## The Components of EDF Implied Spread*
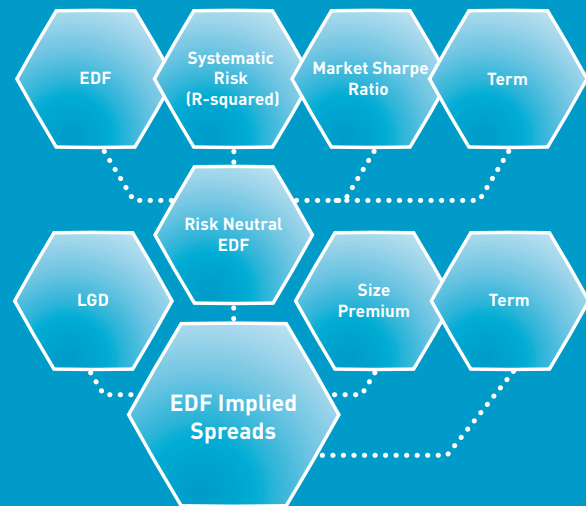
1) **EDF:** Probability of default for the firm.

2) **LGD:** Risk-neutral loss given default of the issue.

3) **Size Premium:** Function of the firm size using total annual sales (non-financial firms) or total book assets (financial firms).

4) **R-squared:** Measure of firm's systematic risk.

5) **Term:** Duration of the bond or tenor of the CDS.

6) **Market Sharpe Ratio:** Expected excess return of the market portfolio divided by the standard deviation of the portfolio.

7) **Zero-EDF Curve:** Point where corporate credits with zero default probability would trade.



*CreditEdge Plus Only

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## Quick Functional Tips

### Analyze a Company

➲ Analyze the drivers that cause changes in default risk for a specific company using **Analyze→Company→EDF**.

➲ Analyze the drivers that cause changes in credit spreads for a specific company using **Analyze→Company→CDS/Bond** (CreditEdge Plus users only).

### Analyze Portfolios and Industries

➲ Analyze historical changes in default risk for your portfolio by importing companies into a portfolio from a text file using **Analyze→Portfolio→EDF (Then click on "Import")**.

➲ Analyze historical default risk for sectors and industries by selecting from over 5,000 pre-defined groups using **Analyze→Group→EDF**. Select a specific group by providing industry, sector, region and country in the **Lookup**.

➲ Analyze historical spread changes on your portfolio using **Analyze→Portfolio→CDS/Bond** (CreditEdge Plus users only).

➲ Analyze historical spreads for sectors and industries by creating a portfolio from pre-defined groups (CreditEdge Plus users only).

### Monitor Portfolios

➲ Monitor the changes in EDF for companies in your portfolios by setting alerts and movers in **Monitor→Alerts (Movers)** and receive daily automated email notification.

### Relative Analysis

➲ Compare EDF, spreads and their drivers for companies, peers, portfolios, and pre-defined sectors and industries using **Chart Builder**. Create customized charts by modifying an existing chart and saving it as a user-defined chart.

### Sensitivity and Scenario Analysis

➲ Perform sensitivity-analyses on a company by changing various EDF and spread drivers using **Calculator**.

➲ Perform sensitivity-analyses on a portfolio using **Scenario Analyzer** and create a report of sensitivities for all companies in the portfolio (CreditEdge Plus users only).

### Scan the Market

➲ Set your scanning universe, set conditional filters and create a report on a subset of names for further analysis. Save your scan criteria using **Scan→Query & Reporting** (CreditEdge Plus users only).

### Triangulate

➲ Triangulate across Equity, Bond, and CDS markets using **Solver** (CreditEdge Plus users only).

### Override Data

➲ Update company financials using **Override→EDF Update** and share your overrides with other users.

➲ Provide your own view of LGD on a single name or on all companies in your portfolio using **Override→LGD Settings** (CreditEdge Plus users only).

### Integrate Application Data

➲ Integrate EDF and spread data into your internal data warehouse using the **Data File Service** and integrate EDF and spread calculators into your internal credit systems (including Excel) using the **XML Web Service**.

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# Quick Reference

CREDIT**EDGE**® & CREDIT**EDGE PLUS**

Additional information, including a full user guide and a list of frequently asked questions can be found in the Online Help.

You can also contact support directly for product questions and feedback:

Support Website:  support.moodyskmv.com

Email:  support@mkmv.com

Telephone:  +1.866.995.9659 (Toll Free)
+1.415.874.6568 Option 2
(Hours: 4am–11pm, US Eastern Time, Mon–Fri.)

# Glossary of Terms

## CREDIT**EDGE**®

### ASSET VOLATILITY

Asset volatility is a measure of the business risk of the firm. Technically, it is the standard deviation of the annual change in the market value of the assets, as measured against the firm's benchmark group, expressed in percentage terms.

The higher the asset volatility, the less certain investors are about the market value of the firm, and the more likely the firm's value will fall below its default point.

### DEFAULT POINT

The default point represents the amount of liabilities that are expected to be due in the event that the firm is in distress. In general, the default point is close to a value equal to short-term liabilities plus half of long-term liabilities.

### DISTANCE TO DEFAULT

Distance to default is the number of standard deviations that the market value of assets is above default point.

### EXPECTED DEFAULT FREQUENCY (EDF)

EDF is the probability that a firm will default within a given time horizon (typically 1 year). A firm with an EDF of 10% has a 1 in 10 chance of defaulting over the next year.

### INSTANTANEOUS EQUITY VOLATILITY

This is a measure of equity volatility derived from the asset volatility data. Technically, the instantaneous equity volatility is a levered up version of asset volatility. CreditEdge calculates it as the asset volatility multiplied by the leverage and divided by the hedge ratio of equity to asset.

### MARKET LEVERAGE

The market leverage is a ratio indicating how much of the market value of the firm's assets is financed by debt. It is calculated by dividing the default point by the market value of assets. If everything else is equal, the higher the firm's market leverage, the higher the firm's EDF credit measure.

### MARKET VALUE OF ASSETS (ASSET VALUE)

The market's view of the enterprise value of the firm as determined by the firm's equity value, equity volatility, and liability structure.

Moody's KMV™ employs a proprietary option theoretic model to compute the market value of assets, since it is not directly observable.

## CREDIT**EDGE PLUS**

### EDF-IMPLIED CDS SPREAD (EICDS)

The EICDS is the spread on a five-year CDS for a given entity, as calculated by the Moody's KMV valuation model.

### EDF-IMPLIED OAS SPREAD (EIOAS)

The EIOAS is the five-year credit spread over LIBOR for the reference bond of a given entity, as calculated by the Moody's KMV valuation model. It is duration-adjusted to be the spread on that bond if it were to have a five-year duration, which facilitates an apples-to-apples comparison with the EICDS (the EDF-implied CDS spread).

### EIOAS (TERM-MATCHED)

This is the EIOAS over LIBOR adjusted for the duration of the reference bond of a given entity, as calculated by the Moody's KMV valuation model.

### FAIR-VALUE SPREAD (FVS)

The fair-value spread is the credit spread calculated using the LGD provided as an override by the user (for example 60%) or Sector LGD provided in CreditEdge Plus.

### IMPLIED LGD/RESIDUAL

The implied LGD/residual (used in EIOAS and EICDS calculations) is a spread-implied loss given default (LGD) measure under the risk-neutral measure that makes the valuation model consistent with the observed market spreads.

The implied LGD/residual captures the issue level pricing-relevant information that cannot be explained by other spread drivers such as: EDF, Market Sharpe Ratio, Size Premium, Duration, and the Zero-EDF Yield Curves.

### MARKET SHARPE RATIO

The market Sharpe ratio, also known as the market risk premium, is defined as the market's excess return per unit of risk. This value is estimated daily using a cross-sectional sample of thousands of investment-grade USD bonds.

### R-SQUARED

The R-squared measure is the proportion of the borrower's risk that is systematic. Specific risk, $(1 - R^2)$ can be diversified; systematic risk can not. Larger values of $R^2$ indicate a large correlation with other asset values (and default probabilities) and with the portfolio.

### REFERENCE BOND AND CDS

Moody's KMV has selected the five-year CDS as the reference instrument to show for the CDS market, since the five-year CDS is by far the most actively traded. We also pick the most popular documentation of the five-year CDS to reflect the most actively traded instrument.

While a criteria for the bonds selected is "most actively traded", we also use a senior unsecured bond that is closest to a five-year duration. All EIOAS are term-adjusted to match a duration of exactly five years so that these spreads can be directly comparable to the CDS.

### SIZE PREMIUM

The size premium relates to the size or liquidity of a company and is used to help capture additional spread that is not accounted for by the pure structural method.

## The Components of an EDF credit measure:

1) **Market Value of Assets:** The current market value of the firm.

2) **Default Point:** The level of the firm's obligations.

3) **Asset Volatility:** The vulnerability of the market value to large changes.

Market Value of Assets — Default Point — Asset Volatility — Distance to Default — EDF