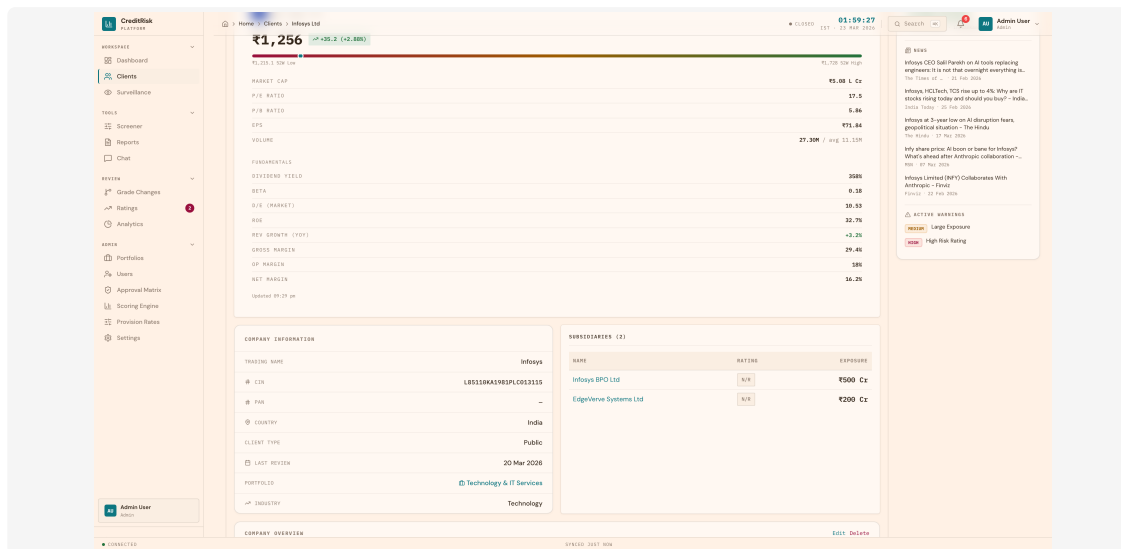
### AI classifies EACH article:

- Positive: growth, expansion, upgrade
- Negative: losses, lawsuits, fraud
- Neutral: informational, no impact

### Overall = majority vote

- No more contradictions
- (was: overall NEGATIVE, articles NEUTRAL)

- Confidence: 80% for real articles



IMPROVED

# Legal Risk — 30M+ Court Cases

IndianKanoon API — company must be a named party, irrelevant cases filtered

## How it works

### Source: IndianKanoon API

- India's largest legal database

-

### AI generates 4-5 search queries:

- NPA recovery, IBC/NCLT, SARFAESI,
- winding up, default proceedings

-

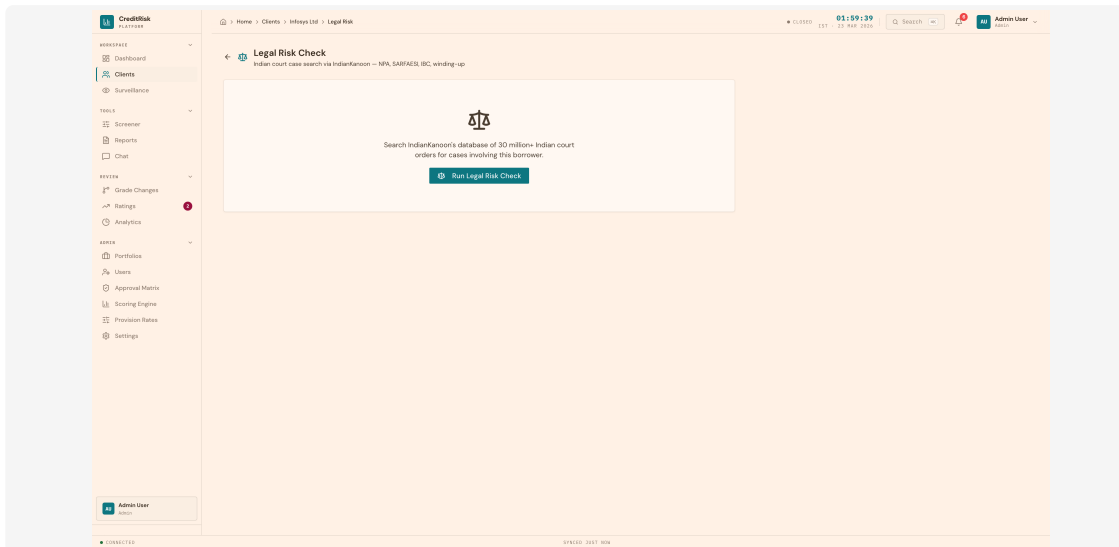
### Strict relevance filter:

- Company must be PARTY (respondent, petitioner, appellant) — not just mentioned in passing

-

### Each case shows:

- Company role badge + AI summary
  - Court, date, IndianKanoon link
- 
- Risk score: 0-100
  - Cost: ■0.50 per search



NEW

# Company Registry — data.gov.in

Government of India MCA data auto-fetched during enrichment

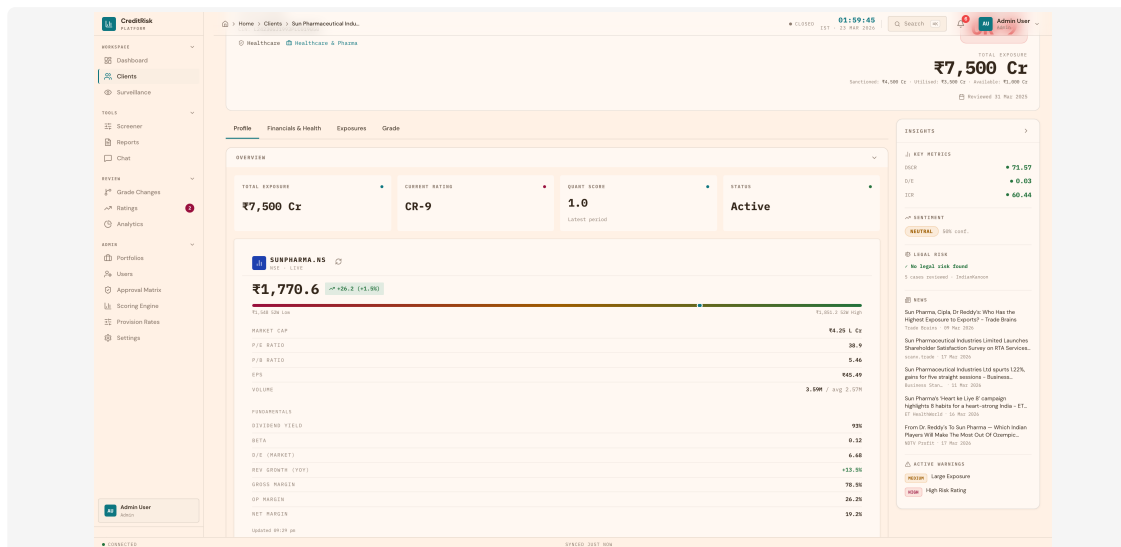
## How it works

Source: data.gov.in (Open Govt Data)

- MCA company master datasets
- Searched across 3 state registries:
  - Delhi, Karnataka, Maharashtra
  -

What we get:

- CIN (Corporate Identity Number)
- Authorised Capital
- Paid-Up Capital
- Registration Date
- Registrar of Companies
- Principal Business Activity
- Registered Office address
- 
- Fuzzy matching with confidence score
- Free government API



# Ask Arjun — Natural Language Queries

Credit officers ask questions in plain English, AI routes to the right data

## How it works

### Natural language interface

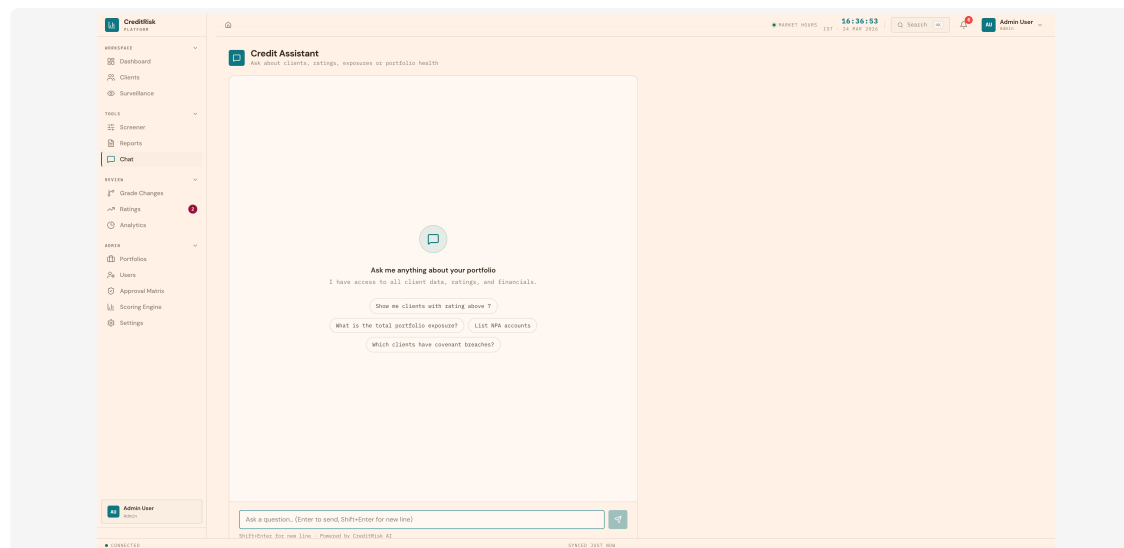
- "What is total portfolio exposure?"
- "Which clients have DSCR below 1.5?"
- "Research Infosys" → triggers AI agent
- 

### Routes to real API data

- Portfolio aggregation, client lookup,
- ratio queries, rating history
- 

### Persona: Arjun

- Professional Indian banking tone
- RBI/CRISIL terminology
- 
- Works for all roles
- Cross-portfolio queries supported



NEW

# AI Says: "This Should Be CR-2, Not CR-9"

The system creates a suggestion — it does NOT auto-update the rating

**CREDIT RISK PLATFORM**

Home > Clients > Sun Pharmaceutical Indu...

01:59:16 IST · 23 MAR 2026

Sanctioned: ₹4,500 Cr · Utilised: ₹3,500 Cr · Available: ₹1,000 Cr

Reviewed 31 Mar 2025

Profile Financials & Health Exposures **Grade**

**CURRENT CREDIT RATING** CR-9 NPA

# CR-9

Use the Grade Change Workflow below to propose a rating revision.

**HOW THIS GRADE WAS CALCULATED**

SCORING MODEL: Weighted Average (RBI Default)

RATIO	VALUE	SCORE	WEIGHT	CONTRIBUTION
DSCR	71.57	1/10	18%	0.18
Debt / Equity	0.03	1/10	14%	0.14
ISCR	60.44	1/10	9%	0.09
TOL / TNW	0.36	1/10	9%	0.09
Current Ratio	2.89	1/10	9%	0.09
EBITDA Margin	31.8%	1/10	9%	0.09
Net Profit Margin	21.0%	1/10	9%	0.09
Fixed Asset Coverage	4558.23	1/10	8%	0.08
Revenue Growth	-	-	5%	-
ROA	11.9%	2/10	5%	0.10
ROE	15.1%	3/10	5%	0.15
<b>COMPOSITE SCORE</b>				<b>1.0</b>

**GRADE CHANGE WORKFLOW**

5

CONNECTED SYNCED JUST NOW

**INSIGHTS**

**KEY METRICS**

- DSCR: 71.57
- D/E: 0.03
- ICR: 60.44

**SENTIMENT**

NEUTRAL 50% conf.

**LEGAL RISK**

No legal risk found

5 cases reviewed - IndianKanoon

**NEWS**

- Sun Pharma, Cipla, Dr Reddy's: Who Has the Highest Exposure to Exports? - Trade Brains
- Sun Pharmaceutical Industries Limited Launches Shareholder Satisfaction Survey on RTA Services...
- Sun Pharmaceutical Industries Ltd spurts 122% gains for five straight sessions - Business...
- Sun Pharma's 'Heart ke Liye 8' campaign highlights 8 habits for a heart-strong India - ET...
- From Dr. Reddy's To Sun Pharma - Which Indian Players Will Make The Most Out Of Ozempic...

**ACTIVE WARNINGS**

- MEDIUM Large Exposure
- HIGH High Risk Rating

Current CR-9 → Suggested CR-2 | 79% confidence | AI reasoning | Initiate or Dismiss

NEW

# Surveillance — Grade Review Alerts

RATING CHANGE indicators pinned at top. Active / Dismissed / Resolved tabs.

**CreditRisk PLATFORM**

WORKSPACE

- Dashboard
- Clients
- Surveillance**

TOOLS

- Screener
- Reports
- Chat

REVIEW

- Grade Changes
- Ratings** (2)
- Analytics

ADMIN

- Portfolios
- Users
- Approval Matrix
- Scoring Engine
- Provision Rates
- Settings

Admin User Admin

01:59:09 23 MAR 2026

### Surveillance Dashboard

Real-time signals across your credit portfolio

13 total

Active Dismissed Resolved

Search by client name or CIN...

ALL TYPES NEWS LEGAL COVENANT GRADE REVIEW ANY SENTIMENT POSITIVE NEGATIVE

- RATING CHANGE** Sun Pharmaceutical Industries Ltd  
AI suggests grade change: CR-9 → CR-2 (upgrade, high severity)  
No sentiment data Unassigned
- LEGAL** Apollo Hospitals Enterprise Ltd  
Legal risk: None (2 case(s) found)  
No sentiment data Unassigned
- NEWS** Apollo Hospitals Enterprise Ltd  
News update  
0 Positive · 0 Negative Unassigned
- LEGAL** Infosys Ltd  
Legal risk: None (1 case(s) found)  
No sentiment data Unassigned
- NEWS** Infosys Ltd  
News update  
0 Positive · 0 Negative Unassigned
- LEGAL** Tata Consultancy Services Ltd  
Legal risk: None (10 case(s) found)  
No sentiment data Unassigned
- NEWS** Tata Consultancy Services Ltd  
News update  
0 Positive · 0 Negative Unassigned
- LEGAL** HDFC Bank Ltd  
Legal risk: Low (10 case(s) found)  
No sentiment data Unassigned

### Surveillance Insights

2 total

Search by client name...

- LEGAL\_RISK** HDFC Bank Ltd
- RATING\_DETERIORATION** HDFC Bank Ltd  
20 Mar 2026

CONNECTED SYNCED JUST NOW

Alerts surface automatically when AI suggests a different rating. Click to navigate to Grade tab.

# Approval Queue — ■ Cr Capital Impact

Maker submits, checker approves. Four-eyes principle. Self-approval blocked.

**CreditRisk PLATFORM**

WORKSPACE

- Dashboard
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**Approval Queue**  
Review and action submitted grade change requests.

All
Pending 3
Returned
Approved
Rejected
Cancelled

CLIENT	OFFICER	STATUS	PROPOSED GRADE	CAPITAL IMPACT	SUBMITTED	ACTIONS
Tata Consultancy Services Ltd	Rajesh Kumar	RETURNED	CR-1	Releases ₹20.00 Cr	-	👁️
Apollo Hospitals Enterprise Ltd	Priya Shazma	APPROVED	CR-2	Releases ₹60.00 Cr	-	👁️
Infosys Ltd	Rajesh Kumar	SUBMITTED	CR-3	Requires ₹45.00 Cr	-	👁️ 🗑️ 🔄 📄
Sun Pharmaceutical Industries Ltd	Rajesh Kumar	SUBMITTED	CR-2	Releases ₹371.25 Cr	-	👁️ 🗑️ 🔄 📄

• CONNECTED

SYNCHED JUST NOW

Officer name | Proposed grade | Capital impact (■ Cr) | Status | Approve / Reject / Return

NEW

# RBI/Basel III Provision Rates

These rates determine how much capital the bank holds in reserve per credit grade

## Capital = Grade

### How provisioning works:

- 
- CR-1 (AAA): 0.25%
- ■100 Cr facility = ■0.25 Cr reserve
- 
- CR-4 (BBB): 2.00%
- ■100 Cr facility = ■2 Cr reserve
- 
- CR-7 (B): 10.00%
- ■100 Cr facility = ■10 Cr reserve
- 
- CR-10 (D): 100.00%
- ■100 Cr facility = ■100 Cr reserve
- 

### Admin-editable inline

- Drives capital impact on every grade change

The screenshot shows the 'Provision Rates' configuration page in the CreditRisk Provisions application. The page title is 'Provision Rates' and it includes a warning: 'Without 0% provision percentages applied per credit grade. Changes affect capital calculations immediately.' Below the title is a table with the following data:

GRADE	DESCRIPTION	RATE (%)	RISK WEIGHT (%)	ACTIONS
CR-1	CR-1(AAA)	0.25000%	20.00%	Edit
CR-2	CR-2(AA)	0.50000%	30.00%	Edit
CR-3	CR-3(A)	1.00000%	50.00%	Edit
CR-4	CR-4(BBB)	2.00000%	75.00%	Edit
CR-5	CR-5(BB+)	4.00000%	100.00%	Edit
CR-6	CR-6(BB)	6.00000%	100.00%	Edit
CR-7	CR-7(B)	10.00000%	150.00%	Edit
CR-8	CR-8(CCC)	25.00000%	150.00%	Edit
CR-9	CR-9(CCC)	50.00000%	150.00%	Edit
CR-10	CR-10(D)	100.00000%	150.00%	Edit

Below the table, a note states: 'These rates drive the capital impact calculation shown on grade change requests. Changes apply to all future computations.'

# Monte Carlo — 1,000 Simulations

Configure shock scenarios and see probability distributions

## What-If Analysis

### 3 Shock Scenarios:

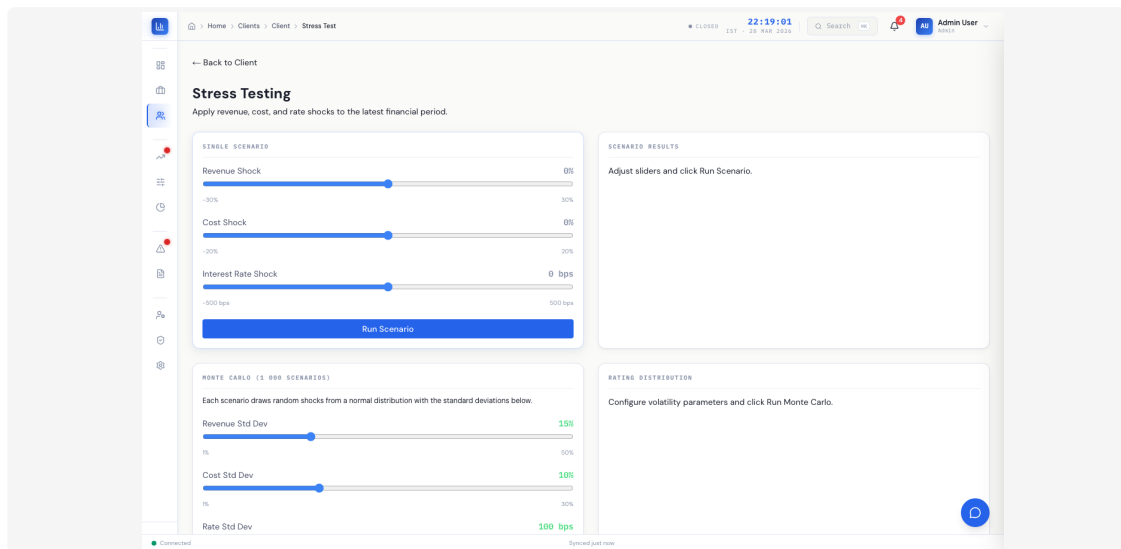
- Revenue Decline (0-80%)
- Cost Increase (0-50%)
- Interest Rate Shift (0-500 bps)

### 1,000 Monte Carlo simulations

- Random draws from normal distribution

### Output:

- DSCR probability: P5 / P50 / P95
- Breach zone (when DSCR < 1.0)
- Stressed financials table
- Grade impact assessment
- "Under stress, grade deteriorates from CR-2 to CR-4"



# Regulatory Reports — One Click

CRILC, IFRS 9 ECL, NPA Movement, Large Exposure — generated as PDF

The screenshot displays the 'Reports' section of the CreditRisk Platform. The interface includes a sidebar with navigation options like Workspace, Tools, Review, and Admin. The main content area features five report cards, each with a title, description, and a 'Generate' button. Below these is a 'Recent Reports' table with columns for Report, Generated, Rows, Status, and Actions.

**Reports**  
Generate regulatory and management reports.

- CRILC REPORT**  
RBI Master Circular DBO.No.BP.BC.21/21.04.048/2014-15  
Central Repository of Information on Large Credits — RBI mandated for exposures >= 5 Cr  
Formats: XLSX, PDF
- IFRS 9 ECL REPORT**  
Ind AS 109 — Financial Instruments (ICA)  
Expected Credit Loss staging report per Ind AS 109  
Formats: XLSX, PDF
- LARGE EXPOSURE REPORT**  
RBI Large Exposures Framework — RBI/2018-19/160  
Clients with exposure > 10% of portfolio  
Formats: XLSX, PDF
- NPA MOVEMENT REPORT**  
RBI Prudential Norms on Income Recognition, Asset Classification and Provisioning  
Quarter-on-quarter NPA movement analysis  
Formats: XLSX, PDF
- SECTOR-WISE ADVANCES REPORT**  
RBI Basic Statistical Returns — BSR-1  
Exposure breakdown by industry sector  
Formats: XLSX

**Recent Reports**

REPORT	GENERATED	ROWS	STATUS	ACTIONS
Large Exposure Report	20/03/2026 19:43	0	Completed	Details Download
NPA Movement Report	20/03/2026 19:43	0	Completed	Details Download
NPA Movement Report	20/03/2026 19:43	0	Completed	Details Download
CRILC Report	20/03/2026 18:54	—	Failed	Details
CRILC Report	20/03/2026 18:40	—	Failed	Details
CRILC Report	20/03/2026 17:51	0	Completed	Details Download
CRILC Report	20/03/2026 14:29	0	Completed	Details Download
NPA Movement Report	20/03/2026 14:26	0	Completed	Details Download
Sector-wise Advances Report	20/03/2026 14:24	5	Completed	Details Download
CRILC Report	20/03/2026 14:24	0	Completed	Details Download

RBI-mandated reports with proper ■ symbol, tables, and page breaks. HTML → PDF generation.

# Client Screener — Multi-Factor Filter

Filter by DSCR, leverage, rating, industry, SMA. Export to Excel. Save presets.

**Client Screener**  
Bloomberg EQS-style multi-factor client filter across your entire portfolio

CLIENTS MATCHED: 16 | RATED: 9 | HIGH RISK (CR-7+): 1 | SMA FLAGGED: 0

**FILTERS**

RATIOS

DSCR ≥ (e.g. 1.5) | DSCR ≤ (e.g. 3.0) | ISCR ≥ (e.g. 1.5) | DER ≥ (e.g. 0.5) | DER ≤ (e.g. 2.0) | CURR. RATIO ≥ (e.g. 1.2) | NPM ≥ (%) (e.g. 5) | ROA ≥ (%) (e.g. 3)

EXPOSURE & CLASSIFICATION

EXPOSURE ≥ (CR) (e.g. 10) | EXPOSURE ≤ (CR) (e.g. 500) | RATING = (All) | RATING ≤ (CEILING) (All) | INDUSTRY (All) | SMA STATUS (All)

Q 16 results

CLIENT	GRADE	SMA	DSCR	ISCR	DER	CURR. RATIO	NPM %	ROA %	EXPOSURE	INDUSTRY	LISTED
Apollo Hospitals Enterprise Ltd	CR-2	STANDARD	7.62	5.83	0.66	1.54	0.1%	0.1%	₹12000.0 Cr	healthcare	-
Asian Paints Ltd	CR-9	STANDARD	28.00	23.48	0.12	2.09	0.1%	0.1%	₹4000.0 Cr	infrastructure	-
Bharti Airtel Ltd	N/R	-	5.72	3.18	1.88	0.37	0.2%	0.1%	₹10000.0 Cr	infrastructure	-
Cipla Ltd	CR-6	-	143.81	155.95	0.01	4.25	0.2%	0.1%	₹4500.0 Cr	healthcare	-
EdgeVerve Systems Ltd	N/R	-	-	-	-	-	-	-	₹200.0 Cr	technology	-
HDFC Bank Ltd	CR-3	STANDARD	-	-	0.95	-	0.3%	0.0%	₹9000.0 Cr	technology	-
Indian Oil	N/R	-	-	-	-	-	-	-	₹0.0 Cr	-	-
Infosys BPO Ltd	N/R	-	-	-	-	-	-	-	₹500.0 Cr	technology	-
Infosys Ltd	CR-2	STANDARD	103.37	91.76	0.09	2.27	0.2%	0.2%	₹5000.0 Cr	technology	-
Reliance Industries Ltd	N/R	-	7.05	5.79	0.44	1.10	0.1%	0.0%	₹15000.0 Cr	energy	-
Sun Pharmaceutical Industries...	CR-2	-	71.57	60.44	0.03	2.89	0.2%	0.1%	₹7500.0 Cr	healthcare	-
TCS Financial Solutions	N/R	-	-	-	-	-	-	-	₹300.0 Cr	technology	-
Tata Consultancy Services Ltd	CR-2	STANDARD	89.66	83.07	-	-	0.2%	-	₹8000.0 Cr	technology	-
Test Corp	N/R	-	-	-	-	-	-	-	₹0.0 Cr	technology	-
Titan Company Ltd	CR-5	-	5.23	5.76	1.79	1.33	0.1%	0.1%	₹2500.0 Cr	technology	-

CONNECTED | SYNCED JUST NOW

Instant results across entire portfolio. Export to Excel. Save and load filter presets.

# 13 Borrowers — Full Credit Profiles

Rating badge, exposure, SMA classification, last review date

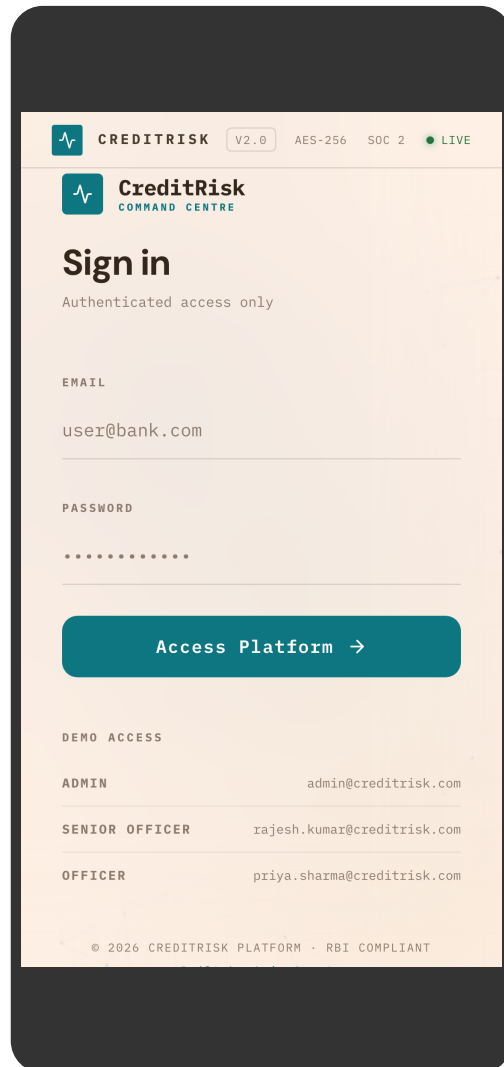
The screenshot displays the 'Client Registry' page in the CreditRisk Platform. The interface includes a sidebar with navigation options like Dashboard, Clients, Surveillance, and Tools. The main content area shows a search bar, filters for 'All Families' and 'Standalones', and a list of borrowers. Two 'CREDIT FAMILIES' are highlighted: 'Tata Consultancy Services Ltd' (1 sub, CR2) and 'Infosys Ltd' (2 subs, CR2). Below these are 'STANDALONE BORROWERS' including Indian Oil, Sun Pharmaceutical Industries Ltd (CR9), Test Corp, Cipla Ltd (CR6), Apollo Hospitals Enterprise Ltd (CR2), Wipro Ltd (CR2), Asian Paints Ltd (CR5), HDFC Bank Ltd (CR3), Bharti Airtel Ltd (CR2), Reliance Industries Ltd (CR2), and Titan Company Ltd (CR3). Each borrower entry includes a rating badge and a small sparkline representing exposure.

Client Name	CIN	Rating	Subs
Tata Consultancy Services Ltd	L24230G1993PLC019650	CR2	1 sub
Infosys Ltd	L24230G1993PLC019650	CR2	2 subs
Indian Oil	No identifiers		
Sun Pharmaceutical Industries Ltd	L24230G1993PLC019650	CR9	
Test Corp	No identifiers		
Cipla Ltd	L24230G1993PLC002380	CR6	
Apollo Hospitals Enterprise Ltd	L85110TN1979PLC008035	CR2	
Wipro Ltd	L32102KA1945PLC020800	CR2	
Asian Paints Ltd	L24220RH1945PLC004598	CR5	
HDFC Bank Ltd	L65920G1994PLC021739	CR3	
Bharti Airtel Ltd	L74899DL1995PLC070609	CR2	
Reliance Industries Ltd	L17110MH1973PLC019786	CR2	
Titan Company Ltd	L74999TN1984PLC010444	CR3	

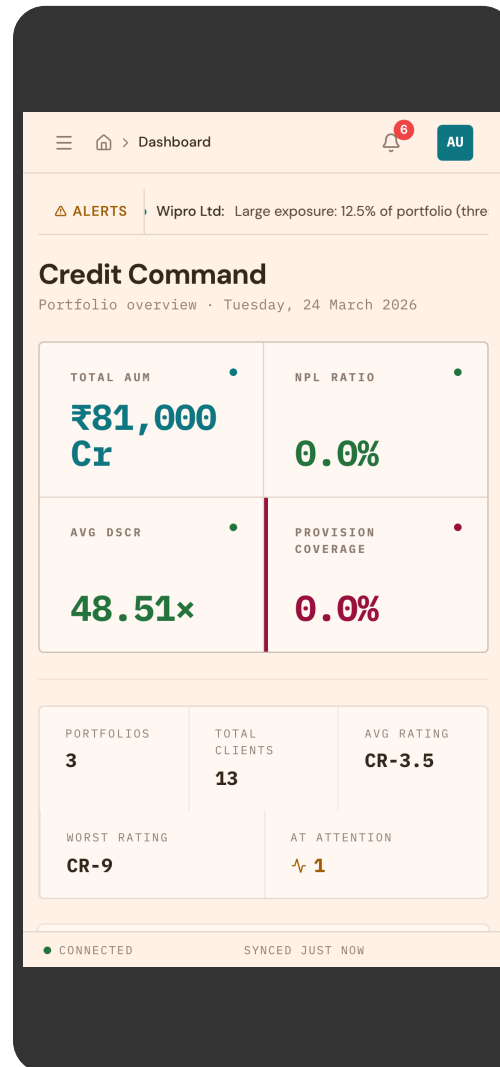
Search, filter, sort. Rating badges CR-1 to CR-10. Exposure sparklines. SMA status.

# Works on Every Screen

Responsive viewport, hamburger navigation, stacking grids, horizontal scroll tables



Login



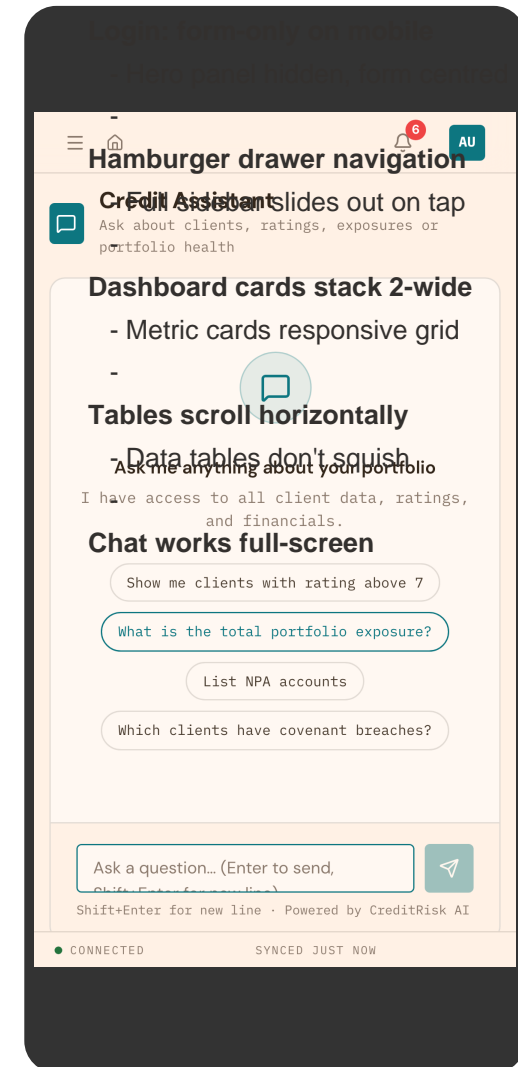
PORTFOLIOS	TOTAL CLIENTS	AVG RATING
3	13	CR-3.5
WORST RATING	AT ATTENTION	
CR-9	1	

Dashboard

## Mobile Features

### Viewport meta tag

- Proper zoom on all devices



Chat

# Try It

creditrisk-eight.vercel.app

Admin

admin@creditrisk.com / demo123

Senior Officer

rajesh.kumar@creditrisk.com / demo123

Officer

priya.sharma@creditrisk.com / demo123

