

Credit Portfolios and Rising Defaults: Tracking Credit Risk Correlation Shifts

August 2022

Credit portfolio managers face spiking interest rates and rising defaults, and contagion from one sector to another is a major concern. Credit Consensus aggregates show how credit risk correlations between sectors are changing.

Figure 1 shows correlations between month-on-month PD changes for a small subset of US Corporate sectors from early 2018 to the start of the pandemic in 2020, and from the start of the pandemic in 2020 to the middle of 2022.

Figure 1: Correlations between monthly PD Changes, US Sectors, 2018 to 2020 and 2020 to 2022

2018 - 2020

	Basic Materials	Chemicals	Farming, Fishing & Plantations	Mining	Automobiles & Parts	Broadline Retailers	Consumer Goods	Food Producers	Health Care Providers	Pharmaceuticals & Biotechnology	Heavy Construction	Household Goods & Home Construction	Life Insurance	Property & Casualty Insurance
Basic Materials	1.00	0.63	-0.14	0.77	0.20	0.21	0.19	0.10	0.35	0.12	0.07	0.15	0.18	0.11
Chemicals	0.63	1.00	-0.22	0.12	-0.11	0.09	0.09	0.06	0.23	-0.20	0.09	0.16	0.16	-0.08
Farming, Fishing & Plantations	-0.14	-0.22	1.00	-0.01	-0.12	-0.12	-0.08	0.13	0.16	0.44	-0.35	-0.27	0.31	0.06
Mining	0.77	0.12	-0.01	1.00	0.27	0.31	0.11	0.03	0.28	0.44	-0.04	0.03	0.01	0.05
Automobiles & Parts	0.20	-0.11	-0.12	0.27	1.00	0.23	0.56	-0.37	0.19	0.31	0.22	0.28	0.17	0.05
Broadline Retailers	0.21	0.09	-0.12	0.31	0.23	1.00	0.27	-0.13	0.04	0.15	0.32	0.38	0.12	0.33
Consumer Goods	0.19	0.09	-0.08	0.11	0.56	0.27	1.00	-0.04	0.27	0.25	0.40	0.74	0.14	0.01
Food Producers	0.10	0.06	0.13	0.03	-0.37	-0.13	-0.04	1.00	-0.12	0.03	0.08	-0.29	-0.04	0.01
Health Care Providers	0.35	0.23	0.16	0.28	0.19	0.04	0.27	-0.12	1.00	0.47	-0.21	0.34	0.30	0.31
Pharmaceuticals & Biotechnology	0.12	-0.20	0.44	0.44	0.31	0.15	0.25	0.03	0.47	1.00	-0.17	0.03	0.24	0.05
Heavy Construction	0.07	0.09	-0.35	-0.04	0.22	0.32	0.40	0.08	-0.21	-0.17	1.00	0.28	0.28	0.31
Household Goods & Home Construction	0.15	0.16	-0.27	0.03	0.28	0.38	0.74	-0.29	0.34	0.03	0.28	1.00	-0.03	0.20
Life Insurance	0.18	0.16	0.31	0.01	0.17	0.12	0.14	-0.04	0.30	0.24	0.28	-0.03	1.00	0.38
Property & Casualty Insurance	0.11	-0.08	0.06	0.05	0.05	0.33	0.01	0.01	0.31	0.05	0.31	0.20	0.38	1.00

2020 - 2022

	Basic Materials	Chemicals	Farming, Fishing & Plantations	Mining	Automobiles & Parts	Broadline Retailers	Consumer Goods	Food Producers	Health Care Providers	Pharmaceuticals & Biotechnology	Heavy Construction	Household Goods & Home Construction	Life Insurance	Property & Casualty Insurance
Basic Materials	1.00	0.95	0.65	0.77	0.79	0.83	0.87	0.74	0.57	0.21	0.60	0.73	0.14	0.11
Chemicals	0.95	1.00	0.64	0.68	0.73	0.86	0.81	0.69	0.49	0.19	0.51	0.68	0.12	0.08
Farming, Fishing & Plantations	0.65	0.64	1.00	0.46	0.69	0.62	0.75	0.85	0.49	0.32	0.35	0.43	0.12	-0.08
Mining	0.77	0.68	0.46	1.00	0.54	0.61	0.65	0.53	0.33	0.22	0.71	0.58	0.37	0.38
Automobiles & Parts	0.79	0.73	0.69	0.54	1.00	0.78	0.94	0.77	0.53	0.18	0.50	0.75	0.00	-0.10
Broadline Retailers	0.83	0.86	0.62	0.61	0.78	1.00	0.79	0.67	0.47	0.02	0.46	0.60	0.12	0.09
Consumer Goods	0.87	0.81	0.75	0.65	0.94	0.79	1.00	0.86	0.59	0.30	0.66	0.83	0.13	-0.01
Food Producers	0.74	0.69	0.85	0.53	0.77	0.67	0.86	1.00	0.62	0.43	0.49	0.56	0.12	-0.04
Health Care Providers	0.57	0.49	0.49	0.33	0.53	0.47	0.59	0.62	1.00	0.42	0.55	0.39	-0.14	-0.09
Pharmaceuticals & Biotechnology	0.21	0.19	0.32	0.22	0.18	0.02	0.30	0.43	0.42	1.00	0.31	0.07	-0.03	-0.21
Heavy Construction	0.60	0.51	0.35	0.71	0.50	0.46	0.66	0.49	0.55	0.31	1.00	0.57	0.23	0.17
Household Goods & Home Construction	0.73	0.68	0.43	0.58	0.75	0.60	0.83	0.56	0.39	0.07	0.57	1.00	0.28	0.09
Life Insurance	0.14	0.12	0.12	0.37	0.00	0.12	0.13	0.12	-0.14	-0.03	0.23	0.28	1.00	0.65
Property & Casualty Insurance	0.11	0.08	-0.08	0.38	-0.10	0.09	-0.01	-0.04	-0.09	-0.21	0.17	0.09	0.65	1.00

In the two years before the pandemic, correlations¹ between sector average default risks were typically low. There are exceptions: correlations between Basic Materials and its subsectors Mining and Chemicals are understandably high and positive (+0.77 and +0.63); in a similar vein the correlation between Consumer Goods and the Household Goods/Home Construction sector is also high at +0.74. For most sectors, however, the correlations are not just low, some are negative – implying that rising risk in one sector is often associated with falling risk elsewhere.

But in the past two years, even for this small sample of sectors, the picture has changed dramatically. Basic Materials are very highly and positively correlated with a diverse range of sectors – Farming, Autos, Retail and Food. Lower correlations are confined to Pharma & Biotech and two Insurance sectors; there are very few negative correlations.

These high correlations are a symptom of a major increase in global credit risk – leaving the credit portfolio manager with limited scope for diversification over the pandemic period.

Figure 2 shows correlations for the same sample of sectors, for the past year. Note that this includes part of the period covered by the 2020-2022 matrix.

¹ Correlations here are measured as the unweighted linear correlation coefficient between one-month changes in one-year Probability of Default estimates; the latter estimates are in turn the unweighted arithmetic average of the default risk estimates for the individual firms that make up the constituents of each aggregate.

Figure 2: Correlations between monthly PD Changes, US Sectors, 2021 to 2022

	Basic Materials	Chemicals	Farming, Fishing & Plantations	Mining	Automobiles & Parts	Broadline Retailers	Consumer Goods	Food Producers	Health Care Providers	Pharmaceuticals & Biotechnology	Heavy Construction	Household Goods & Home Construction	Life Insurance	Property & Casualty Insurance
Basic Materials	1.00	0.93	0.47	0.67	-0.18	0.48	0.56	0.72	0.55	0.54	0.39	-0.13	-0.52	-0.21
Chemicals	0.93	1.00	0.31	0.47	-0.14	0.55	0.50	0.69	0.58	0.61	0.37	-0.16	-0.62	-0.38
Farming, Fishing & Plantations	0.47	0.31	1.00	0.26	0.00	0.34	0.47	0.73	-0.15	0.15	-0.20	-0.13	-0.07	-0.06
Mining	0.67	0.47	0.26	1.00	-0.27	0.18	0.37	0.29	0.38	0.35	0.34	-0.03	-0.15	0.17
Automobiles & Parts	-0.18	-0.14	0.00	-0.27	1.00	0.22	0.33	0.00	-0.42	0.08	-0.47	-0.13	0.04	0.19
Broadline Retailers	0.48	0.55	0.34	0.18	0.22	1.00	0.31	0.45	0.28	0.53	0.06	-0.47	-0.29	-0.29
Consumer Goods	0.56	0.50	0.47	0.37	0.33	0.31	1.00	0.62	-0.15	-0.02	0.12	0.46	0.06	0.03
Food Producers	0.72	0.69	0.73	0.29	0.00	0.45	0.62	1.00	0.29	0.16	0.19	-0.14	-0.38	0.07
Health Care Providers	0.55	0.58	-0.15	0.38	-0.42	0.28	-0.15	0.29	1.00	0.30	0.72	-0.42	-0.60	-0.01
Pharmaceuticals & Biotechnology	0.54	0.61	0.15	0.35	0.08	0.53	-0.02	0.16	0.30	1.00	-0.20	-0.58	-0.56	-0.53
Heavy Construction	0.39	0.37	-0.20	0.34	-0.47	0.06	0.12	0.19	0.72	-0.20	1.00	0.13	-0.32	0.09
Household Goods & Home Construction	-0.13	-0.16	-0.13	-0.03	-0.13	-0.47	0.46	-0.14	-0.42	-0.58	0.13	1.00	0.59	-0.01
Life Insurance	-0.52	-0.62	-0.07	-0.15	0.04	-0.29	0.06	-0.38	-0.60	-0.56	-0.32	0.59	1.00	0.19
Property & Casualty Insurance	-0.21	-0.38	-0.06	0.17	0.19	-0.29	0.03	0.07	-0.01	-0.53	0.09	-0.01	0.19	1.00

This shows a growing number of lower positive or moderately negative correlations, especially in Household Goods/Home Construction, Heavy Construction, Autos and Insurance sectors. Correlations remain high and positive between Basic Materials, Chemicals and Mining as well as Food Producers. Current sources of economic instability – Ukraine war, climate change, rate hikes – is uncovering new credit fault lines, so these correlations are likely to shift rapidly in coming months.

Compared with market data (such as CDS or Bond indices) Credit Consensus data covers a large and mainly unrated universe (more than 30,000 corporates and financials). The risk estimates are “real world” – unaffected by market risk premiums, and correlations between sectors change over time as risk estimates are revised – unlike market sector indices which are usually highly correlated during risk on and risk off phases.

The list of aggregates with a full monthly history starting in early 2016 includes more than 850 geographic and industry/sector combinations. Correlation matrices (CMs) are available on request for combinations of these aggregates; an Excel tool is also available which can be used to generate various matrices for different historical periods.

Credit Consensus Ratings (CCRs), Analytics and Aggregates are based on risk views from 40+ of the world’s leading financial institutions collected monthly by Credit Benchmark, with twice-monthly flash updates.

Credit Consensus Ratings and Analytics

Real-world risk views with unparalleled consensus coverage.

Credit Benchmark provides Credit Consensus Ratings and Analytics based on contributed risk views from 40+ of the world's leading financial institutions, including 15 GSIBs, domiciled in the US, Continental Europe, Switzerland, UK, Japan, Canada, Australia and South Africa.

For regulatory and business reasons, these financial institutions have each created their own regulated internal credit rating agency to assess the creditworthiness of tens of thousands of obligors. Credit Benchmark collects, aggregates and anonymises this information to provide an independent, real-world perspective of risk, delivered twice monthly to our partners.

Credit Benchmark fills an information gap left open by traditional credit risk content providers by offering a timely, comprehensive view of credit risk which proves complementary to issuer-paid rating agencies and third party model vendors. The first of its kind "credit consensus" data reflects the expertise of more than 20,000 credit analysts across the contributing group – a powerful example of the wisdom of crowds.

Credit Consensus Ratings and Analytics are available on over 60,000 corporate, financial, fund and sovereign entities globally, most of which are unrated by credit rating agencies.

Data that works for you

Credit Benchmark data is available via our Web App, Excel add-in, API, flat-file download, and third-party channels including Bloomberg.

Contact us to learn more and to start a trial of Credit Benchmark data by [clicking here](#) or email info@creditbenchmark.com

Data Use Cases

- > Counterparty Risk Management
- > Credit Risk Management
- > Systematic Credit Trading
- > Securities Finance
- > Supply Chain Risk
- > Trade Credit Insurance
- > Fund Management
- > Regulation, RWA & Capital
- > Onboarding, KYC & Relationship Management
- > Point-in-Time (PIT) Impairments
- > Accounts Payable & Receivable



10 Million

Contributed Credit Risk Estimates Per Year
40 Million+ Estimates Collected Since Launch



60,000+

Entities Covered



2x

Twice Monthly Frequency



75%

Unrated by Major Credit Rating Agencies



1,200+

Aggregates



160+

Countries



80+

Months of Data



50+

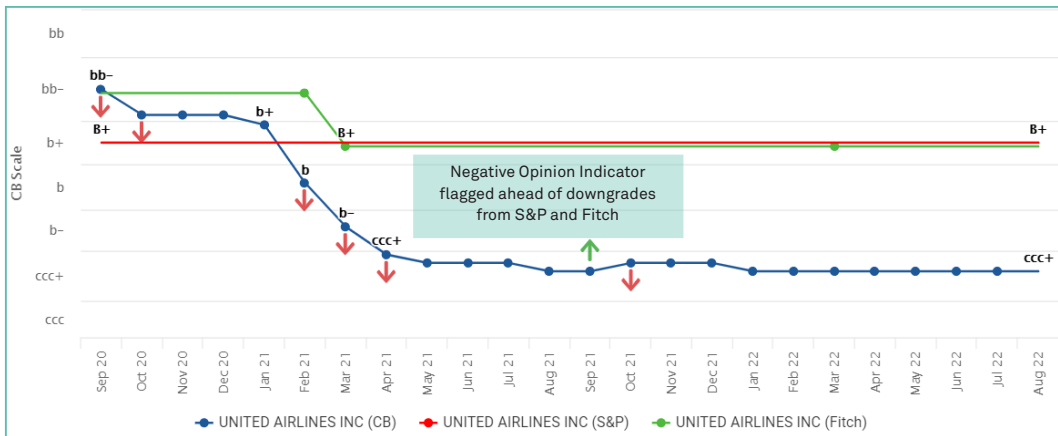
Data Metrics



40+

Contributing Financial Institutions Representing a Pool of 20,000+ Credit Analysts

Real-world risk views with unparalleled consensus coverage



Credit Consensus Rating: Unique measure of creditworthiness based on the views of 40+ leading global financial institutions

Consensus Analytics: Insights into the depth, dispersion, movement, and directionality of the Credit Consensus Rating's underlying views

Opinion Indicator: Month over month observation-level net downgrades or upgrades

Credit Benchmark Web App: Entity-Level Data Sample

Quickly filter the database of 60,000+ legal entities

Combine qualitative and quantitative fields to screen for entities that meet your criteria

44,628 Entities found

Screen for public and non-publicly rated entities within specific geographies, industries, sectors and within your defined rating thresholds

CBID	Entity Name	Credit Consensus Rating	S&P Rating	Fitch Rating
CB0000000009	IHS GLOBAL CANADA LTD	bbb-	Unrated	Unrated
CB0000000025	GYP HOLDINGS III CORP	bb	Unrated	Unrated
CB0000000080	GESTIELLE CEDOLA DUAL BRAND	a-	Unrated	Unrated
CB0000000087	TRANE TECHNOLOGIES LUXEMBOURG FINANCE SA	bbb+	Unrated	Unrated
CB0000000088	TECK HIGHLAND VALLEY COPPER PARTNERSHIP	bbb	Unrated	Unrated

Credit Benchmark Web App: Data Screen Sample

Data that works for you:

Credit Benchmark data is available via our Web App, Excel add-in, API, flat-file download, and third-party channels including Bloomberg.

[Contact us to learn more and get a free trial of our data.](#)

Contact

For more information, visit www.creditbenchmark.com or contact us:

Email:
info@creditbenchmark.com

UK Office (London):
+44 (0)20 7099 4322

US Office (New York):
+1 646 661 3383