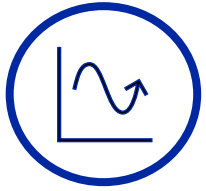**MOODY'S**
ANALYTICS

SUMMIT
2023

Credit Impacts on the SA Corporate Sector:
Evaluating the Implications of a Volatile Environment

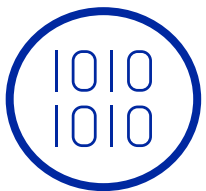**Damian Watson**, Senior Director, Predictive Analytics

April 2023

Topics of Discussion

The credit environment is going through continuing turbulence and volatility.

- What is the current state of health and what is the outlook.

There is a lot for Credit Managers to focus on and market shocks can create further disruption.

- How Early Warning systems can focus attention on portfolio vulnerabilities and help navigate uncertainty.

Who we are

Moody's Corporation

We are a global integrated risk assessment firm that empowers organizations to make better decisions. Our data, analytical solutions and insights help decision-makers identify opportunities and manage the risks of doing business with others. With over 11,000 employees in more than 40 countries, Moody's combines global presence with local expertise and over a century of experience in financial markets.

Moody's Investor Service
Provides investors with a comprehensive view of global debt markets through credit ratings and research.

Moody's Analytics
Provides data, analytics and insights to equip company leaders with effective tools to understand and mitigate a range of risks.

Background to Analysis

Summary of approaches for the analysis

Benchmark PD model

- Often due to firm characteristics, or convention in jurisdictions mean financial statements are not readily available for many firms.
- Relevant firm characteristics and predictive financial ratios are trained against observable model PD outputs
- Generates estimated PD despite limited available information

Macro-economic forecast:

- Model-based relationship between historical PD and Macro-economic factors
- Relationship established at country, sector and rating-level
- Allows forecasting of firm-level PD based on future macro-economic scenarios

Early Warning:

- Approach allows identification of rising risk for a firm, relative to peers/
- Relative firm risk based on comparison of pre-defined peer group trigger and the firms' PIT 1-year PD
- Allows specific actions to be assigned to each EW risk rating

Scope

Sector	Firms
A - Agriculture, Forestry and Fishing	1,852
B - Mining and Quarrying	778
C – Construction	4,227
D – Manufacturing	11,437
E – Transportation, Communications, Electric, Gas & Sanitation	3,879
F – Wholesale Trade	5,276
G – Retail Trade	13,085
H – Finance, Insurance and Real Estate	278
I – Services	23,760
J – Public Administration	191
Public Firms	151
Total	**64,914**
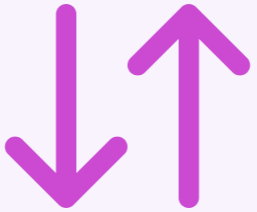
Forecast stable levels of firm default under baseline scenario, remaining marginally above long-term historical levels

South Africa Corporate Sector Probability of Default forecast
from macroeconomic scenarios (Private Firms)

Legend: Actuals — Baseline — S1 - 10% Upside — S2 - 75% Downside — S3 - 90% Downside — S4 - 96% Downside — Long Term Average (2002)
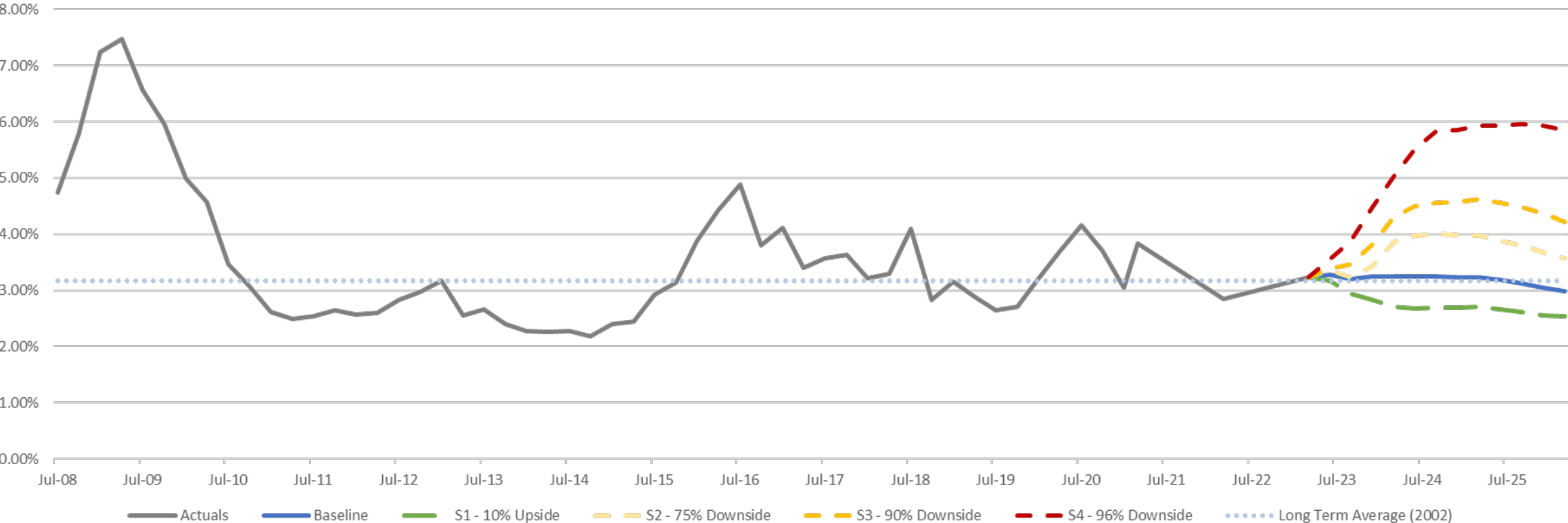
Sector level forecasts reflect limited deterioration in risk, but could be exposed in event of further downturn

South Africa Corporate Sector Probability of Default forecast
from macroeconomic scenarios (Public and Private Firms)

Division	Actual	Forecast	
	Q2 2023	Q2 2024 - Baseline Scenario	Q2 2024 - 96% Downside Scenario
A - Agriculture, Forestry, And Fishing	5.29%	5.89%	-72.82%
B - Mining	4.14%	-0.54%	-30.90%
C - Construction	4.30%	-2.97%	-66.62%
D - Manufacturing	4.46%	7.13%	-50.86%
E - Transportation, Communications, Electric, Gas, And Sanitary Services	3.13%	-2.84%	-49.63%
F - Wholesale Trade	2.78%	-3.27%	-52.49%
G - Retail Trade	2.98%	-1.64%	-52.03%
H - Finance, Insurance, And Real Estate	3.47%	1.75%	-50.10%
I - Services	2.53%	-4.42%	-55.13%
J - Public Administration	3.39%	-6.43%	-43.52%
Public	4.02%	-41.16%	-77.29%
All Sectors	3.68%	-4.41%	-54.67%

Public Firm forecasts reflect limited deterioration in risk, but could be exposed in event of further downturn

South Africa Corporate Sector Implied Rating Distribution
from macroeconomic scenarios (Public Firms)

Legend: Current - Q2 2023 | Baseline Forecast - Q2 2024 | 96% Downside Forecast - Q2 2024
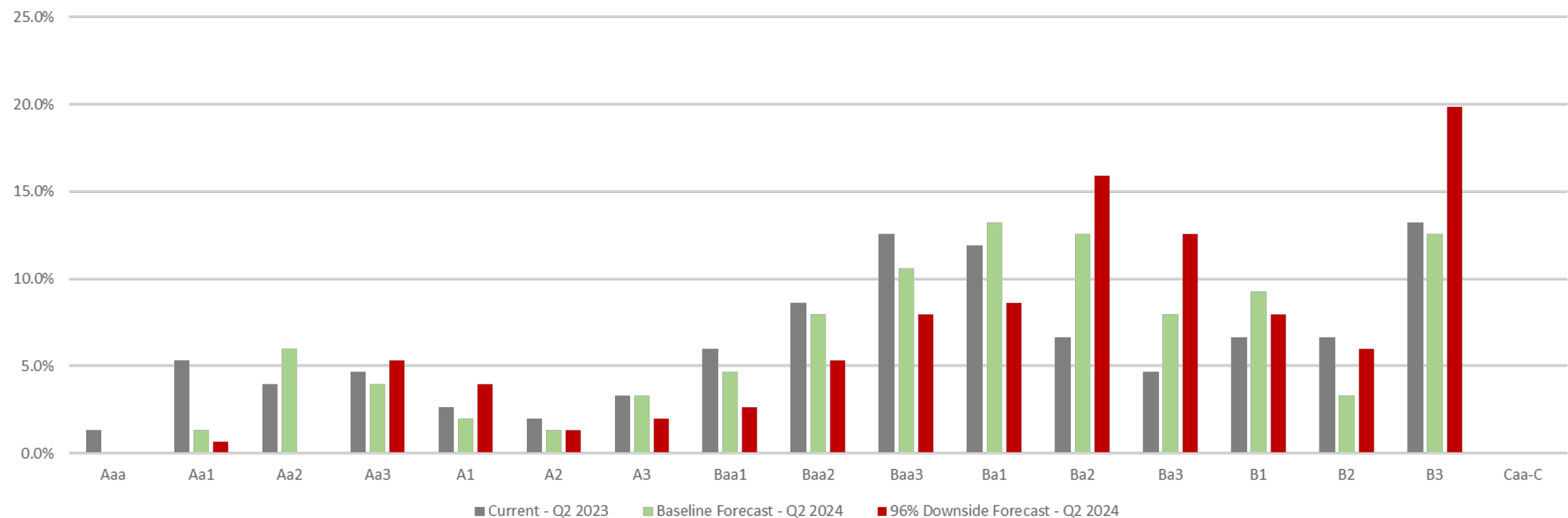
UK balance sheet forecast highlight inflationary headwinds…

Changes in Sales and Cost growth by Sector between Q4 2022 and Q4 2023
Baseline scenario

…which creates a varied picture of financial performance across sectors

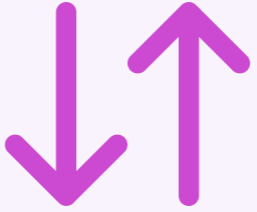| Dec 2022 (Estimates) - Dec 2023 (Baseline Forecast)	Change in Financial Ratio			EDF		
Sector	Profit Margin	Liquidity	Debt Coverage	Dec-22 (Estimate)	Dec-23 (Forecast)	EDF Change (%)
(A) Agriculture	-3.96	15.0	-71.93%	0.46	0.75	-62.6%
(B) Mining, Oil & Gas	2.68	1.1	-26.57%	2.17	2.11	2.7%
(C) Manufacturing	-1.40	0.1	-60.05%	1.94	2.53	-30.5%
(D) Utilities	-0.05	-0.8	-8.41%	1.32	1.55	-17.3%
(E) Waste	-2.24	-3.0	-65.05%	1.11	1.51	-36.5%
(F) Construction	-0.98	15.1	-50.85%	2.18	2.22	-2.0%
(G) Wholesale & Retail	-0.38	3.3	-48.45%	1.23	1.39	-12.8%
(H) Transportation	1.51	23.2	-35.19%	1.18	1.00	15.7%
(I) Accomodation & Food Services	-4.39	20.7	-62.54%	2.07	2.36	-13.7%
(J) Information	0.23	2.3	-47.23%	2.11	2.19	-4.0%
(M) Professional Services	0.05	4.4	-40.65%	1.78	1.88	-5.7%
(N) Admin Services	-1.90	5.7	-38.45%	1.84	1.86	-1.1%
(Q) Health Care	-3.99	-43.0	-91.16%	0.89	1.48	-65.5%
(R) Arts & Entertainment	0.51	32.5	-39.24%	0.79	0.72	9.0%
(S) Other Services	0.18	-5.6	-38.49%	0.98	1.12	-13.5%

Debt Coverage = EBITDA divided by Interest Expense. Change is calculated as percentage change.

Liquidity = Cash plus Marketable Securities divided by Current Liabilities. Change is calculated as simple change.

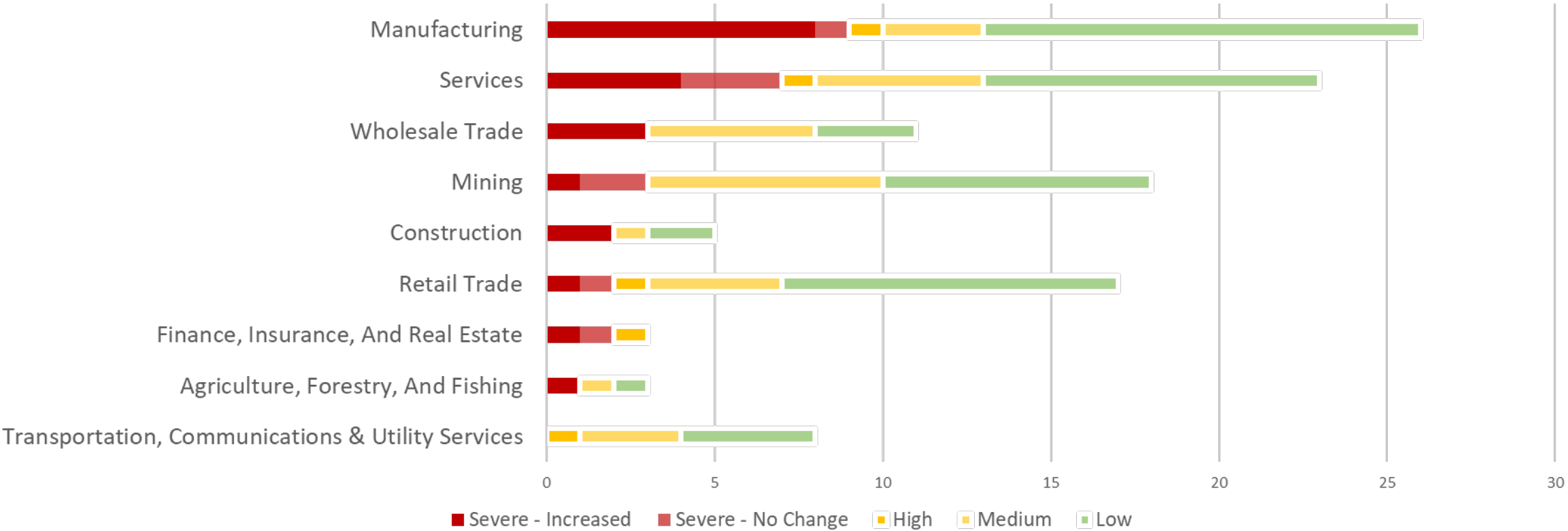Profit Margin = Net Profit Turnover. Change is calculated as simple change.

Early Warning Classification highlight disparity of company performance within sectors

Early Warning Classification by Sector
March 2022 and Mach 2023 (Public firms)

Monitor conditions in which firms with rising risk would face further deterioration
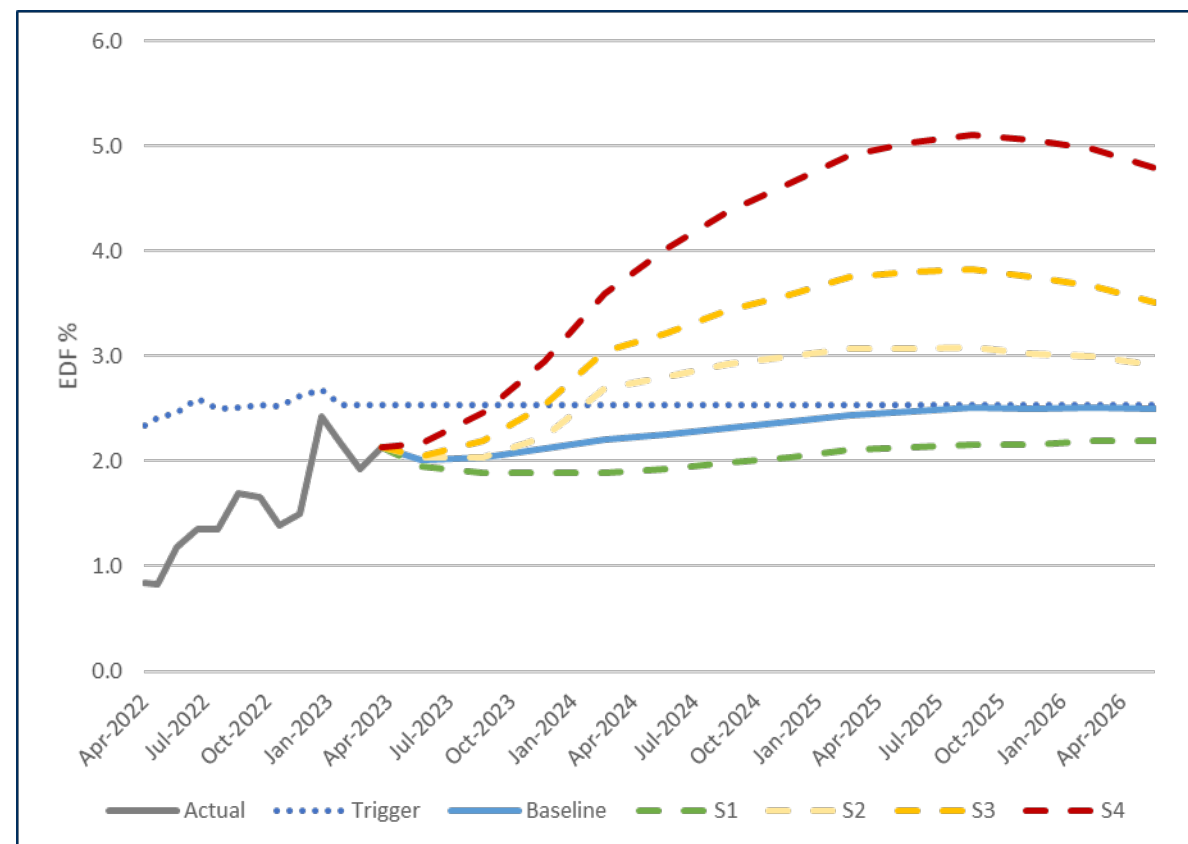
BARLOWORLD LTD – Wholesale Trade - G10070
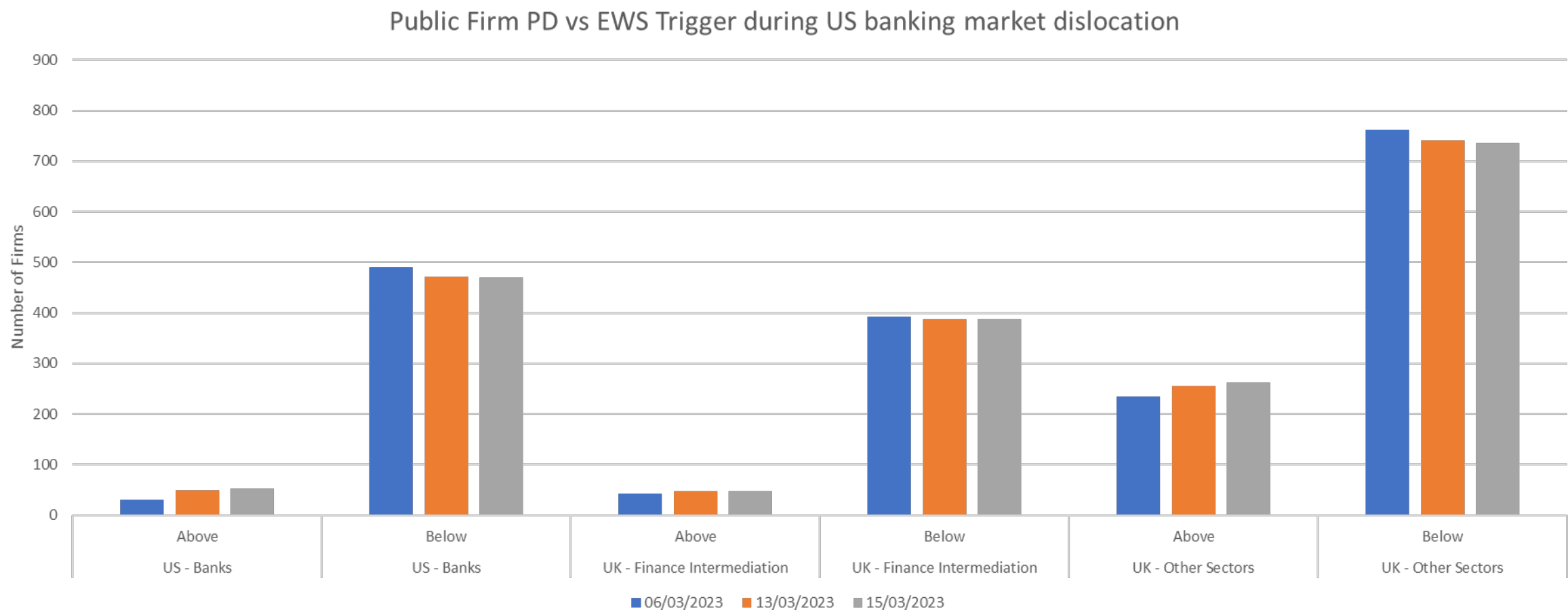
Profile

Barloworld, headquartered in South Africa, is the exclusive distributor and after-sales support provider of Caterpillar heavy equipment for the mining and construction industries across southern Africa, Russia and Mongolia. Equipment sales and servicing accounted for 70% of Barloworld's revenue and 69% of operating profit for FY2021.

EDF Credit Assessment

- Low EWS classification in Q1 2022.

- Increasing EDF through 2022 resulted in rises in Implied rating, although below peer trigger. Medium EWS classification in Q1 2023.

- Firm likely to remain below peer trigger level in Baseline scenario.

- However, could breach current trigger levels in 2024 under downside scenarios

At the same time, EWS measures indicate recent market events are contained…for now?

Public Firm PD vs EWS Trigger during US banking market dislocation

Legend: 06/03/2023, 13/03/2023, 15/03/2023

Categories: Above / Below — US - Banks, UK - Finance Intermediation, UK - Other Sectors

Y-axis: Number of Firms