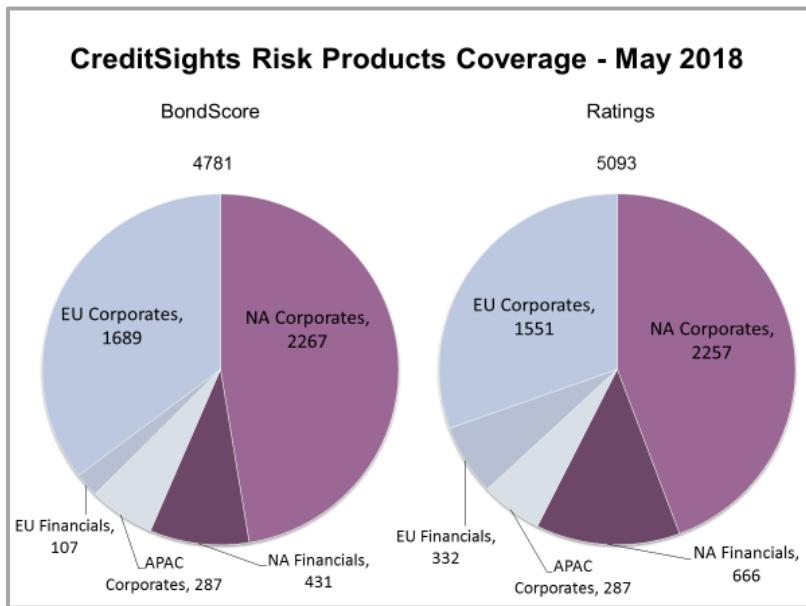


CreditSights Risk Products produces **medium-term ratings** and short-term default measures and is an excellent complement to our fundamental credit research. **Website delivery** provides an efficient screening and credit risk surveillance tool. **Regular commentary** from our fundamental analyst team is also featured.

Risk Products: Active Coverage



Risk Products: Outputs and Interpretation

- **1-year forward PD (probability of default)** (known as "Credit Risk Estimate" or "CRE"). *Identify short-term default risks, rapid changes in a company's credit profile and short-term relative value opportunities.*
- **Medium-term credit rating ("CreditSights Rating" or "CSR")**. Non-financial CSRs are based on a cumulative 5-yr PD which is mapped to one of 22 ratings buckets. The CSR for financial companies is based on historical ratings. *Address potential ratings migration and standalone medium-term credit risk*
- **CRE-based Credit Risk Level ("CRL")** allows for easy interpretation of a company's CRE. *Provided in five buckets from very low to very high.*
- **"CSR Trend" indicator** highlights directional change in a company's CSR.
- **CRE-based Credit Risk Trend ("CRT") indicator** highlights improvement or deterioration in a company's CRE.
- **3-month CreditSights Rating (CSR) Outlook** alerts you to those companies that may see a CSR upgrade or downgrade soon.
- **Input calculator** allows users to change the input ratios used in a company's CRE, CRL and CSR estimation to reflect any anticipated scenario. *Reflect future expectations for a company's fundamental and equity market profiles.*
- **New private company** CREs for over 150 companies, along with the ability to generate Ratings and CREs for private companies using the input calculator and a new bulk download template.
- Easy ability to **track week-to-week changes/updates** in CRLs, CSRs, analyst recommendations and CreditSights analyst ratings comments with custom e-mail alerts.

The Risk Products section of CreditSights' website is the best place to view CreditSights Risk Products output. Log in at www.creditsights.com and follow the "Risk Products" link on the top navigation bar.

Website: Individual Company Analysis

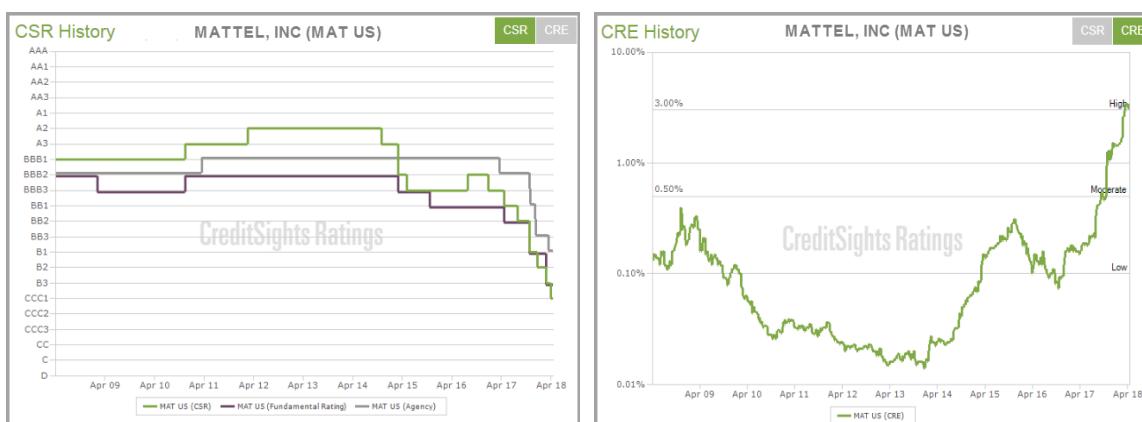
- Enter a ticker or company name in the box labeled "Search Risk Products" in the upper-right hand corner of any Risk Products page. One can also navigate to a company's page from a portfolio at any time.

The screenshot shows the CreditSights homepage with a dark purple header. The header includes links for About Us, Our Team, News, Contact Us, Browse Coverage, Change Password, Alerts, and Logout. A search bar with the placeholder "Search Risk Products" and a "GO" button is located in the top right. Below the header is a navigation bar with tabs for HOME, SECTORS, REGIONS, STRATEGY, VIEWS, TEARSHEETS, and RISK PRODUCTS. The RISK PRODUCTS tab is currently selected. Underneath the navigation is a secondary menu with links for PORTFOLIOS, SCREENER, VISUALIZER, COVERAGE, and ABOUT. The main content area is currently titled "Risk Products".

The "Company View" page provides a table summarizing all key CRE and CSR outputs;

Mattel, Inc. (MAT US)							CCC1, Medium Volatility	
							CS RESEARCH:	CONSUMER PRODUCTS AND SERVICES
CALCULATION DATE	FUNDAMENTAL DATE	MODEL	AGENCY COMPOSITE RATING (ACR)			NOTCHES DIFF	CS ANALYST RECOMMENDATION	
			CURRENT	LAST CHG	PREV		Underperform	
16 Apr 2018	31 Dec 2017	Consumer	B1	5	BB3	-3	Underperform	
CREDITSIGHTS RATING (CSR)							CREDIT RISK ESTIMATE (CRE: 1-YR PD)	
CURRENT	LAST CHG	PREV	TREND 1Y	TREND 3Y	OUTLOOK	VOLATILITY	CURRENT CRE (1-YR PD)	CREDIT RISK LEVEL (CRL)
CCC1	2	B3	▼	▼	—	Medium	3.12%	High
							5 (Moderate)	11.61%
							18.35%	▼
								▼

As well as graphical histories of the CRE, CRL, CSR, Fundamental Rating (FR) and Agency Composite Rating (ACR) for up to the past decade.



The ability to review charts showing the evolution of the input ratios used in a company's CreditSights Risk Products output and a comparison of current input ratios across up to four comparison companies is also provided (not shown).

A **scenario calculator** displaying values for all independent input ratios used to calculate a company's CreditSights Rating is provided for every company.

Reflect **fundamental and equity market assumptions**. Gauge the impact of a **potential acquisition** (shown right for AEE US buying LNT US).

Disable the equity impact on a company's rating to see a company's **fundamental-only rating** and to derive a fundamental rating for similar private companies.

Percentile rankings for both original and calculated values are also provided (shown right for AEE US).

Calculator		
CALCULATED CSR	CALCULATED CRE	CALCULATED CRL
BBB2	0.15%	Low
Current CSR: BBB2	Current CRE: 0.16%	Current CRL: Low
FUNDAMENTAL (USD)	ORIGINAL	MODIFIED
GDP	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Earnings Vol (%)	7.36	%
EBITDA (mn)	2,097	\$103.56 mn
Total Assets (mn)	22,884	\$6012.52 mn
FFO (mn)	1,648	\$251.44 mn
Interest Expense (mn)	337	\$8.87 mn
Minority Interest (mn)	0	\$0 mn
Net Income (mn)	604	\$64.52 mn
Total Debt (mn)	7,195	\$4965.60 mn
Total Equity (mn)	6,846	\$1718.90 mn
Ignore Equity Contribution:	<input type="checkbox"/>	
Market Cap (mn)	9,154.62	\$5654.40 mn
Total Liabilities (mn)	16,038	\$24377.76 mn
Idiosyncratic Vol (%)	16.19	%
Alpha Percentile	40	
INPUT TYPE	ORIGINAL	CALCULATED
	VALUE	P-TILE
Total Assets	22,884mn	85
Leverage	51.24%	31
Interest Coverage	6.22x	83
Cash Flow	22.9%	68
Earnings Vol	7.36%	62
Profitability	8.82%	35
Market Leverage	63.66%	77
Idiosyncratic Vol	16.19%	5
Alpha	0.00002	40
	VALUE	P-TILE
Total Assets	35,012.52mn	90
Leverage	50.42%	29
Interest Coverage	6.1x	82
Cash Flow	16.85%	36
Earnings Vol	7.36%	62
Profitability	6.69%	19
Market Leverage	60.9%	73
Idiosyncratic Vol	16.19%	5
Alpha	0.00002	40

Risk Products Website: Portfolio Creation and Analysis

- Navigate to the Risk Products home page and follow either "create portfolio" button in the "My Portfolios" area of the page **to build an equity ticker-driven, static portfolio**.
- Follow the "Screener" link **to build a criteria-driven dynamic query**. A sample screen is below, searching for companies that have an outperform recommendation from CreditSights' analysts, a positive CSR outlook, and a ratings comment from CS analysts.

Screener

▼ Hide Filters

REGIONS	All None		
<input checked="" type="checkbox"/> North America	<input type="checkbox"/> Europe	<input type="checkbox"/> Asia Pacific	
SECTORS	All None		
<input checked="" type="checkbox"/> Basic Industries	<input type="checkbox"/> Consumer	<input type="checkbox"/> Energy	
<input type="checkbox"/> Financial Services	<input type="checkbox"/> Manufacturing	<input type="checkbox"/> TMT	
<input type="checkbox"/> Transportation			
TOTAL DEBT	1 mn to 200,000 mn		
<input type="checkbox"/>	<input type="checkbox"/> Excl.		
CSR OUTLOOK	All None		
<input checked="" type="checkbox"/> ✓	<input checked="" type="checkbox"/> =	<input checked="" type="checkbox"/> ▲	
CSR VOLATILITY	All None		
<input type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low	
CS ANALYST RECOMMENDATION	All None		
<input checked="" type="checkbox"/> Outperform	<input type="checkbox"/> Market perform	<input type="checkbox"/> Underperform	<input type="checkbox"/> No Recommendation

2 companies match

CREDITSIGHTS RATING (CSR)	C to AAA
CSR 1Y TREND	▼ to ▲
CSR 3Y TREND	▼ to ▲
AGENCY COMPOSITE RATING (ACR)	C to AAA
NOTCHES DIFFERENCE (ND)	2 to 10
CREDIT RISK ESTIMATE (CRE)	0% to 80%
CREDIT RISK LEVEL	Very Low to Low

- All column headings in the portfolio view are able to be sorted and the columns displayed are user-driven. Export functionality is available, while flat files containing all outputs are also available at an additional charge.



Show 100 ▼ Choose Columns		GDP	Showing 1 to 2 of 2 companies					Export to CSV
COMPANY	CREDITSIGHTS RATING (CSR)	CSR TREND 1Y	CSR OUTLOOK	AGENCY COMPOSITE RATING (ACR)	NOTCHES DIFF	CS ANALYST RECOMMENDATION		
FTR US Frontier Communications Corp.	CCC2	▼	=	B2	-3	Market perform		
HUN US Huntsman Corp.	BBB3	▲	=	BB2	2	Outperform		

The image above shows the results from the query outlined above for the week of 18 April 2018.

Risk Products: Data Visualizer

- The new Data Visualization Spreadsheet (DVS) allow users to take maximum advantage of the data which drives our **non-financial** Risk Products models, as well as the outputs of those models, presented in a standard format in numerous tables and charts.
- A historical view of all inputs and outputs is also available, in contrast to the limited historical dataset available in the current flat files.
- A web-based version of the Visualizer will be available sometime in 2018.

	Consumer Sector: Risk Products Input And Output Metrics Across All Companies And By ACR Tier													
	Fundamental Metrics					Equity Market Metrics			Default Probabilities					
	Total Assets (\$mn)	Leverage	Interest Coverage	Cash Flow	Earnings Volatility	Profitability	Market Leverage	Idiosyncratic Volatility	Alpha Percentile	1-Year	2-Year	3-Year	4-Year	5-Year
Average	14,151	4.07	13.3x	0.07	7.3%	12.0%	37.9%	19.4%	47	0.67%	1.60%	2.48%	3.50%	4.61%
Median	5,349	3.75	7.0x	0.06	4.0%	10.6%	35.0%	16.7%	47	0.09%	0.45%	0.90%	1.81%	2.52%
>=AA	110,239	2.17	29.1x	0.13	2.4%	19.8%	24.6%	11.8%	50	0.02%	0.08%	0.20%	0.42%	0.66%
A	29,767	2.10	29.7x	0.14	4.1%	18.9%	21.6%	13.6%	50	0.02%	0.11%	0.26%	0.55%	0.88%
BBB	15,658	3.22	14.0x	0.10	4.2%	13.6%	32.8%	15.2%	48	0.08%	0.35%	0.71%	1.27%	1.93%
BB	7,315	4.14	11.3x	0.08	7.4%	11.3%	38.3%	19.6%	47	0.27%	0.93%	1.68%	2.68%	3.83%
B	5,711	5.40	5.8x	0.04	9.6%	9.1%	50.3%	24.1%	47	0.89%	2.48%	3.97%	5.62%	7.42%
<=CCC	2,737	6.11	1.8x	0.00	13.5%	6.9%	66.5%	39.1%	29	5.80%	10.95%	14.74%	17.80%	20.73%

Source: CreditSights Risk Products

Average and Median Market Leverage, Idiosyncratic Volatility, Alpha and Default Probabilities are calculated for public companies only.

For each rating tier, numbers shown are averages across the rating tier

Risk Products: Supported by CreditSights' Analysts

- CreditSights' fundamental analysts played an **integral role in the creation of the fundamental factor models** that underlie Risk Products' methodology.
- CreditSights' **fundamental analyst recommendations are also included** in CreditSights Risk Products.
- Many analysts making use of the Risk Products calculator to frame a company against a narrow peer group and provide forward expectations for a company's business.

Copyright © 2018 CreditSights Analytics, LLC. All rights reserved. Reproduction of this report, even for internal distribution, is strictly prohibited. The information in this report has been compiled from sources believed to be reliable, but neither its accuracy and completeness, nor the opinions based thereon, are guaranteed. CreditSights Analytics' products are not recommendations or opinions that are intended to substitute for an investor's independent assessment of whether to buy, sell or hold any financial products. If you have any questions regarding the contents of this report, contact CreditSights at +1 212 340 3840 in the United States or +44 20 7429 2070 in Europe.

BondScore and CreditSights Ratings are offered by CreditSights Analytics, LLC, an affiliate of CreditSights, Inc. CreditSights Limited is authorized and regulated by The Financial Conduct Authority. This product is not intended for use in the UK by Private Customers, as defined by the Financial Conduct Authority.