

MOODY'S
ANALYTICS

Better
Faster
Decisions

CreditEdge Training
A powerful approach to managing credit risk

NOVEMBER 2019

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Today's Speakers

 Presenter
Leo Gardner
Assistant Director – Engagement Manager

 Moderator
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Assistant Director – Product Strategist

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About Moody's Analytics

MOODY'S
Moody's Corporation (NYSE: MCO) reported revenue of \$4.4 billion in 2018, employs approximately 13,100 people worldwide and maintains a presence in 42 countries.

MOODY'S INVESTORS SERVICE
Founded in 1900, Moody's Investors Service is a leading provider of credit ratings, research, and risk analysis.

MOODY'S ANALYTICS
Moody's Analytics has grown to be a \$1.7 billion company since forming in 2008 growing both organically and by acquisition.

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Agenda

1. Introducing CreditEdge
2. The basics of the public firm EDF model
3. CreditEdge for Risk Management
4. CreditEdge for Asset Management
5. CreditEdge website and Excel Add-in demo
6. Coming soon to CreditEdge
7. Q&A

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CreditEdge: Leverage the industry's most accurate PD model through cutting-edge analytics

50 Years of default data	1989 When the first EDF measure was calculated	60,000+ EDF measure for publicly traded firms
250+ Data fields	11,700+ Defaults in our global data base	76,000+ Active CUSIPs in our database


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What is an EDF?



- » **EDF = Expected Default Frequency** → Moody's Analytics brand name for probability of default measure
- » **Forward looking** measure of default risk, with a term structure **up to 10 years**, calculated **daily**
- » EDF ranges between 0.01% to 50% for corporates and 0.01% to 35% for financials



Group of 100 borrowers with 1-yr EDF of 5%

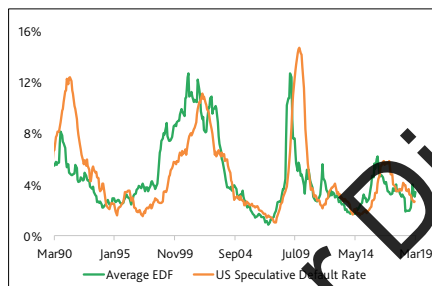
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We would expect 5 members of the group to default in the next 1 year

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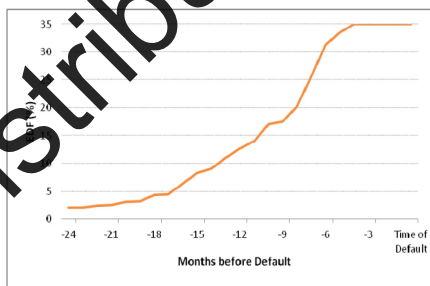
The CreditEdge public firm EDF model predicts default with accuracy and high degree of advance warning

Average EDF for high-yield firms vs. Moody's high-yield default rate



» CreditEdge **accurately** and **timely** predicted the level of high-yield default rate

Median EDF for North American firms that defaulted between 2008-2010



» The EDFs of the North American credit crisis casualties increased many months before default

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The value of the public-firm EDF model in practice

👉 Thomas Cook



The EDF highlighted Thomas Cook's rising credit risk 1 year before default occurred

- » **Absolute default probabilities** rather than relative rankings
- » Provides **daily updates** and aggregate market view
- » Forward-looking signals provide **early warning** of changes in credit quality

What differentiates CreditEdge?

Key Features:

- Daily EDF & EDF-Implied Rating for 38,000+ public entities
- EDF term structure 1-10 years
- Benchmarking for peers, industry groups & regions
- Early Warning Toolkit with EDF Trigger
- Downgrade risk metric
- Scenario analysis
- CDS coverage for 1,800+ entities
- Satellite models, i.e. Stressed EDF

Item	Aug 15, 2019	Aug 15, 2018	% Change
1-W EDF	0.15%	0.27%	-42.7%
Asset Volatility	4.93%	7.05%	-29.9%
Market Leverage	62.70%	65.87%	-5.1%
Market Value of Assets	249,929,000	244,420,000	2.2%
Share Price*	13.20	18.40	-27.7%
Share Outstanding	3,809,999	3,810,000	-0.0%
Market Capitalization*	50,347,200	37,700,370	33.5%
Debt/Equity	363,427,000	162,000,000	124.3%
Short Term Debt/Total	91,334,000	94,581,000	-3.6%
Long Term Debt/Total	127,543,000	67,419,000	47.6%

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The basics of the public firm EDF model

Not for Distribution

The public firm EDF model and large default database differentiate CreditEdge among competitors

Model

Database

Coverage

- » **Black-Scholes-Merton:** structural model with clear causal interpretation
- » This approach allows **what-if scenarios** and **counterfactuals**: risk can be updated based on user assumptions, unlike reduced form models
- » **11,700+ defaults** globally since 1973
- » Daily EDF data dating back to 1980
- » Manual and machine learning research to expand database of default activity
- » **60,000+ public firms** (38k actively traded)
- » Term structure 1 to 10 years; up to 30 years for rating to EDF
- » 100 countries: America (29), APAC (18), EMEA (53)
- » Launched in 1989 – 30 years market acceptance

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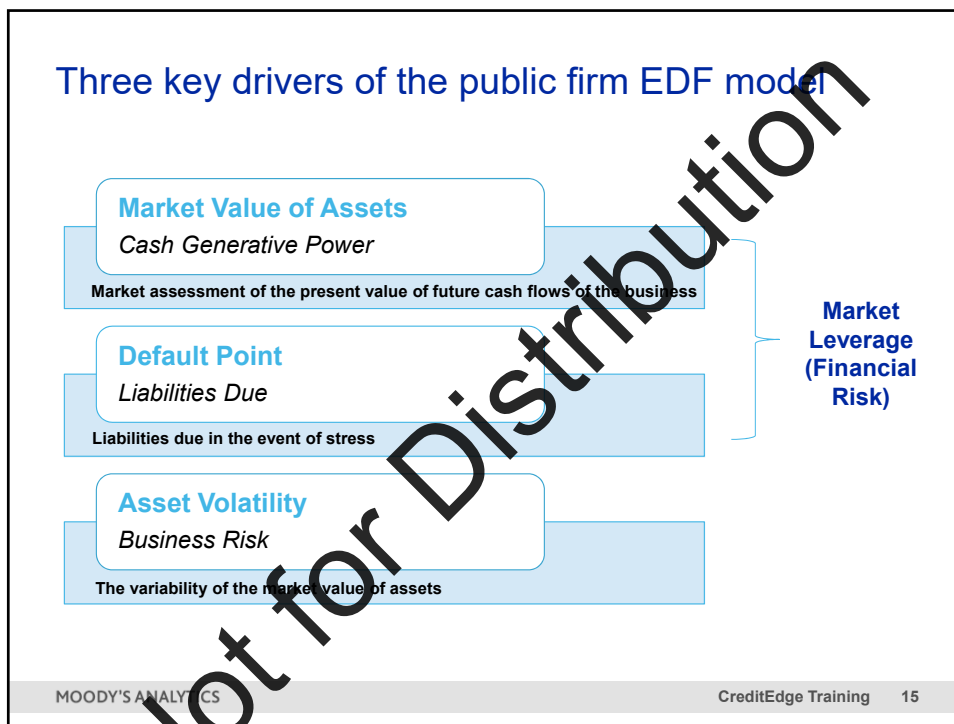
We conduct annual validation of the public firm EDF model to ensure optimal performance

December 2005--January 2019

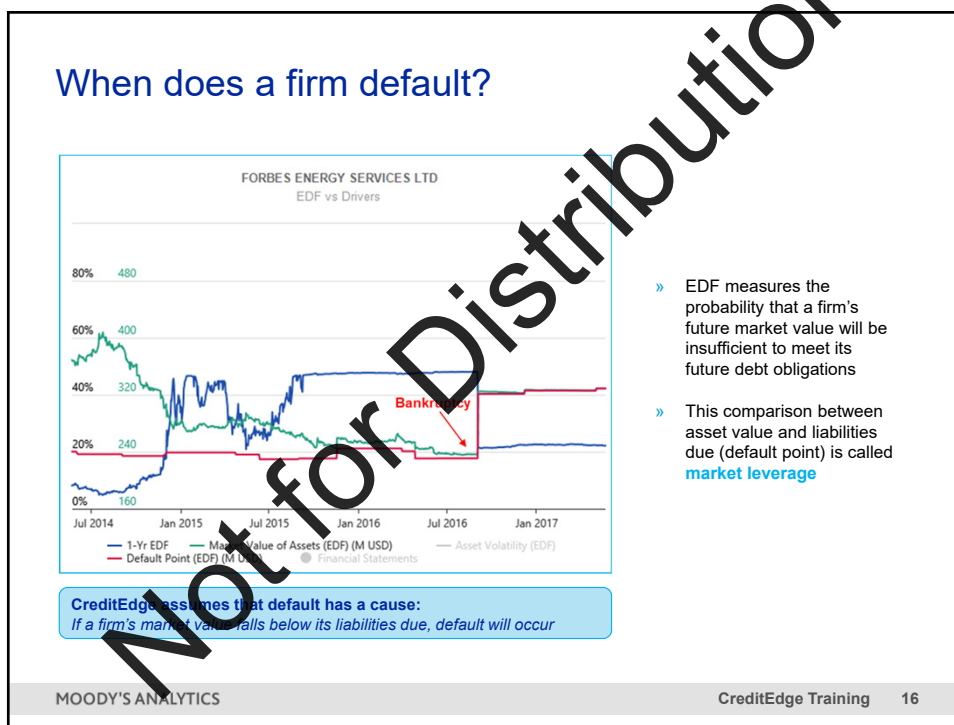
November 2005--October 2012

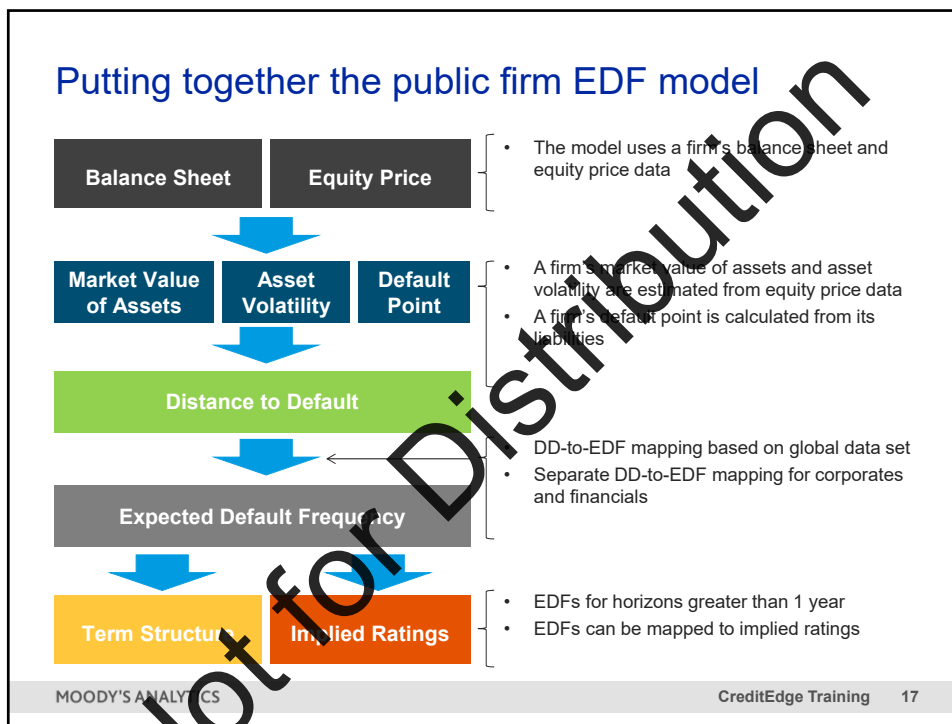
January 2013--January 2019

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CreditEdge tools help explain changes in an EDF from both a quantitative and qualitative standpoint

EDF Relative Contribution tool on the Company page to understand what drives an EDF change

Enhanced News on the Company page to access information on the events that triggered the EDF change

Item	Aug 14, 2019	Aug 14, 2018	% Change	Relative Contribution
1-Year EDF	2.43%	2.19%	0.22%	0.73%
Asset Volatility	13.66%	13.36%	3.64%	-0.13%
Market Leverage	74	72.50%	3.00%	N/A
Market Value of Assets*	27,970,330	31,434,950	-11.02%	N/A
Share Price*	0.35	0.70	-28.35%	N/A
Shares Outstanding	79,900,000	79,900,000	-0.11%	N/A
Market Capitalization*	27,970,330	25,830,000	37.40%	1.3%
Default Point*	925,500	22,015,000	-0.20%	-0.44%
Short Term Liabilities*	1,000,000	10,413,000	-10.97%	-0.3%
Long Term Liabilities*	2,010,000	8,004,000	36.43%	-0.14%
Adj. Total Liabilities*	3,010,000	18,417,000	-10.5%	N/A

*Amounts are in \$K

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Additional CreditEdge models are derived from the public firm EDF model

EDF-Implied Rating Through-the-Cycle EDF
Economic & Regulatory Capital

Stressed EDF Custom Scenarios
Stress Testing

CDS-Implied EDF Fair-Value CDS Spreads
Credit Default Swap Analysis

Fair Value Spread Alpha Factor
Asset Management & Bond Pricing

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3 | CreditEdge for Risk Management

Early Warning Toolkit: Empirically Tested Signals Providing Insight into Early Credit Deterioration

Term Structure
High Risk Firms Have Inverted Term Structures

EDF Level
How to Choose the Right Trigger Level

Relative EDF Level
Point-in-Time Rank

EDF Change
EDFs Exhibit Momentum

EDF Relative Change
Compare with Peers & Industry

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A Large Bank uses CreditEdge as its Primary Portfolio Monitoring Solution

- » Risk Portfolio Management Group; primary responsibility is to monitor their commercial portfolio, also responsible for working on their risk adjusted returns and capital calculations
- » **Two Primary Uses of EDF Data:**
 - » Feeds internal model for economic capital calculations
 - » Serves as primary Early Warning system
- » When the Early Warning system shows strong warning signs, they do a deep dive to decide if they need to reduce their exposure or close out the position
- » **Customization to their Processes:**
 - » TTC EDF, Rating Outlook and EDF drivers added to their Early Warning process
 - » Automated industry analysis reports
 - » SED aggregated by country and industry as well as names in their portfolio and their capital calculations

Prior 1 Year				Momentum				EDF drivers			Cyclicality Monitoring		
1-Year EDF	Implied Volatility	1-Year Change	1-Year Momentum	EDF + Business Risk	Financial Risk	Point in time	Through the cycle	EDF	Asset Value	Market Weight	EDF	EDF	EDF
0.08%	12	-2	47th QNTL	Deterioration	43.29%	46.14%	7.08%	7.76%	-68				
0.05%	12	0	157th QNTL	No change	20.53%	13.82%	0.15%	0.19%	-4				
0.03%	13	325	47th QNTL	Deterioration	25.64%	55.08%	4.08%	0.41%	367				
0.04%	13	-2	157th QNTL	No change	15.21%	31.58%	0.05%	0.09%	-4				
0.39%	11	22	390th QNTL	No change	18.82%	46.93%	0.58%	0.59%	3				
0.10%	11	20	290th QNTL	No change	18.39%	51.41%	0.21%	1.51%	-90				
0.12%	12	-5	157th QNTL	No change	5.77%	47.94%	0.08%	0.13%	-14				
0.04%	Baa2	0	157th QNTL	No change	13.18%	16.57%	0.04%	0.11%	-17				
0.02%	Aa2	1	157th QNTL	No change	16.49%	24.20%	0.03%	0.05%	-1				
0.02%	Aa3	2	157th QNTL	No change	17.94%	10.22%	0.04%	0.06%	-2				
0.09%	Ba1	0	157th QNTL	No change	20.07%	25.31%	0.09%	0.22%	-13				
0.08%	Ba1	-5	157th QNTL	Improvement	18.10%	6.72%	0.02%	0.25%	-23				
0.01%	Aaa	1	157th QNTL	No change	24.96%	5.62%	0.02%	0.05%	-3				
0.13%	Ba1	4	290th QNTL	No change	19.64%	53.58%	0.17%	0.28%	-11				
0.24%	Ba3	-12	290th QNTL	No change	11.77%	52.45%	0.12%	0.40%	-16				
0.17%	Ba2	7	290th QNTL	Deterioration	19.81%	35.57%	0.24%	0.50%	-16				
0.31%	Baa2	-8	157th QNTL	No change	8.21%	53.31%	0.23%	0.38%	-15				
0.28%	Baa2	9	390th QNTL	Deterioration	10.38%	31.31%	0.37%	0.41%	-4				
0.21%	Baa1	-7	157th QNTL	No change	5.06%	56.70%	0.15%	0.52%	-18				
0.34%	Baa3	0	290th QNTL	No change	9.66%	55.20%	0.34%	0.44%	-9				
0.01%	Aaa	0	157th QNTL	No change	13.33%	8.42%	0.01%	0.02%	-1				
1.05%	B3	215	47th QNTL	Deterioration	25.06%	55.07%	3.20%	3.13%	7				
4.35%	Caa2	453	47th QNTL	No change	21.51%	72.44%	8.88%	4.40%	447				
0.04%	Baa2	-2	157th QNTL	No change	25.63%	7.97%	0.05%	0.07%	-5				
0.18%	A3	-4	290th QNTL	No change	15.22%	29.25%	0.15%	0.24%	-10				
0.03%	A1	-2	157th QNTL	No change	10.94%	18.47%	0.02%	0.02%	0				

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A Bank uses Implied Ratings to Monitor Deterioration Migration

Moody's Senior Unsecured Rating	Bond IR Migration					EDF Migration				
	Bond Imp Gap Movt	BI Weekly Bond	1 Month Bond	3 Month Bond	1 Year Bond	Eqty Impl Gap Movt	BI Weekly EDF	1 Month EDF	3 Month EDF	1 Year EDF
Baa2	0	0	0	1	1	0	0	0	0	4
A3	0	0	0	0	0	0	0	0	0	0
Baa1	1	1	1	1	1	1	1	1	1	1
A3	1	1	1	0	0	0	0	0	0	-1
Baa1	-1	-1	-1	0	0	-1	-1	-1	-1	-1
Baa1	1	1	1	0	0	1	1	1	1	1
Baa2	0	2	0	-1	0	0	0	0	0	6
Baa1	1	1	1	0	0	1	1	1	1	1
Baa2	1	1	1	1	1	1	1	1	1	1
A3	1	1	1	1	1	1	1	1	1	1
A2	0	0	0	0	0	0	0	0	0	0
Baa1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Aa3	0	0	0	-1	1	0	0	0	0	0
B3	1	4	4	3	2	5	5	5	4	4
A1	1	1	1	1	1	1	1	1	1	1
Baa1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Baa2	1	1	1	1	1	1	1	1	1	1
B3	2	3	3	3	2	3	3	3	2	0
Baa1	-1	-1	-1	-1	-1	6	6	6	6	5
Baa2										
Baa1						6	6	6	5	3
Baa2	-1	0	0	0	0	4	4	4	5	3
A2	4	3	4	3	2	1	1	1	1	-1
A3	0	0	0	0	0	2	2	2	2	2
A3	0	0	0	0	0	5	4	5	5	4

- » Credit Risk Management Dept; Credit Relationship Management team monitor names in portfolios to spot sensitivities and send bi-weekly status reports to larger Portfolio Management team
- » **Primary Use of EDF Data:**
 - » EDF IR serves as part of their sensitivity report
 - » This report leans on the Bond and EDF IR's; it monitors the IR Gap migration over multiple time frames with a focus on the movements over the last three months. They send this report around to alert portfolio managers of any 2 notch movements, the PM then decides if any action needs to be taken.

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A Real Estate Manager uses EDF to Create Custom Implied Rating

- » Credit Department; monitor portfolio of tenants of real estate properties they own. See how viable they will be over the next 5 years as they sign 5 year agreements

- » **Two Primary Uses of EDF Data:**
 - » Monitor trends of rolling 30 day 5 year EDF & Implied Ratings
 - » Custom Implied rating calculated off of rolling 30 day average EDF and used in their internal rating system

- » When their internal rating falls below a certain level they deep dive on the name decide to break relationship with tenant or get collateral.

- » **Customization to their Processes:**
 - » Helped them build an internal spreadsheet to calculate custom implied rating scale and how it feeds their internal rating system.

Yr	Avg IR	Current IR	Starting IR	MIS Rating
3.35%	Caa1	Caa1	Caa1	Caa1
1.6%	A1	A1	A1	
0.7%	Ba2	Ba2	Ba2	
0.1%	A2	A1	A1	Aa1
1.1%	A2	A2	A2	
12.22%	Caa3	Caa3	Ca	B1
0.11%	A1	A1	A1	Baa1
5.94%	Caa2	Caa2	Caa2	
0.12%	A1	A1	A1	Aa2
0.56%	Ba2	Ba1	Ba2	Baa1
0.60%	Ba2	Ba2	Ba2	
34.5%	C	C	C	
6.89%	Caa2	Caa2	Caa3	
0.80%	Ba3	Ba3	Ba3	Ba1
0.67%	Ba2	Ba2	Ba2	
4.15%	Caa1	Caa1	Caa1	
0.19%	A3	A3	A3	
0.60%	Ba2	Ba2	Ba2	Ba3
0.17%	A3	A3	A3	
0.22%	Baa1	Baa1	Baa1	
1.00%	B1	B1	B1	
0.68%	Ba2	Ba2	Ba2	
0.14%	A2	A2	A2	
13.07%	Ca	Ca	Ca	

A Corporate uses Triggers to Build their Watchlist

- » Counterparty Credit Risk Group; set limits for each name within the portfolios and monitor them daily to make sure none of the names have crossed their threshold.

Two Primary Uses of EDF Data:

- » Have adopted our methodology as a primary element of their Early Warning tool
- » EDF Trigger is used to help set their internal thresholds

- » When EDF of any name is above their trigger for 5 days in a row it is automatically added to the watchlist for deep dive review. If it is deemed too risky they reduce their exposure.

Customization to their Processes:

- » Worked with them to help infuse the triggers into their internal threshold calculation process

EDF Implied Rating	1Y EDF	Deterioration Probability	EDF Trigger	1Y EDF Above Trigger Level
Ca	16.46%	56.78%	8.67%	Yes
Caa3	7.25%	33.69%	8.67%	No
Caa2	4.10%	16.62%	3.94%	Yes
Caa1	3.80%	14.95%	4.56%	No
Caa1	3.21%	10.85%	10.59%	No
B3	1.78%	14.75%	8.67%	No
B3	1.6%	15.82%	3.45%	No
B3	1.57%	11.81%	3.94%	No
B3	1.43%	17.04%	5.72%	No
B3	1.2%	14.77%	0.94%	Yes
B3	0.98%	4.81%	8.67%	No
B3	0.91%	10.59%	3.45%	No
B1	0.42%	10.68%	8.67%	No
B1	0.40%	0.92%	2.34%	No
B1	0.34%	4.87%	4.56%	No
Ba3	0.31%	8.35%	4.56%	No
Ba1	0.11%	8.70%	3.45%	No
Ba1	0.11%	4.03%	8.67%	No
Ba1	0.10%	20.92%	4.56%	No
Ba1	0.08%	5.93%	8.67%	No
Ba1	0.08%	18.90%	8.67%	No
Ba1	0.08%	15.64%	8.67%	No
Ba1	0.07%	7.26%	2.00%	No
Baa3	0.07%	6.30%	8.67%	No

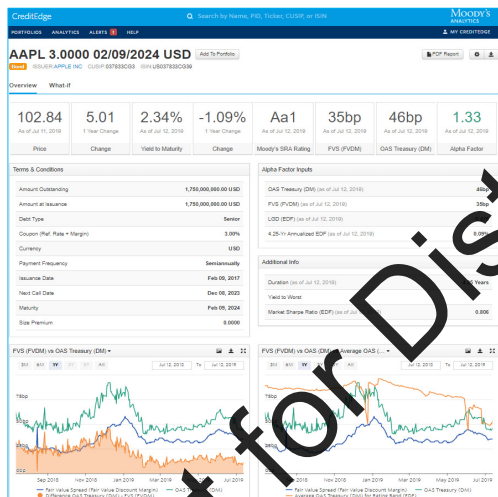
*Expanded List of Client Use Cases can be found in the Appendix

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4

CreditEdge for Asset Management

CreditEdge contains over 265,000 bond issues denominated in 51 currencies



- » Coverage continues to grow globally
- » Includes floating rate, discount zero and variable rate coupon bonds
- » Bond EDF tied to duration
- » LGD to calculate expected losses

Region	Bond	
	Active	Total
ASIA-PACIFIC	24628	84642
EUROPE MIDDLE EAST AND AFRICA	14818	65732
NORTH AMERICA	30790	110904
LATIN AMERICA	1184	3757
Total	71420	265035

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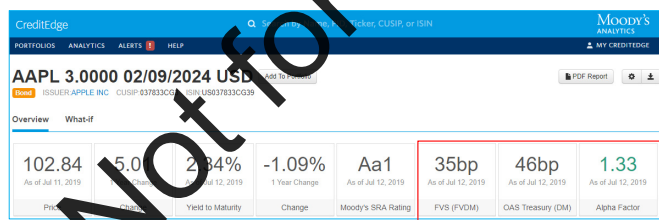
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CreditEdge proprietary Fair Value Spread and Alpha Factor measures help asset managers select underpriced bonds

Fair Value Spread (FVS) = $(EDF \times LGD) + MRF \pm \text{issuer size factor}$

Alpha Factor (AF) = $\text{Option Adjusted Spread (OAS)} / \text{FVS}$

Our research shows that Alpha Factors over 1 tend to have stronger returns and better credit risk characteristics



A possible opportunity to explore

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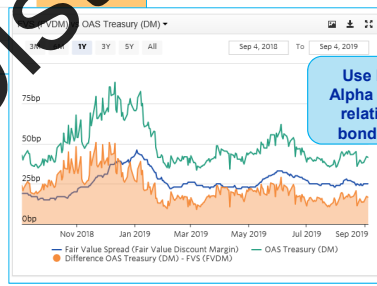
German asset manager using CreditEdge for credit risk control and to inform factor-based investment strategies

Deterioration Probability	1-Yr EDF Trigger (%)	1-Yr EDF Above Trigger Level	1-Yr EDF Change	Term Structure Inversion	Relative 1-Yr EDF
28.08%	9.08%	No	Deteriorating	No	Between 25th to 75th Percentile
28.01%	8.74%	No	Deteriorating	No	Between 50th to 75th Percentile
17.23%	0.99%	Yes	Deteriorating	No	Between 25th to 75th Percentile
10.48%	5.34%	No	Deteriorating	No	Between 25th to 75th Percentile
13.51%	1.43%	Yes	Deteriorating	No	Between 25th to 75th Percentile
14.21%	10.22%	No	Improving	No	Between 25th to 75th Percentile

Utilize EDF metrics to develop factor strategies in fixed income and equity

Assess the Deterioration Probability metric to comply with issuer ratings mandate

Use FVS and Alpha Factor for relative value bond analysis



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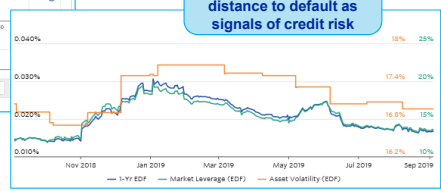
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U.S. hedge fund using CreditEdge to support systematic credit trading strategies



Utilize CreditEdge metrics to enhance existing trading models and build new ones

Analyze issuer EDF, asset volatility and distance to default as signals of credit risk



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1st EDF-based ETF: Ossiam Solactive Moody's Analytics IG EUR Select Credit ETF (Ticker: MOOC)


METHODOLOGY

- 1 **INVESTMENT UNIVERSE** Solactive Euro IG Corporate Index ex Non-Core Countries
- 2 **LIQUIDITY FILTER** Largest bond issues ex Perpetual Bonds
- 3 **QUALITY FILTER** Moody's Analytics Expected Default Frequency
- 4 **VALUATION SELECTION** Fair value spread vs options adjusted spread

Solactive Moody's Analytics IG EUR Select Credit

Source: www.ossiam.com

CreditEdge EDF and FVS act as filters to uncover corporate bonds with low default risk



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CreditEdge website and Excel Add-in demo

CreditEdge is a platform suite that comprises four delivery methods to satisfy any user needs

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Manage portfolios and conduct individual name analysis right on CreditEdge

Entity and bond portfolio pages offer you aggregate status on portfolio performance, with the ability to drill down into each constituent

Company and bond overview pages offer a customizable snapshot of relevant information

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Portfolio analytics provide early warning of changes in credit risks

Portfolio Analytics

MA Country by Exposure

- GERMANY 2%
- IRELAND 2%
- JAPAN 2%
- UNITED KINGDOM 2%
- UNITED STATES 94%

MA Sector by Exposure

- Travel & Entertainment 8%
- Technology & IT 19%
- RETI 2%
- Media & Comm. 16%
- Materials & Fab. 4%
- Utilities 2%
- Automotive & Def. 2%
- Health 4%
- Business Products 2%
- Consumer Durables 2%
- Consumer Non-Dur. 6%
- Energy 4%
- Equipment 2%
- Finance Cos. / - 12%
- Insurance 4%

Credit Quality Distribution

Bond Portfolio Parent Issuer EDF Distribution

Biggest Movers

Top 10% Improving Alpha Factors	Bottom 10% Deteriorating Alpha Factors				
Name	CUSIP	ISIN	Current	Change	% Change
US Gov 10Y	33209PA03	US33209PA03	97.18	1243.93	97.31%
US Gov 10Y	12992Z14	GA12992Z140	1001.39	1011.49	10039.27%
US Gov 10Y	ES0213770011	74.85	810.45	108.99%	
US Gov 10Y	NET95078PS	-79.87	811.00	91.07%	
US Gov 10Y	US195405AF09	-32.81	748.79	91.64%	
US Gov 10Y	12198LAD3	US12198LAD30	-55.45	681.39	89.05%
US Gov 10Y	098501A11	US098501A111	-43.74	671.97	83.69%
US Gov 10Y	055858D06	US055858D061	-2006.10	-2006.10	-189018.20%
US Gov 10Y	8226228PS	US8226228PS0	-13.24	-1195.02	-101.17%
US Gov 10Y	US109134W30	US109134W30	-1501.87	-1002.73	-94570.43%
US Gov 10Y	2338F10PS	US2338F10PS0	-490.10	-490.05	-99.97%
US Gov 10Y	US1303ACCL01	US1303ACCL01	-490.10	-490.05	-99.97%
US Gov 10Y	US1303ACCL02	US1303ACCL02	-490.02	-476.10	-4600.96%
US Gov 10Y	US7801CAFPS0	US7801CAFPS0	-17.21	-588.82	-103.01%
US Gov 10Y	XS180204732	XS180204732	-848.00	-581.25	-10501.87%

Run entity, bond and portfolio PDF reports containing key CreditEdge metrics for quick analysis

Find "movers" by EDF or Alpha Factor, and receive customizable alerts when credit risks change for entities, bonds and portfolios

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Compare peers, groups and portfolios utilizing the peer analysis tool for additional insight

NETFLIX INC

Compare to: US CO-INTELL SERVICES GROUP

1-yr EDF vs Group Percentiles

EDF and Driver Percentiles

EDF vs Trigger Level

Selecting industry group or portfolio to compare the selected entity against

Analyze a company's 1-yr EDF versus the EDF trigger level of its industry group

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The What-If Calculator on the website and via API supports scenario analysis

Drivers & Market Data All amounts are in millions (except for Share Price) Auto-Refresh Market Data Overrides Daily

Driver	Current	Override	Change	% Change
Asset Volatility	6.92%	7.39%	0.46%	6.6%
Market Leverage	65.78%	40.17%	-25.61%	-39.1%
Market Value of Assets	249,939.09	399,632.64	149,713.55	59.9%
Market Capitalization	36,947.29	151,423.35	114,476.06	309.6%
Share Price	9.26	37.99	28.73	310.26%
Shares Outstanding	3,989.99	3,985.87	-4.11	-0.10%
Default Point	164,407.22			
Short-Term Liabilities	98,334.00			
Long-Term Liabilities	127,245.00			
Adjusted Total Liabilities	225,579.00			

EDF Calculator FVCDS CALCS CDS

Term	Current EDF	Current IR	New EDF	New IR
1 Year	0.75%	Ba2	0.03%	Baa1
2 Year	0.75%	Ba2	0.08%	Baa2
3 Year	0.41%	Ba2	0.12%	Baa2
4 Year	0.41%	Ba2	0.17%	Baa2
5 Year	0.57%	Ba2	0.23%	Baa2
6 Year	0.66%	Ba2	0.29%	Baa2
7 Year	0.75%	Ba1	0.36%	Baa2
8 Year	0.75%	Ba1	0.40%	Baa2
9 Year	0.82%	Ba1	0.44%	Baa2
10 Year	0.85%	Ba1	0.48%	Baa2

Annualized EDF Term Structure

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Industry data and entity news complement the fundamental process

US ELECTRONIC EQUIPMENT GROUP FIC: 206332 COUNTRY: United States Aggregate calculations are based on average values.

EDF Distributions EDF Percentiles EDF Risk Profile EDF Change Profile

EDF Implied Rating Distribution

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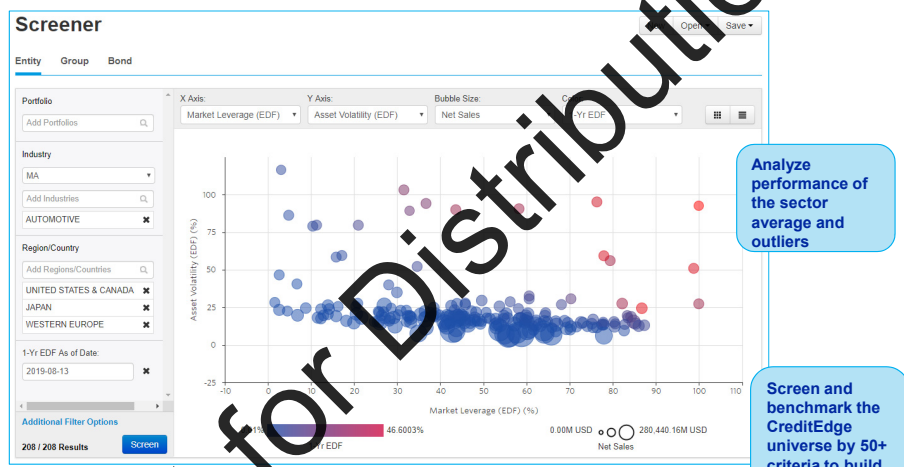
BUZZ-U.S. STOCKS ON THE MOVE-Big Banks, PepsiCo, Tesla, Amneal Pharma, Homebuilders

BUZZ-U.S. STOCKS ON THE MOVE-Oil stocks, Pepsi, pharma companies

Reuters Insider - U.S. Morning Call: Wall Street points to subdued open ahead of Powell testimony

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Powerful screening and benchmarking at company, group and bond level to find investment opportunities

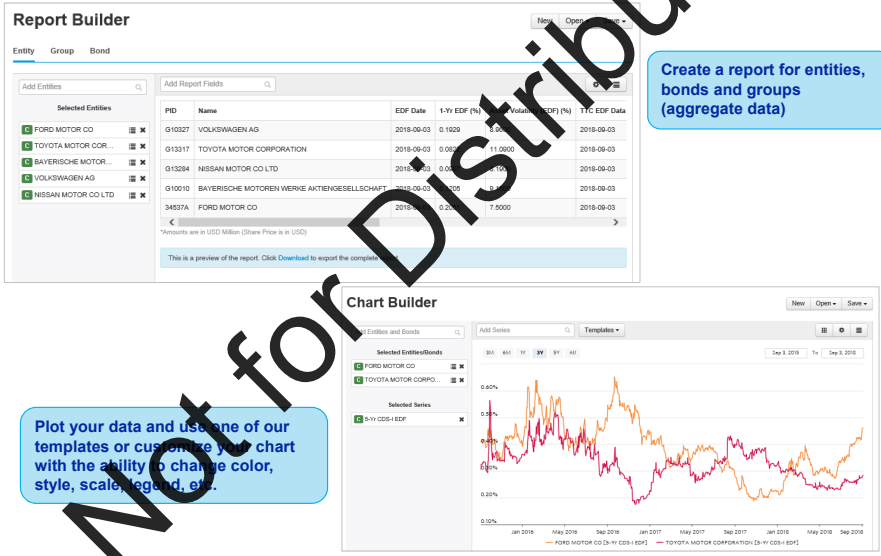


Analyze performance of the sector average and outliers

Screen and benchmark the CreditEdge universe by 50+ criteria to build portfolios

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Best-in-Class charting and reporting analytics



Create a report for entities, bonds and groups (aggregate data)

Plot your data and use one of our templates or customize your chart with the ability to change color, style, scale, legend, etc.

Easily create a Custom Entity by inputting market and financial data to produce an EDF value

Create Financial Statement

Entity Details | Income Statement | Balance Sheet | Market Data | **EDF Drivers**

EDF Drivers

1-Yr EDF: 0.01%

Asset Volatility	Percentile	10th	50th	75th	Value
		18.29%	23.60%	29.32%	29.00%
		73rd Percentile 25.00%			

Market Value of Assets*: 136,030.30

Default Point*: 90,853.50

*All amounts are in millions of USD

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Use to conduct in-depth pro forma and M&A analyses

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Deterioration Probability: How to Assess the Risk of Downgrade

Deterioration Probability (DP) is a metric ranging from 1-100 that estimates probability of downgrade for rated firms in the next 12 months. Deterioration Probability is a quantitative and transparent model that leverages CreditEdge's Implied Ratings (MIR), and Rating Outlook history from Moody's Analytics to calculate a probability of downgrade. Click below to read our AI Analytics document.

[LEARN MORE](#)



Sample of CreditEdge Applied Research:

- Using EDF Measures to Identify At-Risk Names – A Monitoring & Early Warning Toolkit
- Preparing for a Turn in the Chinese Credit Cycle
- Converting Agency Ratings to Point-in-Time PD Term Structure
- EDF Measures as An Overlay to Credit Ratings
- Dealing with Fallen Angel Risk

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6 | Coming soon to CreditEdge

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We are working on several enhancements coming soon to CreditEdge

- Further capabilities of the **News** feature by integrating **Artificial Intelligence** to display more **robust news**
- Smarter entity and bond **portfolio pages** with **more analytics** and **benchmarking** capabilities
- A new **Analytics Hub** with powerful **screening, charting and reporting** functionalities


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Upcoming CreditEdge Webinars



- November 21 at 10AM ET
Credit Markets Today & Beyond – Tools to Prepare for the Next Recession
- December 3 at 10AM ET
ESG & Credit Risk Ideas for Fixed Income Investors

Register at www.moodyanalytics.com/events

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