Credit Benchmark®

Quarterly Credit
Outlook Q3 2023

Growth Holding Up but Storm Clouds Gathering
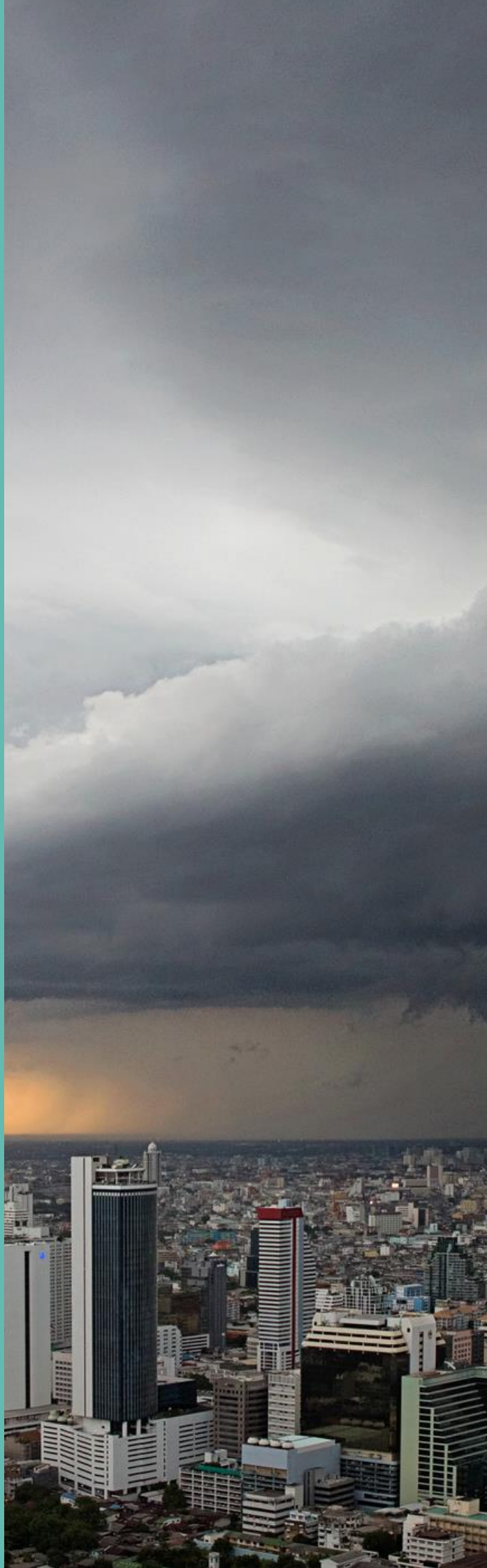
July 2023

Credit Benchmark

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About Credit Benchmark

Credit Benchmark produces a comprehensive view of credit risk by creating Credit Consensus Ratings ("CCRs") and analytics on the credit quality of companies, financial institutions, sovereigns, and funds.

The data is sourced from more than 40 global financial institutions, representing the work of over 20,000 analysts and is also used by regulators to monitor Basel rules on capital adequacy.

Credit Benchmark collects a specific measure of credit risk: a one-year, forward-looking Probability of Default (PD) and forward-looking senior unsecured Loss Given Default (LGD).

The underlying inputs are subject to a rigorous data quality approval process and derived from models that are approved by regulatory authorities. The resultant accuracy of each PD and LGD leads to a credible market view of credit risk for each given entity.

After being anonymized and aggregated, the contributed risk estimates are mapped to the appropriate credit category on the Credit Benchmark Consensus scale, which is calibrated periodically and can be used as a comparison to the scales published by the rating agencies.

Credit Benchmark produces regular data updates with history going back to 2015.

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Are storm clouds still gathering? Some major economies have been surprisingly buoyant in the past quarter making some of the gloomier credit forecasts look premature. Despite continued rate hikes, economic growth numbers remain robust especially in North America, the UK, and countries with major energy producing sectors. While recent US CPI numbers look promising, core inflation rates are likely to be stubbornly high; the Fed may have paused but further hikes cannot be ruled out. In Continental Europe, the impact of the Ukraine war continues to cast a shadow; stalled growth has been the price of lower inflation. Other major economies may also struggle to slay the inflation dragon for good without recession.

The full impact of rate hikes has been delayed by staggered loan rate resets; some sectors will be hit harder than others. This summer is likely to bring further challenges: El Nino is expected to set new weather records, and the effects of climate change are becoming obvious in a growing list of countries. Africa (also suffering a Ukraine linked fertilizer shortage) has been on the environmental frontline for years, but Southern Europe and the Southern US are now suffering annual droughts. Wildfires are earlier, larger, more frequent and more widespread; New York's recent smoke haze originated in Canada. Food production and river-based transport now face regular disruption, and water shortages are becoming the new normal.

These problems are driving climate-linked technology research; and shifting global consumer attitudes may start to free up capital needed to turn innovation into climate-tackling investment. Higher interest rates are key in the fight against inflation, but they also encourage saving to finance technological change.

Consensus data shows that many sectors with a marked deterioration in Q1 have stabilised in Q2, while transitions only show a balance to downgrades in the crossover credit categories. This may be the calm before the storm, but the consensus has been broadly correct so far – the worst-case predictions for default rates have yet to materialise.

The commercial real estate sector – discussed in this report – is shifting focus away from office and retail towards industrial and warehousing, consistent with shorter supply chains and hybrid working. The sector is beginning to adapt to the new real estate landscape.

Leveraged Loans – also covered here – have been a major area of concern in 2023. Consensus data shows a marked credit deterioration, but this may have run its course for now. Many leveraged companies continue to successfully refinance and the appetite for securitised assets – at the right price – remains, but volumes are expected to trend lower. The US Government's flirtation with default has again stretched the definition of "high risk" in credit markets, causing some investors to seek new forms of diversification. Related to this, credit index correlations reported here show that Asian and Continental Europe credit indices are diverging from the UK and North America – so there may be more scope for credit portfolio diversification.

Diversifying credit risk is likely to be become increasingly important if storm clouds continue to gather. Some of these appear in this report, including an uptick in credit volatility after a prolonged downtrend and – as the chartbook at the end of this report shows – ominously negative trends developing in Farming, Fishing, and Food Production.

1. Global Roundup: More Credit Indices Show Upgrade Bias

The chart below covers a universe of approximately 1,200 credit indices, tracking the proportion showing net credit upgrades.
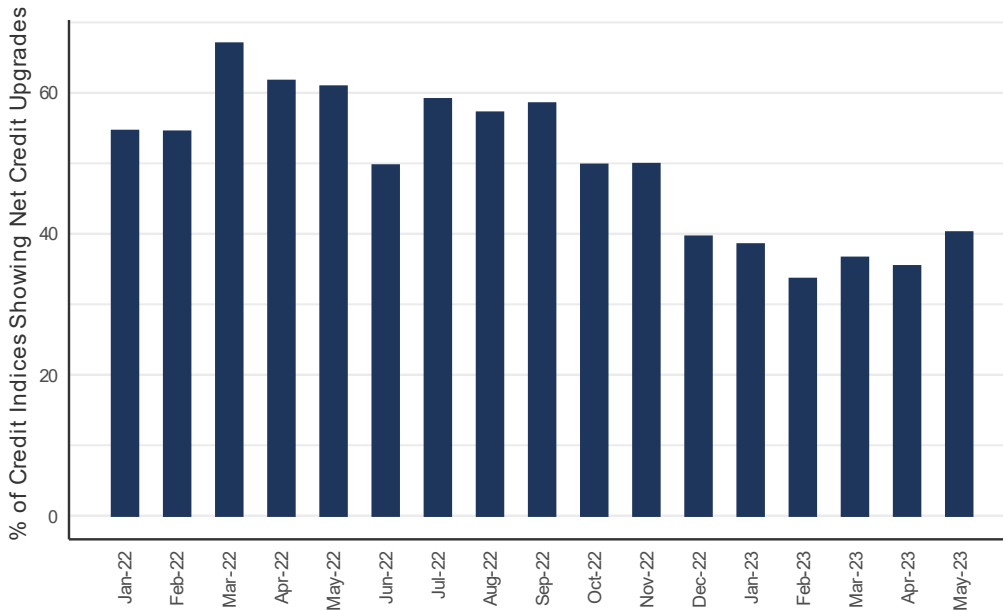
The 2022-Q3 steep decline in the proportion of indices showing net credit upgrades slowed in 2023-Q1. The latest month shows an increase in the proportion of indices showing net credit upgrades; more than 40% of indices are currently biased to upgrades in 2023-Q2.

The charts below show details for index types and regions. Upper charts show the proportion of indices upgrading over time. Lower charts show the current split between downgrades, no change, and upgrades.

All   **Corporates**   **Financials**   **Funds**
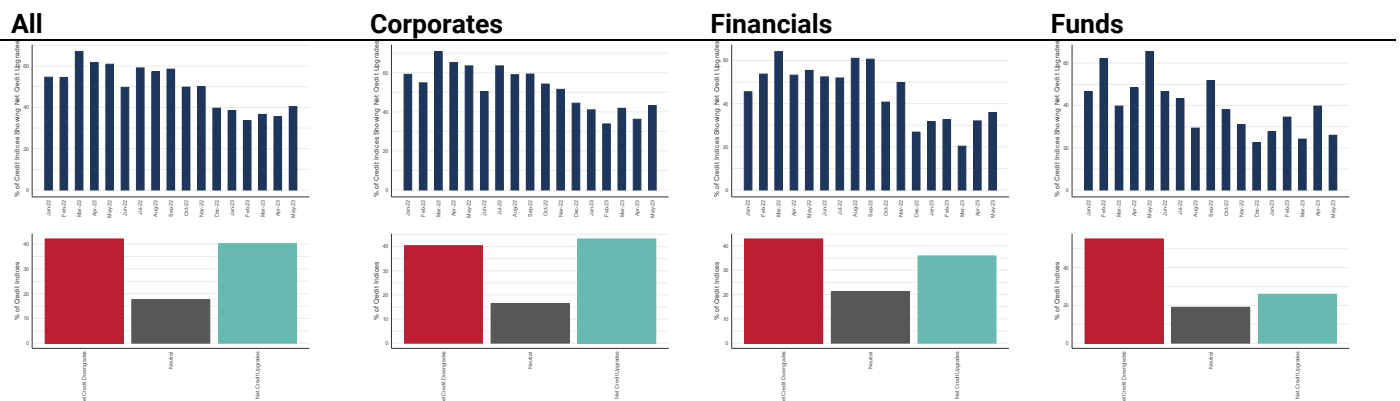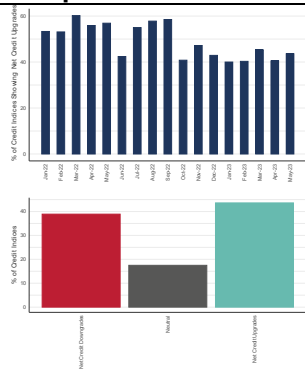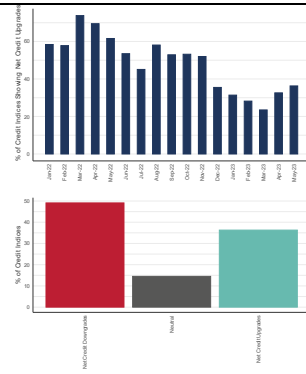
Europe   **North America**   **Asia**   **Africa**
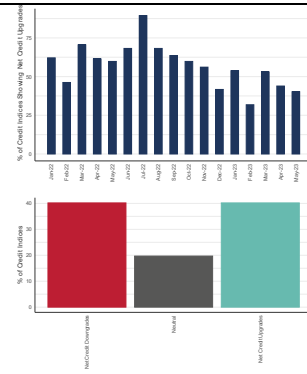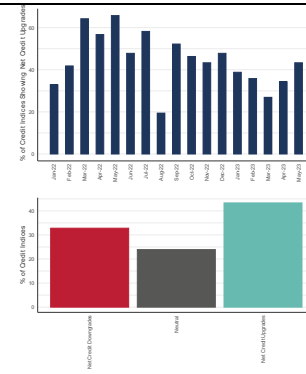
Apart from Asia and Funds, the main regions and borrower types are all trending up.

Financials show a higher proportion of stable indices than Corporates; the latter show more movement, roughly balanced between upgrades and downgrades.

The proportion of Europe indices showing net credit upgrades increased in the latest month; North America is on its second month of incline, whilst Africa is on its third. Asia decline continues.

2. Industry and Sector Turning Points: Recovery in Personal Goods and Clothing & Accessories

The table below shows detailed global industries and sectors that may be at turning points. These have either started to show negative balances after a run of positives, or vice versa.

Dec-22 to Feb-23 all positive CCIs, Mar-23 to May-23 at least 1 negative CCI:
- Pharmaceuticals
- Support Services

Dec-22 to Feb-23 all negative CCIs, Mar-23 to May-23 at least 1 positive CCI:
- Clothing & Accessories
- Commodity Chemicals
- Hedge Fund
- Media
- Personal Goods
- Railroads
- Real Estate Investment & Services
- Real Estate Investment Trusts
- Real Estate Services

There are more Global indices in the right column than the left. These trend shifts are spread across diverse sectors.

The charts below are based on the net balance between upgrades and downgrades which forms the Credit Consensus Indicator (CCI[1]). The plotted indices are examples of some of the global industries and sectors listed above.
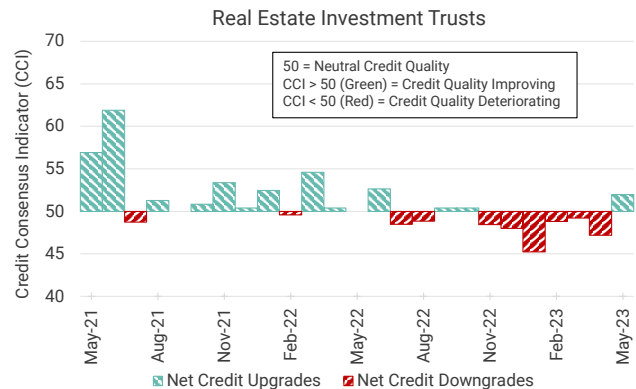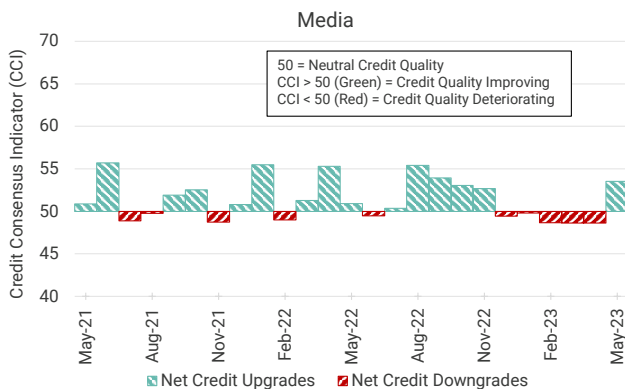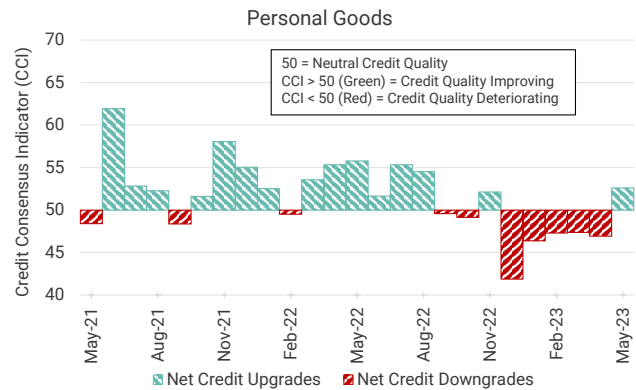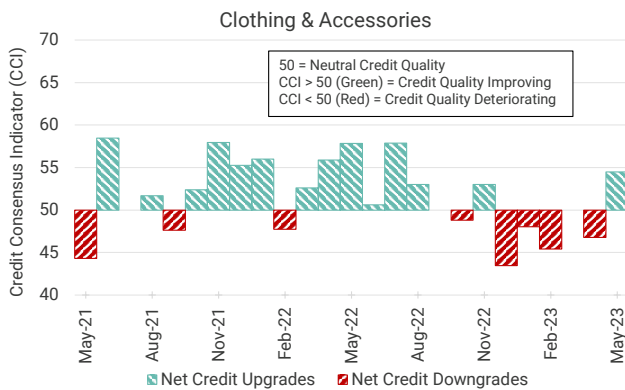
[1] The CCI tracks the total number of upgrades and downgrades made each month by credit analysts to chart the long-term trend in analyst sentiment. A monthly CCI score of 50 indicates neutral credit quality, with an equal number of upgrades and downgrades made over the course of a month. Scores above 50 indicate that credit quality is improving. Scores below 50 indicate that credit quality is deteriorating.

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The Global industries and sectors below are some of the key ones to watch. They have all had a run of multiple consecutive months of net deterioration, but the trend is slowing and approaching positive territory, or vice versa.

Health Care Equipment & Services

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

Building Materials & Fixtures

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

Financials

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

Investment Services

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

Electrical Components & Equipment

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

Automobiles & Parts

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

3. US Sector PD Comparisons: Travel & Leisure Largest Improvement, Fixed Line Telecomms Largest Deterioration

With economies and markets giving mixed signals, there is a lot of uncertainty about 2023 default rates. The table below compares average consensus default probabilities for a range of US sectors.
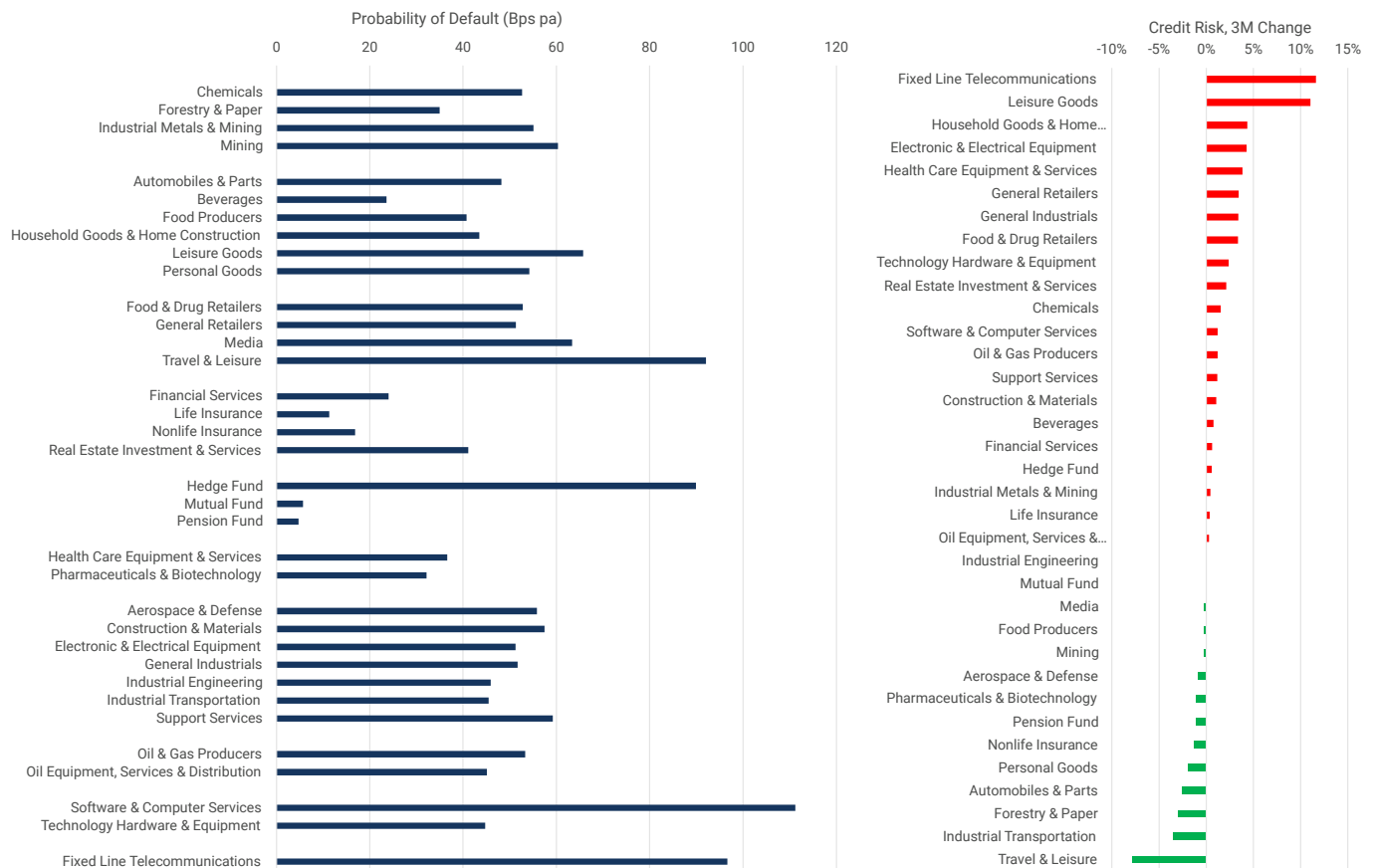
Insurance and Funds – apart from Hedge Funds – are very low risk. Travel & Leisure, Hedge Funds, Software, and Fixed Line Telecomms are highest in the 80 -120 Bps range. The mid-range includes Mining, Leisure Goods, Media and Support Services.

Large sector increases this quarter includes Leisure Goods, Fixed Line Telecomms (always a volatile sector), Household Goods, and Electronic & Electrical Equipment. Improvements include Travel & Leisure (cf. Leisure Goods), Industrial Transportation, Forestry & Paper, and Automobiles & Parts.

The second half of 2023 could show deteriorating balance sheets and liquidity problems in some sectors, and the main credit rating agencies are forecasting steep increases in default rates. Consensus data derived volatility and trend metrics will also give a strong and detailed indication of future downgrades or default rates.

4. Credit Index Volatility: Equity and Credit Volatility Ticking Up – Downgrades Coming?

The chart below shows percentiles for credit index 6-month rolling volatility. For approximately 1,200 indices, rolling volatility shows the speed and scale of PD changes; these can give advance warning of changes in transition rates. The percentiles plotted here are the most sensitive to turning points in PD volatility.
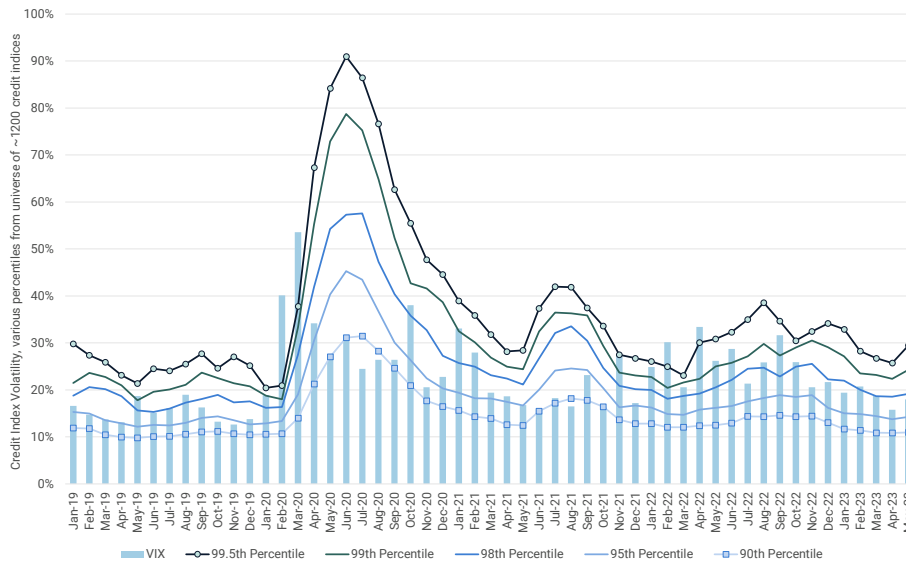
Sources: Credit Benchmark, CBOE / St. Louis Fed.

Across the CB index universe, all percentiles have – along with the equity VIX - ticked up this month, after multiple months of decline.

The next chart is based on cross sectional volatility ("dispersion") i.e., the average range of estimates for single name estimates. A high value implies widespread uncertainty about individual firm credit ratings, probably around a key turning point; a low value implies a tight consensus and probably indicates that current trends will continue.

This metric shows a trend decline[2] since the start of the pandemic, consistent with the drop in rolling volatility plotted above, but it is above its low and has been volatile in recent months.

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[2] The actual plotted range is small (about 4% of the average value). Changes in dispersion are more marked at the single name level – for example, when a legal entity is downgraded, the range of PD estimates usually increases.

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5. CB Leveraged Loan Universe: Improving After Long Trend Decline

The CB Leverage Loan universe now covers about 4,300 issuers (54% North America, 44% Europe). The charts below show the latest trends.
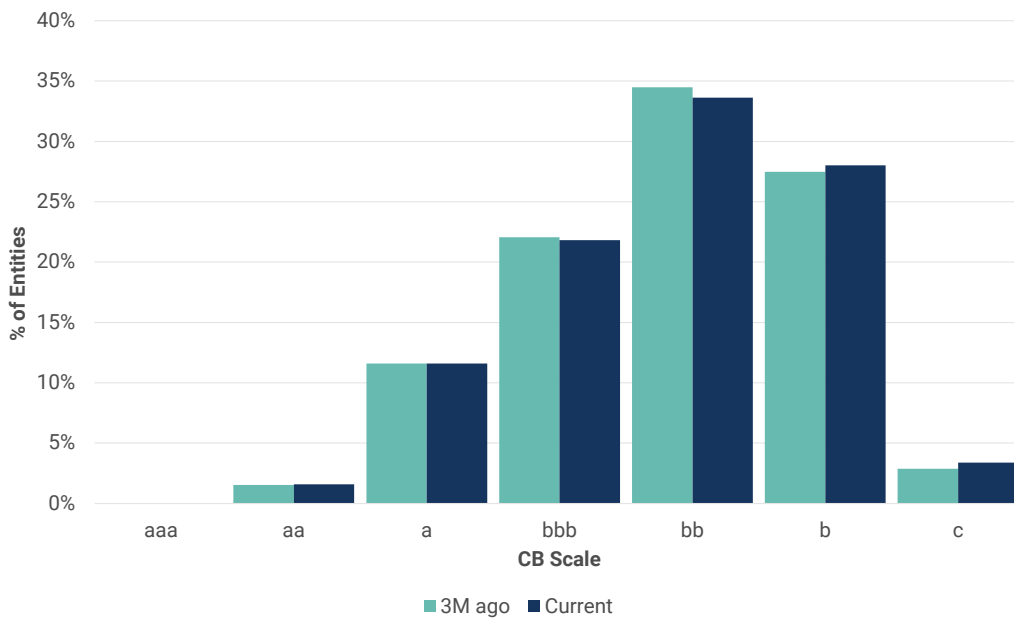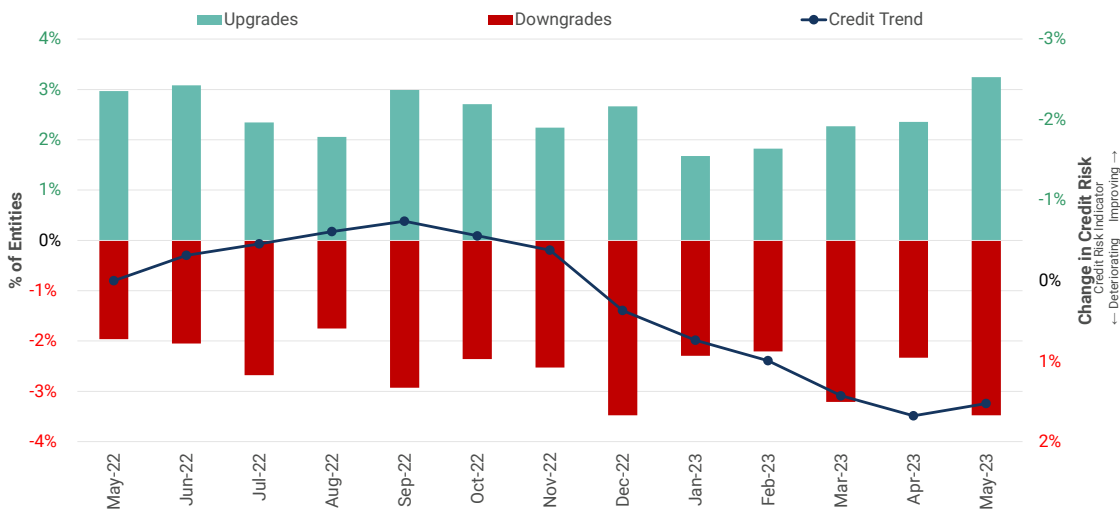
The latest credit trend shows an improvement in average risk. However, the credit distribution has shifted to the right in the last 3 months, with more issuers in the **b** and **c** categories.

6.   Water: UK Water Sector Credit Has Been Deteriorating Since Before Covid

Cash flow problems at Thames Water have highlighted the range of challenges facing the sector. Crumbling infrastructure, high inflation linked debt, rising interest rates and tougher regulation are all questioning the Leveraged model that has been used to boost returns by infrastructure investors over the past few years.

The charts below show consensus ratings for Global Utilities in a sustained decline, but the deterioration in UK Water companies is significantly greater.

Historic Credit Trend (Jan-16 to Current)
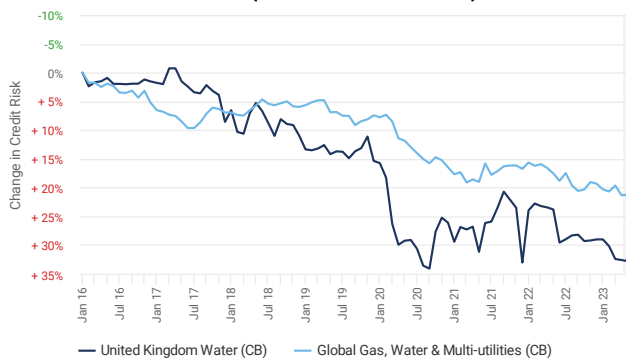
Current Credit Distribution
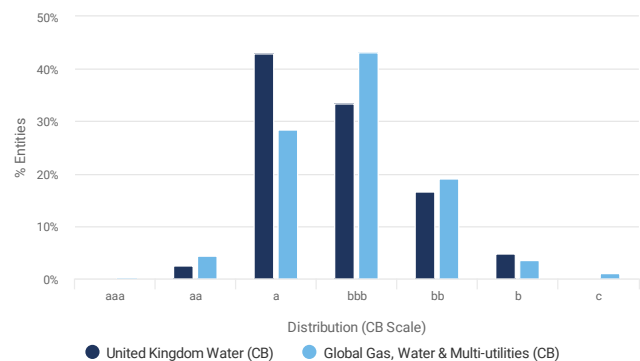
The chart on the right shows that – despite this long-term underperformance – UK water companies have better credit risks than a typical global utility. But UK water company groups fall into distinct categories:

1. Statutory Corporations like Scottish Water, which are effectively publicly owned.
2. Publicly traded companies like Severn Trent.
3. Privately held companies whose owners include major, diversified infrastructure firms, long term holders like pension funds, and dedicated infrastructure funds with multiple retail investors. Examples include Northumbrian Water and South Staffordshire Water.
4. Privately held companies with (possibly offshore) "Holding Company" majority ownership parents whose sole purpose is to invest in their water utility subsidiaries. Examples include Thames Water, Wessex Water, and South West Water owned by Kemble, Pennon and YTL respectively. In some of these cases the operating companies may also have their own diverse investors.

The next chart shows average consensus credit risk for these four types of firms, based on a UK consensus universe of 39 parent, holding and operating legal entities.
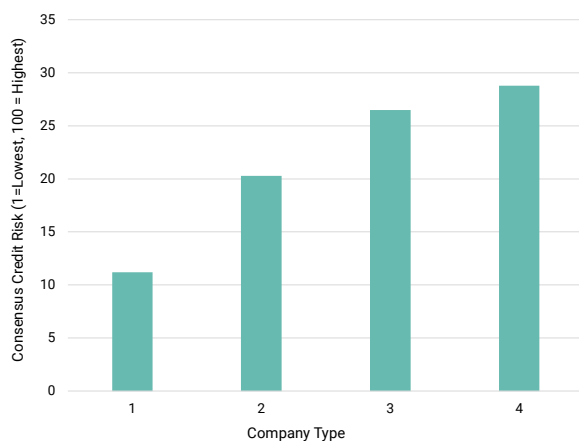
"Holding Company" structures have the highest risk (averaged across parents and subsidiaries), slightly above those with a more traditional investor base. Companies with ready access to equity funding are much lower, while those with implicit Government guarantees are unsurprisingly the lowest.

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7. Food, Beverages & Farming: Declining

Summer in the Northern Hemisphere now brings an annual round of heat records and various extreme weather episodes. Drought, fires, fertilizer shortages, supply chain issues, and changing consumer tastes (and budgets) are putting increasing pressure on the agriculture and forestry subsectors.

The impact of climate change has been exacerbated by the Ukraine war, and the temporary ceasefire (Black Sea Grain Initiative) that allows Ukraine to continue to export fertilizer and grain is set to expire on 17th July.

These issues are now hitting credit risk in the "4Fs": Food, Farming, Fishing, and Forestry. Consensus data shows a modest but consistent impact in these and related subsectors.
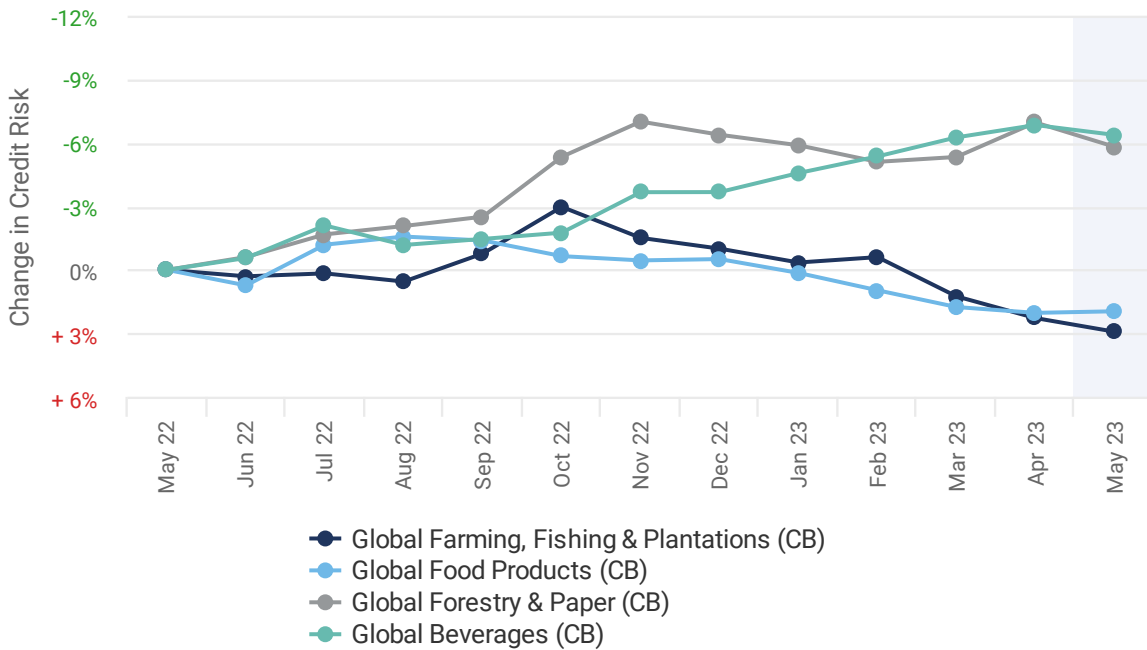
Global Farming, Fishing & Plantations, Beverages and Forestry & Paper credit indices all show a deterioration this month. The downward trend in Farming, Fishing & Plantations started in Q4 of last year.

If current climate records continue to be broken, and with no immediate end in sight for the Ukraine war, further deterioration is likely in coming months.

8. US Commercial Real Estate: Industrial & Office Worst Performer

Warning signs continue to flash in the $5.5trn US Commercial Real Estate ("CRE") market, with rising rent arrears and defaults, plus sales of some properties and real estate loans at steep discounts. The latter now extends to performing loans as lenders and investors anticipate widening problems.

Office sectors are worst affected by the persistence of hybrid working, with a Knight Frank survey reporting that most large firms are cutting office space. Retail is another casualty of work-from-home; already heavily indebted malls and former flagship stores are struggling with lack of footfall.

There are knock-on effects: municipal revenues will be hit by a shrinking property and sales tax base; the CMBS market is likely to see lower volumes and falling prices; and banks may struggle to liquidate property collateral for broader corporate (i.e., non-real estate) loans if those also turn sour.

Most of these problems are concentrated in cities like tech-hub San Francisco, or more generally in older properties in cities like Washington DC and New York. And there are also opportunities: demand for storage and warehousing space is growing. Industrial property demand in some locations is benefiting from onshoring as companies bring manufacturing home and hold more manufacturing inventory. Second-tier office sites are being converted to residences.

The S&P US REIT index reflects some of these issues, down 12% over the past year (vs. S&P 500 +3%). And real estate funds have explicit "gates" to manage withdrawals and avoid a property market overhang. So far, the adjustment has been modest.

The consensus credit distribution chart below shows that the majority of US REITs are investment grade, with around two-thirds in the **a** and **bbb** categories. The exception is Mortgage REITs, representing secured CRE loans. The majority are in the **bb** category and 40% are in single **b**. Retail REITS are generally high quality but just under 10% are in the **c** category – i.e., significant risk of default.

Legend:
- United States Real Estate Investment Trusts (CB)
- United States Industrial & Office REITs (CB)
- United States Retail REITs (CB)
- United States Mortgage REITs (CB)
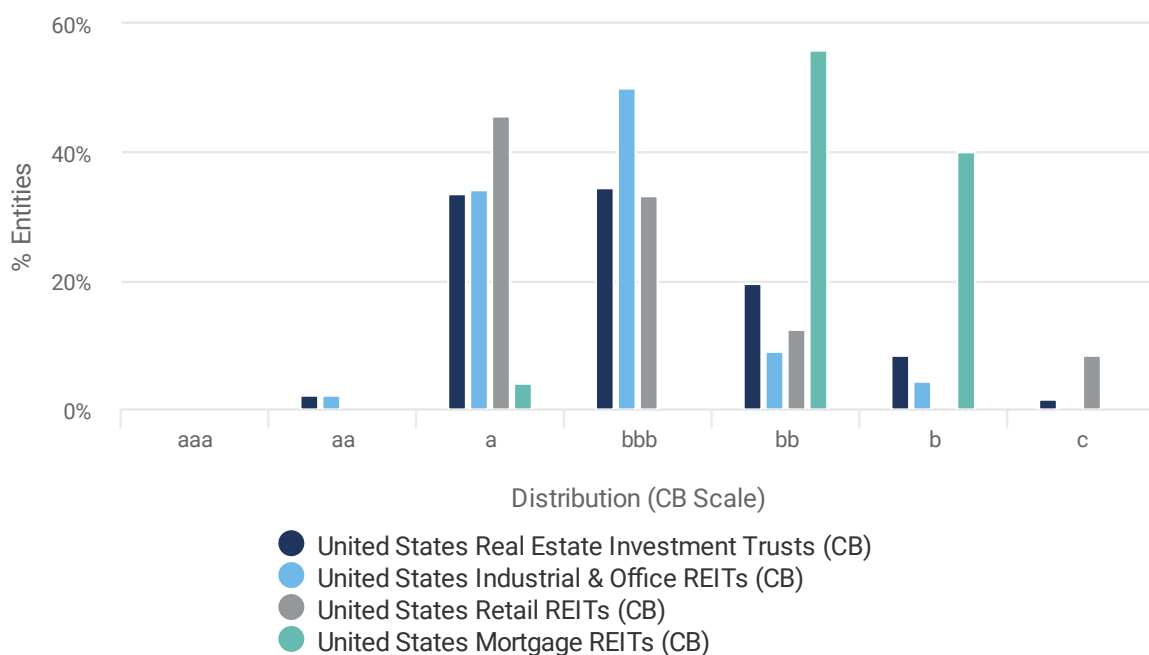
Source: Credit Benchmark (based on 182 issuers)

The next chart shows recent credit trends for these sectors.

United States Real Estate Investment Trusts (CB)
United States Industrial & Office REITs (CB)
United States Retail REITs (CB)
United States Mortgage REITs (CB)
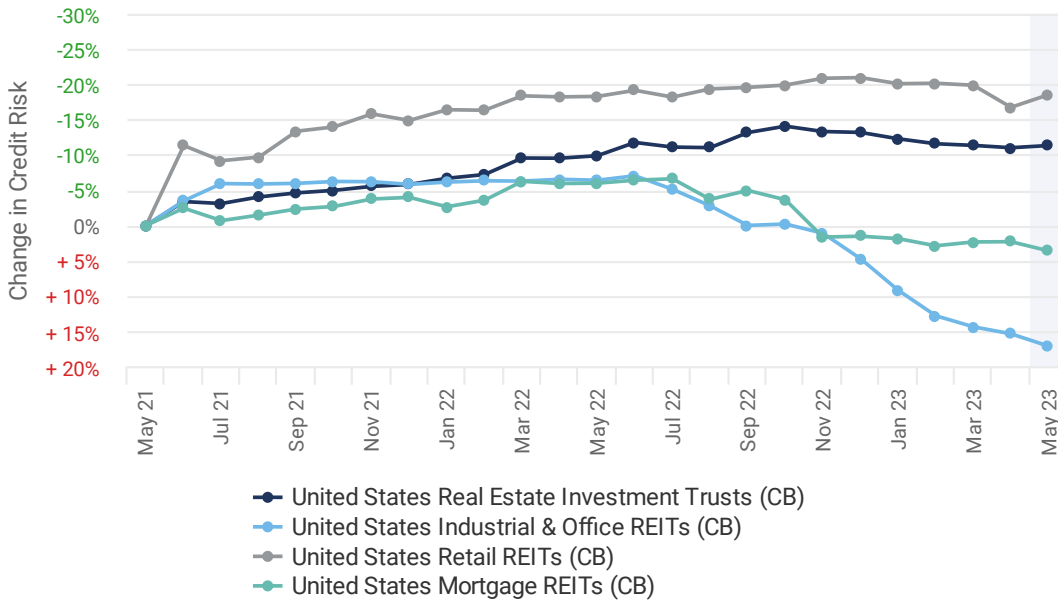
In the past two years, the main index shows a credit risk improvement of 10%, now flattening. US Retail has been even stronger, particularly after Covid lockdowns ended. Mortgage REITs have underperformed, giving up all their post-Covid gains. The worst performer is the combined Industrial & Office category, with a 12M credit deterioration of 10%. This suggests that any Industrial improvements have been more than weighed down by problems in the Office sector.

The next set of 4 charts plot the 2-year Credit Consensus Indicators (CCIs).
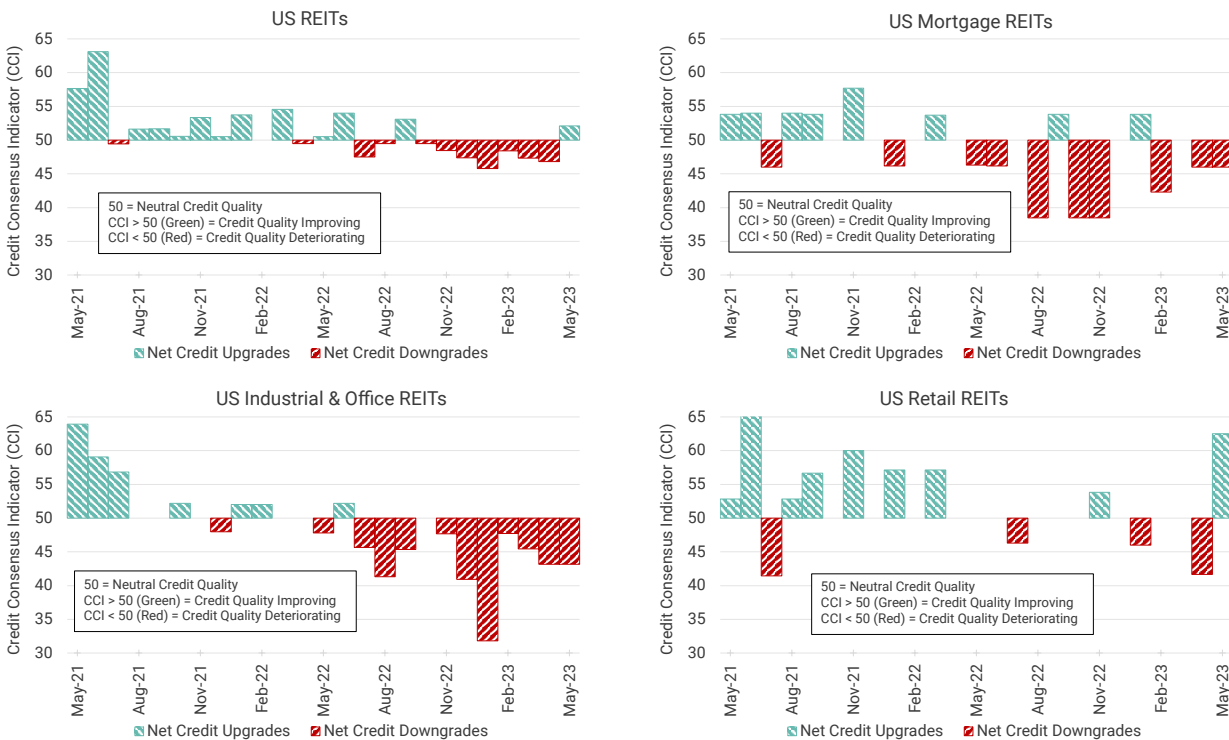
The US REIT universe actually turned positive this month after being in net downgrade territory for most of the past year. Industrial and Office shows the largest downgrade bias in this period, although the pace has recently eased. Retail shows a positive credit outlook in the latest month, but Mortgage REITs are mired in downgrades with only brief moments of modest respite.

9. Transition Matrices: Skewed Bias to Upgrades

Global Corporates

	Current			
	IGa	IGb	HYb	HYc
IGa	94.8%	5.0%	0.3%	0.0%
IGb	5.2%	87.5%	7.4%	0.0%
HYb	0.1%	5.8%	93.1%	1.0%
HYc	0.5%	0.0%	19.7%	79.8%

(6M ago — row label)

Global Financials

	Current			
	IGa	IGb	HYb	HYc
IGa	94.9%	5.1%	0.1%	0.0%
IGb	5.7%	89.7%	4.6%	0.0%
HYb	0.1%	7.3%	91.7%	0.9%
HYc	0.0%	0.0%	18.5%	81.5%

(6M ago — row label)

Transition Matrices can be slow to adjust when credit conditions are changing rapidly. Both categories of borrowers still show a very skewed bias to upgrades; Global Financials have 31.6% upgrades vs. just 10.6% downgrades; a ratio of ~3:1.

Global Corporates have a similar ratio with 31.3% upgrades vs. 13.6% downgrades.

However, the majority of these upgrades are within the High Yield categories. In Investment Grade, both Corporates and Financials, show a more balanced position: 5.2% upgrades vs. 5.0% downgrades for Corporates and 5.7% upgrades vs. 5.1% downgrades for Financials.

In the crossover category, Corporates are skewed to downgrades (5.8% vs. 7.4% downgrades) and Financials are biased to upgrades (7.3% vs 4.6% downgrades).

In the second half of 2023, the "Downgrade Triangle" (the upper right) is likely to dominate.

10. Correlation Matrices: North America and UK Decouple From Continental Europe and Asia Suggesting Increased Scope for Portfolio Diversification

The matrices below are based on credit index changes for the past 12 months. Post-Covid correlations are still low and, in many cases, slightly negative. Continental European and Asian indices show some surprisingly high correlations, while North America and the UK currently form a separate block. This is consistent with the more robust economic news from the latter economies.

Corporate Credit Correlations by Geography

Correlations Between Changes in Average Index PDs, 12m to May23

	Africa	Asia	Australia	Belgium	Canada	Central CP Clearing Firms	China	Developed Sovereigns	Emerging/Frontier Sovereigns	EU	Europe	France	Germany	Global	Global SIBs	Hong Kong	Spain	Italy	Japan	Latin America	Middle East	Netherlands	North America	Pacific	Singapore	South Africa	United Kingdom	United States	US Financials	US Top 500 (Tech)
Africa Corporates	1.00	-0.01	0.38	0.20	0.15	0.24	0.01	-0.16	-0.34	-0.17	-0.30	-0.07	-0.09	0.11	-0.20	0.13	-0.30	0.15	-0.11	0.05	0.50	-0.03	0.19	0.17	0.30	0.96	-0.33	0.13	-0.05	0.22
Asia Corporates	-0.01	1.00	0.64	0.07	0.21	0.18	0.79	0.19	0.22	0.57	0.47	0.37	0.75	0.73	-0.23	0.76	0.25	0.57	0.27	0.64	0.12	0.25	0.43	0.73	0.16	-0.09	0.38	0.33	0.20	-0.01
Australia Corporates	0.38	0.64	1.00	-0.03	0.19	0.34	0.27	0.16	0.32	0.33	0.17	0.16	0.43	0.53	0.03	0.51	-0.06	0.34	0.33	0.36	0.25	0.30	0.38	0.80	0.47	0.39	0.07	0.30	0.49	0.41
Belgium Corporates	0.20	0.07	-0.03	1.00	-0.14	0.05	0.19	0.04	-0.40	0.41	0.43	-0.04	0.41	0.52	-0.07	-0.12	0.06	0.21	0.12	0.70	0.17	0.12	0.42	-0.21	-0.28	0.28	0.41	0.30	-0.02	-0.08
Canada Corporates	0.15	0.21	0.19	-0.14	1.00	-0.07	0.05	0.13	-0.36	-0.20	-0.02	-0.28	-0.06	0.25	-0.47	0.06	0.12	0.17	-0.37	-0.17	0.23	-0.19	0.52	0.28	0.42	0.04	-0.03	0.51	0.23	0.02
Central Counterparty Clearing Firms	0.24	0.18	0.34	0.05	-0.07	1.00	0.18	-0.14	0.22	0.50	0.16	0.54	-0.07	0.16	-0.19	-0.04	-0.46	0.25	-0.06	0.28	0.20	0.31	-0.10	0.17	0.12	0.16	0.05	-0.12	-0.09	0.72
China Corporates	0.01	0.79	0.27	0.19	0.05	0.18	1.00	0.03	0.14	0.59	0.33	0.56	0.68	0.44	-0.30	0.72	0.40	0.38	0.01	0.51	0.08	0.14	0.05	0.55	-0.10	-0.14	0.22	-0.08	-0.34	-0.17
Developed Sovereigns	-0.16	0.19	0.16	0.04	0.13	-0.14	0.09	1.00	0.37	0.12	0.03	-0.09	0.22	0.11	-0.26	0.41	-0.12	0.28	0.41	0.03	-0.05	0.08	0.14	0.40	0.01	-0.10	0.02	0.19	0.13	-0.01
Emerging/Frontier Sovereigns	-0.34	0.22	0.32	-0.40	-0.36	0.22	0.14	0.37	1.00	0.47	0.22	0.29	0.25	-0.03	0.19	0.25	0.13	0.18	0.39	0.01	0.12	0.63	-0.37	0.50	-0.07	-0.31	0.15	-0.30	-0.01	0.28
EU Corporates	-0.17	0.57	0.33	0.41	-0.20	0.50	0.59	0.12	0.47	1.00	0.78	0.49	0.60	0.66	-0.06	0.26	0.26	0.24	0.63	0.29	0.78	0.38	0.67	0.38	-0.15	-0.20	0.66	0.14	-0.02	0.37
Europe Corporates	-0.30	0.47	0.17	0.43	-0.02	0.16	0.33	0.03	0.22	0.78	1.00	0.33	0.44	0.78	0.22	0.03	0.21	0.58	0.13	0.67	0.40	0.73	0.43	0.10	-0.06	-0.27	0.98	0.38	0.29	0.24
France Corporates	-0.07	0.37	0.16	-0.04	-0.28	0.54	0.56	-0.09	0.29	0.49	0.33	1.00	0.01	0.08	0.25	0.19	-0.19	0.12	-0.17	0.14	-0.09	-0.18	-0.37	0.21	0.12	-0.16	0.27	-0.43	-0.16	0.39
Germany Corporates	-0.09	0.75	0.43	0.41	-0.06	-0.07	0.68	0.22	0.25	0.60	0.44	0.01	1.00	0.64	-0.18	0.67	0.53	0.37	0.41	0.78	0.11	0.28	0.34	0.53	-0.29	-0.06	0.35	0.20	-0.04	-0.36
Global Corporates	0.11	0.73	0.53	0.52	0.25	0.16	0.44	0.11	-0.03	0.66	0.78	0.08	0.64	1.00	-0.14	0.31	0.16	0.77	0.27	0.83	0.47	0.51	0.81	0.40	0.16	0.12	0.73	0.72	0.45	0.18
Global Systemically Important Banks	-0.20	-0.23	0.03	-0.07	-0.47	-0.19	-0.30	-0.36	0.19	-0.06	0.22	0.25	-0.18	-0.14	1.00	-0.31	-0.05	-0.39	-0.14	-0.13	0.21	-0.30	-0.21	0.13	-0.07	0.28	-0.33	0.33	0.06	-0.22
Hong Kong Corporates	0.13	0.76	0.51	-0.12	0.06	-0.04	0.72	0.16	0.25	0.26	0.03	0.19	0.67	0.31	-0.31	1.00	0.42	0.24	0.44	0.34	0.10	0.01	0.08	0.63	-0.17	0.04	-0.05	0.01	-0.22	-0.22
Spain Corporates	-0.30	0.25	-0.06	0.06	0.12	-0.46	0.40	-0.12	0.13	0.24	0.21	-0.19	0.53	0.16	-0.05	0.42	1.00	0.04	0.08	0.42	-0.30	-0.37	0.17	0.06	-0.25	0.19	-0.04	0.14	-0.02	0.37
Italy Corporates	0.15	0.57	0.34	0.21	0.17	0.25	0.38	0.28	0.18	0.63	0.58	0.12	0.37	0.77	-0.39	0.24	0.04	1.00	0.32	0.55	0.63	0.62	0.63	0.44	0.24	0.09	0.52	0.66	0.27	0.35
Japan Corporates	-0.11	0.27	0.33	0.12	-0.37	-0.06	0.01	0.41	0.39	0.29	0.13	-0.17	0.41	0.27	-0.14	0.44	0.13	0.32	1.00	0.37	0.07	0.23	0.22	0.23	-0.29	-0.02	0.10	0.29	0.15	-0.01
Latin America Corporates	0.05	0.64	0.36	0.70	-0.17	0.28	0.51	0.03	0.01	0.74	0.67	0.14	0.78	0.83	-0.13	0.34	0.12	0.55	0.37	1.00	0.24	0.40	0.52	0.21	-0.24	0.10	0.59	0.39	0.11	-0.01
Middle East Corporates	0.50	0.12	0.25	0.17	0.23	0.20	0.08	-0.05	0.12	0.38	0.40	-0.09	0.11	0.47	-0.19	0.10	0.16	0.63	0.07	0.24	1.00	0.70	0.36	0.20	0.05	0.45	0.36	0.38	-0.03	0.40
Netherlands Corporates	-0.03	0.25	0.30	0.12	-0.19	0.31	0.14	0.08	0.63	0.74	0.73	-0.18	0.28	0.51	0.21	0.01	0.14	0.62	0.23	0.40	0.70	1.00	0.15	0.30	0.02	0.00	0.47	0.18	0.16	0.08
North America Corporates	0.19	0.43	0.38	0.42	0.52	-0.10	0.05	0.14	-0.37	0.20	0.43	-0.37	0.34	0.81	-0.30	0.08	0.08	0.63	0.22	0.52	0.36	0.15	1.00	0.23	0.34	0.22	0.42	0.97	0.62	0.08
Pacific Corporates	0.17	0.73	0.80	-0.21	0.28	0.17	0.55	0.40	0.50	0.38	0.10	0.21	0.53	0.40	-0.21	0.63	0.22	0.44	0.23	0.21	0.20	0.30	0.23	1.00	0.46	0.10	-0.02	0.19	0.25	0.18
Singapore Corporates	0.30	0.16	0.47	-0.28	0.42	0.12	-0.10	0.01	-0.07	-0.15	-0.06	0.12	-0.29	0.16	-0.17	-0.30	0.24	-0.23	-0.24	0.05	0.02	0.34	0.46	1.00	0.24	-0.08	0.36	0.69	0.42
South Africa Corporates	0.96	-0.09	0.39	0.04	0.16	0.14	-0.10	-0.31	-0.20	-0.27	-0.18	-0.16	0.12	-0.07	0.04	-0.37	0.19	-0.02	0.10	0.45	0.00	0.22	0.10	0.24	1.00	-0.28	0.15	0.06	0.18
United Kingdom Corporates	-0.33	0.38	0.07	0.41	-0.03	0.05	0.22	0.02	0.15	0.66	0.98	0.27	0.35	0.73	0.28	-0.05	-0.04	0.52	0.10	0.59	0.66	0.42	-0.02	-0.08	-0.28	1.00	0.39	0.32	0.18
United States Corporates	0.13	0.33	0.30	0.30	0.51	-0.12	-0.08	0.19	-0.30	0.14	0.38	-0.43	0.20	0.72	-0.33	0.01	0.06	0.66	0.29	0.39	0.38	0.18	0.97	0.19	0.36	0.15	0.39	1.00	0.65	0.17
United States Financials	-0.05	0.20	0.49	-0.02	0.23	-0.09	-0.34	0.13	-0.01	-0.02	0.29	-0.16	-0.04	0.45	0.33	-0.22	-0.25	0.27	0.15	0.11	-0.03	0.16	0.62	0.25	0.69	0.06	0.32	0.65	1.00	0.31
United States Top 500 (Technology)	0.22	-0.01	0.41	-0.08	0.02	0.72	-0.17	-0.01	0.28	0.37	0.24	0.39	-0.36	0.18	0.06	-0.22	-0.41	0.35	0.13	-0.01	0.40	0.48	0.08	0.18	0.42	0.18	0.18	0.17	0.31	1.00

Credit Correlations by Industry

Correlations Between Changes in Average Index PDs, 12m to May23

	Aerospace & Defense	Airlines	Apparel Retailers	Auto Parts	Automobiles	Automobiles & Parts	Banks	Basic Materials	Beverages	Brewers	Broadline Retailers	Building Materials & Fixtures	Central Banks	Chemicals	Clothing & Accessories	Coal	Commodity Chemicals	Computer Hardware	Computer Services	Construction & Materials	Consumer Finance	Consumer Goods	Consumer Services	Containers & Packaging	Corporates	Delivery Services	Distillers & Vintners	Diversified Industrials	Drug Retailers	Durable Household Products
Global Aerospace & Defense	1.00	0.09	-0.07	-0.41	0.00	-0.27	0.24	0.27	-0.08	0.20	0.32	0.52	0.37	0.05	0.32	-0.10	-0.01	-0.14	0.04	0.26	-0.32	0.42	0.21	0.49	0.32	0.26	-0.15	-0.03	-0.35	0.39
Global Airlines	0.09	1.00	0.08	-0.15	-0.18	-0.12	0.32	0.02	-0.09	0.40	0.43	-0.02	0.26	0.22	0.34	-0.25	0.03	0.35	-0.38	0.19	0.24	0.17	0.71	-0.10	0.33	0.14	-0.51	0.24	0.38	0.12
Global Apparel Retailers	-0.07	0.08	1.00	0.04	0.35	0.28	0.04	0.22	0.15	-0.11	-0.20	0.30	0.52	0.29	0.12	0.43	-0.09	0.08	0.15	0.31	0.04	0.04	0.26	-0.38	0.26	-0.25	0.19	-0.04	-0.18	0.00
Global Auto Parts	-0.41	-0.15	0.04	1.00	0.68	0.89	-0.22	0.51	-0.08	0.29	-0.24	-0.01	-0.07	0.53	-0.12	0.13	0.61	0.31	0.18	0.16	0.06	0.39	-0.11	-0.28	0.24	0.05	-0.32	0.46	-0.09	-0.12
Global Automobiles	0.00	-0.18	0.35	0.68	1.00	0.92	-0.05	0.57	0.37	0.42	-0.10	0.25	0.12	0.43	0.18	0.10	0.19	0.32	0.25	0.19	0.05	0.57	0.09	-0.36	0.48	0.26	0.06	0.39	-0.54	-0.11
Global Automobiles & Parts	-0.27	-0.12	0.28	0.89	0.92	1.00	-0.11	0.58	0.21	0.40	-0.16	0.12	0.06	0.54	0.06	0.14	0.40	0.39	0.21	0.19	0.11	0.53	0.04	-0.38	0.43	0.15	-0.12	0.48	-0.31	-0.12
Global Banks	0.24	0.32	0.04	-0.22	-0.05	-0.11	1.00	0.39	0.37	0.59	0.80	0.31	0.36	0.26	0.14	0.51	-0.06	0.69	0.13	-0.01	-0.21	0.41	0.40	0.40	0.51	0.05	-0.22	0.32	0.34	0.34
Global Basic Materials	0.27	0.02	0.22	0.51	0.57	0.58	0.39	1.00	-0.06	0.42	0.39	0.74	0.36	0.88	0.33	0.43	0.70	0.51	0.63	0.62	0.02	0.88	0.42	0.19	0.86	0.20	-0.37	0.56	-0.19	0.38
Global Beverages	-0.08	-0.09	0.15	-0.08	0.37	0.21	0.37	-0.06	1.00	0.44	0.08	-0.21	0.10	-0.15	0.07	0.30	-0.52	0.33	-0.08	-0.57	-0.33	-0.03	0.02	-0.14	0.06	0.05	0.58	0.15	-0.05	-0.06
Global Brewers	0.20	0.40	-0.11	0.29	0.42	0.40	0.59	0.42	0.44	1.00	0.52	0.17	0.03	0.29	0.17	0.19	0.03	0.74	-0.10	-0.08	-0.23	0.51	0.40	0.03	0.51	0.52	-0.43	0.45	0.03	-0.08
Global Broadline Retailers	0.32	0.43	-0.20	-0.24	-0.10	-0.16	0.80	0.39	0.08	0.52	1.00	0.42	0.07	0.21	0.42	0.10	0.08	0.54	0.04	0.15	0.21	0.58	0.59	0.40	0.52	-0.22	-0.37	0.11	0.30	0.32
Global Building Materials & Fixtures	0.52	-0.02	0.30	-0.01	0.25	0.12	0.31	0.74	-0.21	0.17	0.42	1.00	0.14	0.53	0.24	0.34	0.44	0.23	0.62	0.78	0.19	0.61	0.43	0.13	0.68	0.29	-0.24	0.22	-0.33	0.14
Global Central Banks	0.37	0.26	0.52	-0.07	0.12	0.06	0.36	0.36	0.10	0.03	0.07	0.14	1.00	0.47	0.30	0.25	0.11	0.13	0.09	0.17	-0.43	0.16	0.39	-0.37	-0.04	0.21	0.15	0.05	0.73
Global Chemicals	0.05	0.22	0.29	0.53	0.43	0.54	0.26	0.88	-0.15	0.29	0.21	0.53	0.47	1.00	0.37	0.40	0.73	0.55	0.63	0.65	0.07	0.72	0.48	0.15	0.80	0.17	-0.43	0.60	-0.11	0.43
Global Clothing & Accessories	0.32	0.34	0.12	-0.12	0.18	0.06	0.14	0.33	0.07	0.17	0.42	0.24	0.30	0.37	1.00	-0.39	0.02	0.07	0.11	0.61	0.15	0.54	0.75	0.21	0.66	0.29	-0.03	-0.14	-0.09	0.41
Global Coal	-0.10	-0.25	0.24	0.13	0.10	0.14	0.51	0.43	0.30	0.19	0.10	0.34	0.25	0.40	-0.39	1.00	0.24	0.55	0.55	0.15	-0.30	0.12	-0.17	0.23	0.20	-0.14	0.05	0.42	0.02	0.19
Global Commodity Chemicals	-0.01	0.03	-0.09	0.61	0.19	0.40	-0.06	0.70	-0.52	0.03	0.08	0.44	0.11	0.73	0.02	0.24	1.00	0.15	0.42	0.61	0.19	0.53	0.12	0.15	0.61	-0.10	-0.48	0.49	0.11	0.35
Global Computer Hardware	-0.14	0.35	0.08	0.31	0.32	0.39	0.69	0.51	0.33	0.74	0.54	0.23	0.13	0.55	0.07	0.55	0.15	1.00	0.26	0.15	0.05	0.50	0.35	0.11	0.61	0.38	-0.43	0.52	0.02	0.07
Global Computer Services	0.04	-0.38	0.15	0.18	0.25	0.21	0.13	0.63	-0.08	-0.10	0.04	0.62	0.09	0.63	0.11	0.55	0.42	0.26	1.00	0.58	0.05	0.36	0.13	0.14	0.64	0.26	0.06	0.38	-0.36	0.14
Global Construction & Materials	0.26	0.19	0.31	0.16	0.18	0.19	-0.01	0.62	-0.57	-0.08	0.15	0.78	0.17	0.65	0.61	0.15	0.61	0.15	0.58	1.00	0.45	0.49	0.40	-0.07	0.55	0.22	-0.45	0.35	-0.31	0.10
Global Consumer Finance	-0.32	0.24	0.04	0.06	0.05	0.11	-0.21	0.02	-0.33	-0.23	0.21	0.19	-0.39	0.07	0.15	-0.30	0.19	0.05	0.05	0.45	1.00	0.14	0.27	-0.37	0.20	0.09	-0.11	-0.08	-0.07	-0.19
Global Consumer Goods	0.42	0.17	0.04	0.39	0.57	0.53	0.41	0.88	-0.03	0.51	0.58	0.61	0.16	0.72	0.54	0.12	0.53	0.50	0.36	0.49	0.14	1.00	0.48	0.31	0.73	0.43	0.39	0.24	0.47
Global Consumer Services	0.21	0.71	0.26	-0.11	0.09	0.04	0.40	0.42	0.02	0.40	0.59	0.43	0.25	0.48	0.75	-0.17	0.12	0.35	0.13	0.40	0.27	0.48	1.00	0.09	0.37	0.34	-0.30	0.24	0.18	0.14
Global Containers & Packaging	0.49	-0.10	-0.38	-0.28	-0.36	-0.38	0.40	0.19	-0.14	0.03	0.40	0.13	0.35	0.15	0.21	0.23	0.15	0.11	0.14	-0.07	-0.37	0.31	0.09	1.00	0.21	-0.04	-0.21	-0.18	0.04	0.75
Global Corporates	0.32	0.33	0.26	0.24	0.48	0.43	0.51	0.86	0.06	0.51	0.52	0.68	-0.04	0.80	0.66	0.20	0.61	0.61	0.64	0.55	0.20	0.73	0.37	0.21	1.00	0.46	0.10	0.31	-0.37	0.41
Global Delivery Services	0.26	0.14	-0.25	0.05	0.26	0.15	0.05	0.20	0.05	0.52	0.22	0.29	-0.37	0.17	0.29	-0.14	-0.10	0.38	0.26	0.22	0.09	0.30	0.34	-0.04	0.36	1.00	-0.33	0.12	-0.53	-0.39
Global Distillers & Vintners	-0.15	-0.51	0.19	-0.32	0.06	-0.12	-0.22	-0.37	0.58	-0.43	-0.37	-0.24	-0.04	-0.43	-0.03	0.05	-0.10	-0.43	0.06	-0.18	-0.11	0.39	-0.30	-0.21	0.10	-0.33	1.00	-0.05	0.10	-0.05
Global Diversified Industrials	-0.03	0.24	-0.04	0.46	0.39	0.46	0.32	0.56	0.15	0.45	0.11	0.22	0.21	0.60	-0.14	0.42	0.49	0.50	0.38	0.35	-0.08	0.39	0.24	-0.18	0.37	0.12	-0.24	1.00	0.10	0.07
Global Drug Retailers	-0.35	0.38	-0.18	-0.09	-0.54	-0.31	0.34	-0.19	-0.05	0.03	0.30	-0.33	0.05	-0.11	-0.09	0.02	0.11	0.02	-0.36	-0.31	-0.07	-0.24	0.18	0.04	-0.18	-0.53	-0.13	0.10	1.00	0.15
Global Durable Household Products	0.39	0.12	0.00	-0.12	-0.11	-0.12	0.34	0.38	-0.06	-0.08	0.32	0.14	0.73	0.43	0.41	0.19	0.35	0.07	0.14	0.10	-0.19	0.47	0.14	0.75	0.41	-0.39	-0.05	0.07	0.15	1.00

Credit Benchmark®

11. Appendix: CCI Chartbook

The CCI is an index of forward-looking credit opinions based on the consensus views of over 20,000 credit analysts at 40+ of the world's leading financial institutions.
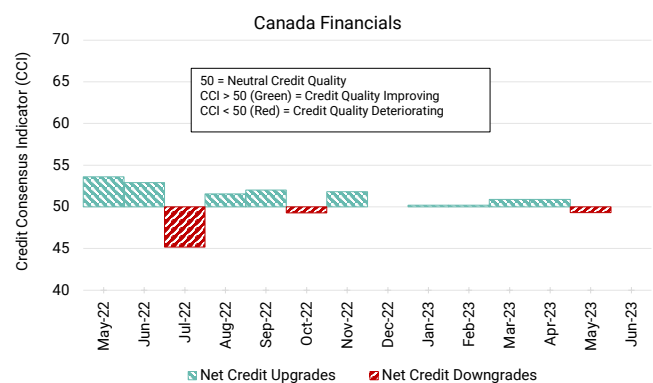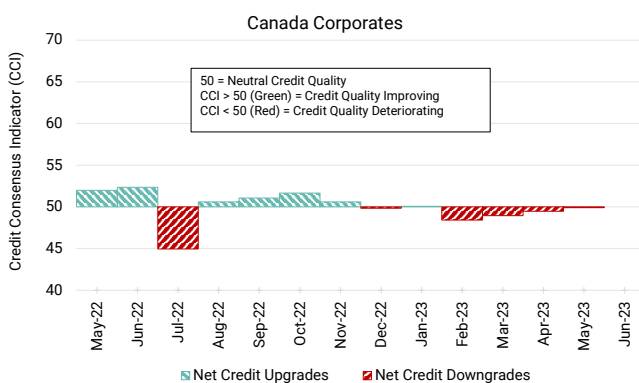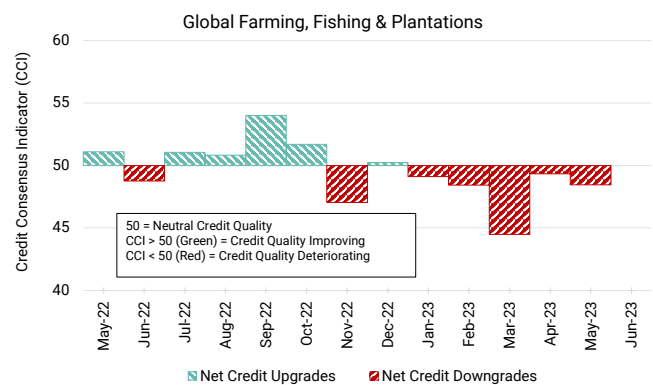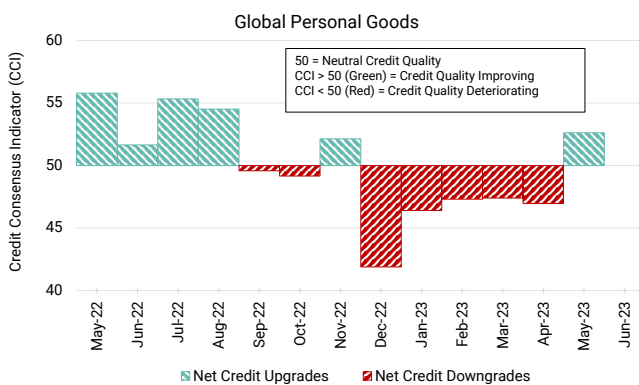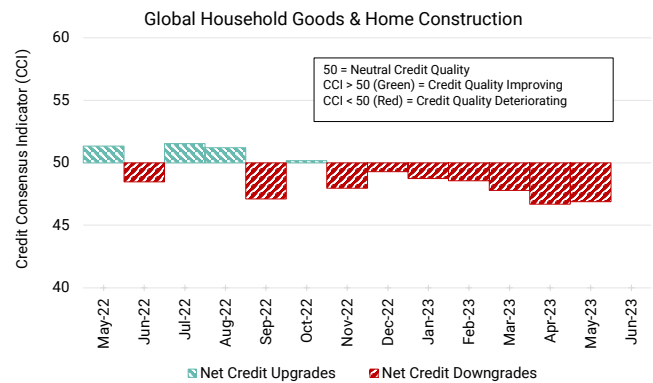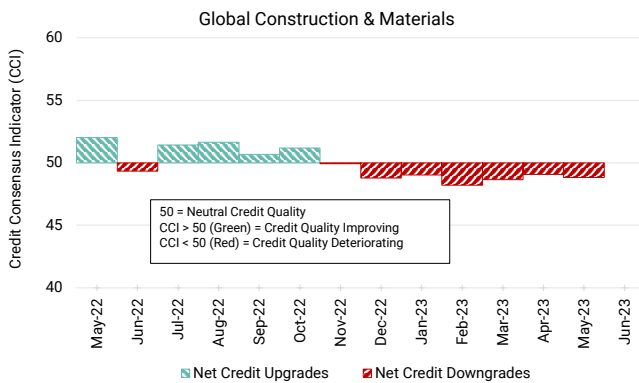
Drawn from more than 950,000 contributed credit observations, the CCI tracks the total number of upgrades and downgrades made each month by credit analysts to chart the long-term trend in analyst sentiment.
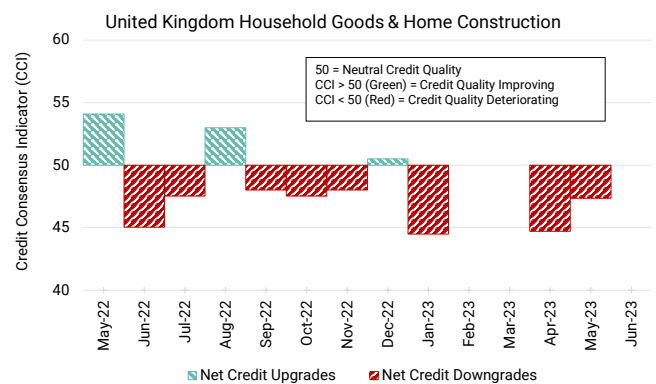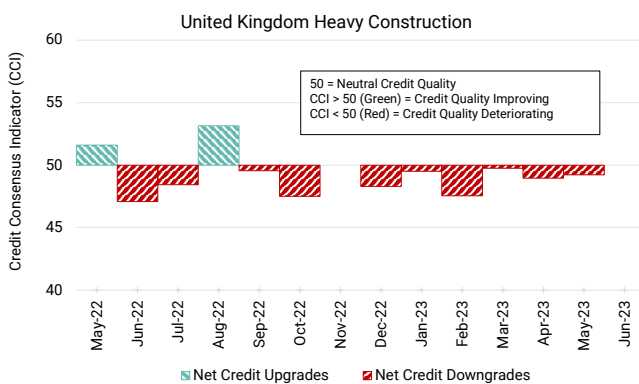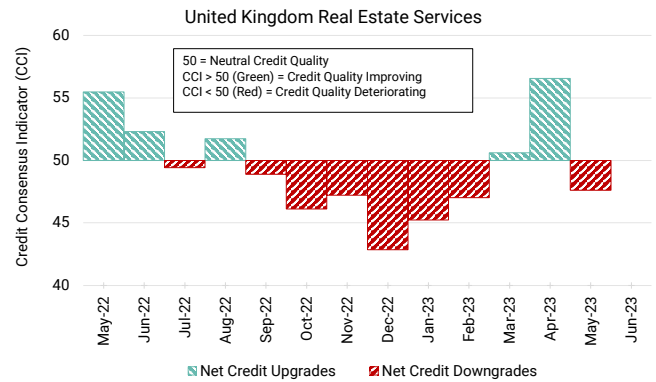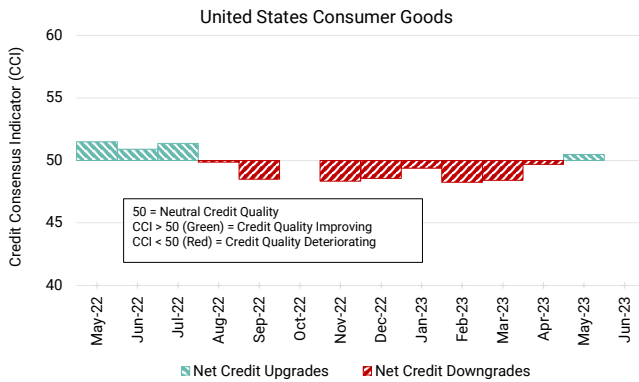
A monthly CCI score of 50 indicates neutral credit quality, with an equal number of upgrades and downgrades made over the course of a month. Scores above 50 indicate that credit quality is improving. Scores below 50 indicate that credit quality is deteriorating.

CCI monitors, tracking various sectors and regions, are available to view and download here. They are updated monthly.

Individual CCI charts can be produce for approximately 1,200 credit indices. Below is a selected sample of CCI charts.

Contact us to learn more by emailing info@creditbenchmark.com.

Global Construction & Materials

Global Household Goods & Home Construction

Global Personal Goods

Global Farming, Fishing & Plantations

Canada Corporates

Canada Financials

Credit Benchmark

South Africa Corporates

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

South Africa Financials

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United Kingdom Mutual Fund

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United States Mutual Fund

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United States Consumer Goods

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United Kingdom Real Estate Services

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United Kingdom Heavy Construction

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United Kingdom Household Goods & Home Construction

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

Credit Benchmark®

United Kingdom Hotels

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United States Hotels

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United Kingdom Chemicals

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United States Oil & Gas

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United Kingdom Automobiles

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

United Kingdom Trucking

50 = Neutral Credit Quality
CCI > 50 (Green) = Credit Quality Improving
CCI < 50 (Red) = Credit Quality Deteriorating

Net Credit Upgrades   Net Credit Downgrades

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Credit Benchmark

The charts below show details on index types and regions.

Left charts show the proportion of indices upgrading over time. Right charts show the current split between downgrades, no change, and upgrades. Note the heavy bias towards upgrades in the Travel & Leisure sector.

United States

United States

United Kingdom

United Kingdom

Canada

Canada

South Africa

South Africa

Credit Benchmark®

Industrials

Industrials

General Retailers

General Retailers

Travel & Leisure

Travel & Leisure

Mining

Mining

12. Q2 Research Roundup

Consensus Credit Ratings, CDS and CVAs
Consensus credit data can fill CDS market gaps for CVA calculations. This insight links real-world PDs to "Synthetic CDS" estimates for unrated, private counterparts.

AI: Disruption Now, Efficiency Later
Is AI all promise, no profit? The Economist suggests equity markets are unconvinced as to the immediate value of AI tech. In credit terms, AI-focused firms are outperforming other Global Tech firms; keeping pace with Global Corporates.

Sovereign, Financial and Corporate Default Risks
Latest Credit Benchmark data shows that the credit rating of a country's financial system is heavily influenced by that of the Sovereign, and, in countries with the strongest credit, the Financial sector is stronger than the Corporate sector.

US Commercial Real Estate
Warning signs continue to flash in US Commercial Real Estate, with Industrial & Office sectors worst affected by the persistence of hybrid working. However, Credit Benchmark data shows various US REITs currently with a positive credit outlook.

Leverage Loans: Morningstar LSTA and Issuer Consensus Credit Index
After a stellar performance over the past 12 months, the Leveraged Loan total return index is diverging from its respective credit indices.
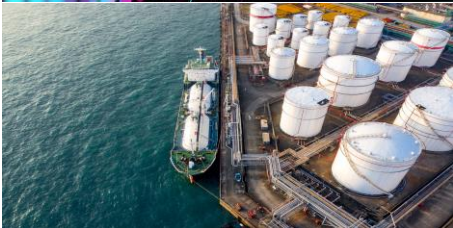
Credit Consensus Indicators (CCIs) – US, UK & EU Oil & Gas Monitor
US Oil & Gas end their run of eight consecutive months of positive credit outlook. UK Oil & Gas return to negative credit outlook. EU Oil & Gas show recent instability in their collective credit balance.

Credit Consensus Indicators (CCIs) – US, UK & EU Industrials Monitor
US Industrials return to net improvement. UK Industrials haven't shown a positive credit outlook for seven consecutive months. EU Industrials net improvement trend slows.

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Credit Consensus Indicators (CCIs) – UK, EU & US Consumer Services Monitor

This month the consensus outlook on EU Consumer Services is back in negative territory. US Consumer Services net deterioration continues. UK Consumer Services have experienced recent instability in their collective credit balance.

Credit Consensus Indicators (CCIs) – UK, EU and US Consumer Goods Monitor

UK Consumer Goods have experienced recent instability in their collective credit balance. US Consumer Goods register a sixth consecutive instance of a negative CCI this month. EU Consumer Goods return to net deterioration.

Financial Counterpart Monitor

The Financial Counterpart Monitor from Credit Benchmark provides a unique analysis of the changing creditworthiness of financial institutions.

Industry Monitor

Credit Benchmark have released the latest end-month industry update, based on the final and complete set of the contributed credit risk estimates from 40+ global financial institutions.

Data at a Glances

Leveraged Loans: Credit Trends
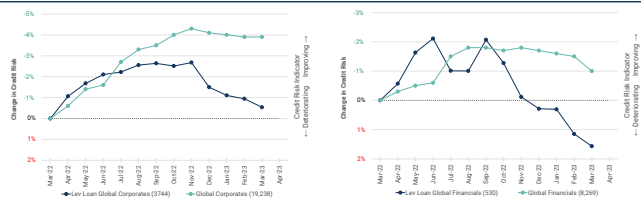
After years of reliable growth, the Leveraged Loan market faces **rising rate headwinds**, and recent legal issues may increase the sector risk premium.

The above charts are based on a universe of **4,000+ Leveraged Loan issuers.** The credit trends of these Leverage Loan issuers are being compared with their respective **Credit Benchmark index.**

Global Corporates have been **underperforming** the main index, since late 2022, while Global Financials began to **decline** in Q3 2022.

Source: Credit Benchmark   **Date:** May 2023.

AI: Disruption Now, Efficiency Later
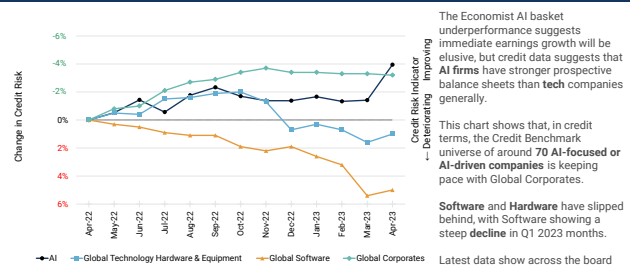
The Economist AI basket underperformance suggests immediate earnings growth will be elusive, but credit data suggests that **AI firms have stronger prospective balance sheets than tech** companies generally.

This chart shows that, in credit terms, the Credit Benchmark universe of around **70 AI-focused or AI-driven companies** is keeping pace with Global Corporates.
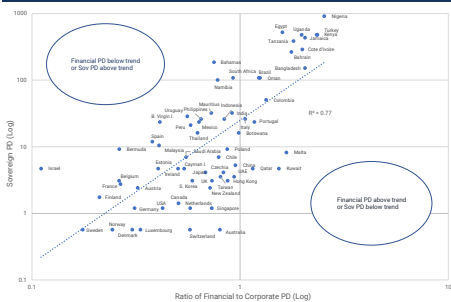
Software and **Hardware** have slipped behind, with Software showing a steep **decline** in Q1 2023 months.

Latest data show across the board technology credit **improvements,** led by AI companies.

Source: Credit Benchmark   **Date:** May 2023.

Sovereign, Financial and Corporate Default Risks

This chart plots the current relationship between consensus **Sovereign** credit risk and the **Financial / Corporate** credit risk ratio, for a large cross section of countries.

For example, countries in the upper left quadrant either have a Financial PD below trend, a Corporate PD above trend, or a Sovereign PD above trend.

This shows that the **credit rating** of a country's financial system is **heavily influenced** by the credit rating of the **Sovereign,** and, in countries with the strongest credit, the Financial sector is **stronger** than the Corporate sector.

US Commercial Real Estate
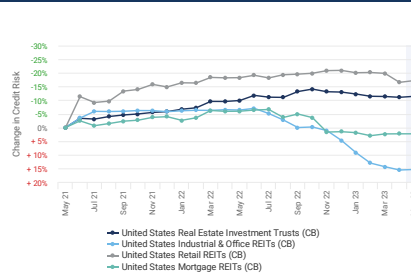
Warning signs continue to flash in the US Commercial Real Estate market. Office sectors are worst affected by the persistence of hybrid working.

This chart looks at the 2Y credit trend for various REITs indices. The main REITs index shows a **credit risk** improvement of 10%, now flattening. US Retail has been even **stronger,** particularly after Covid lockdowns ended. Mortgage REITs have **underperformed,** giving up all their post-Covid gains. The **worst** performer is the combined Industrial & Office category, with a 12M **credit deterioration** of 10%.

This suggests that any Industrial improvements have been more than weighed down by problems in the Office market.

Source: Credit Benchmark   **Date:** June 2023.

More from Credit Benchmark

Credit Benchmark provides Credit Consensus Ratings and Analytics based on contributed risk views from 40+ of the world's leading financial institutions, almost half of which are GSIBs, domiciled in the US, Continental Europe, Switzerland, UK, Japan, Canada, Australia and South Africa.

The risk views are collected, aggregated, and anonymized to provide an independent, real-world perspective of credit risk, delivered twice monthly to our partners. Credit Consensus Ratings and Analytics are available on over 80,000 corporate, financial, fund and sovereign entities globally, most of which are unrated by credit rating agencies. Credit Benchmark also produces over 1,200 credit indices, which help risk practitioners better understand industry and sector macro trends.

Risk professionals at banks, insurance companies, asset managers and other firms use the data to gain visibility on entities without a public rating, inform risk sharing transactions (CRT / SRT), monitor and be alerted to changes within the portfolio, benchmark, assess and analyze trends, and fulfil regulatory requirements and capital.

The data is available via the Credit Benchmark Web App, Excel add-in, flat file download, and **third-party platforms including Bloomberg.** High level credit assessments on the single name constituents of the sectors mentioned in this report can be accessed on CRPR <GO> or via CRDT <GO>.

Get in touch with us to start a trial for Credit Benchmark Credit Consensus Ratings and Analytics on Bloomberg.

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