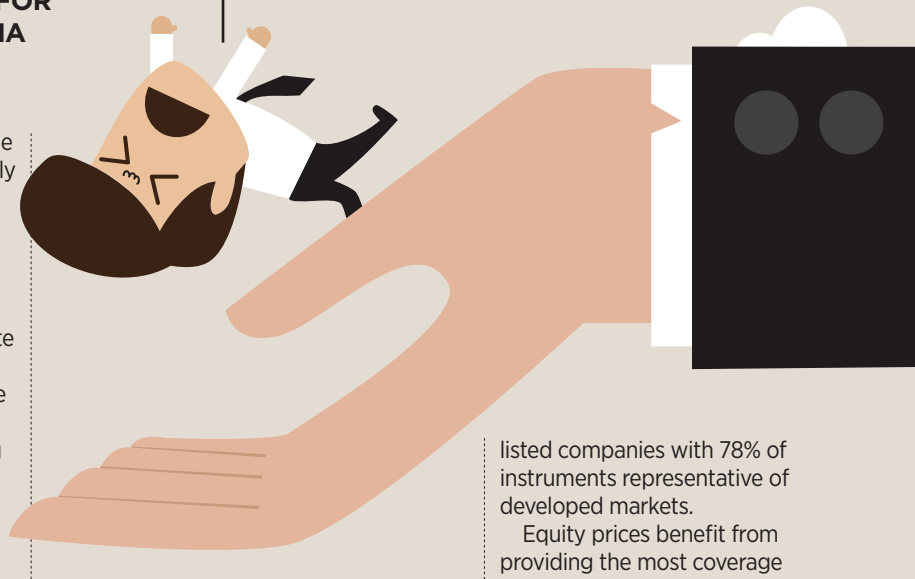
TOP OF THE AGENDA

ARE YOU USING THE RIGHT CREDIT METRICS FOR COUNTERPARTY RISK SURVEILLANCE? SILVINA ALDECO-MARTINEZ EXPLORES THE OPTIONS



Due to a volatile credit environment and working capital shortages, companies continue to be susceptible to sharp falls in creditworthiness even in an economic upturn. So it's becoming ever more difficult for market players to anticipate build-ups of credit risk exposure among their counterparties.

As such, timely credit risk monitoring has risen to the top of the agenda for many large corporations exposed to global customers and supply chains. There are several credit metrics and methods that exist today to help treasurers monitor the credit risk affecting their operations, but do these capture all the essential risk factors and can they be used for daily surveillance?

For example, firms may use internal or external credit rating systems, which can be perceived as heavy-weighted in through-the-cycle credit assessments, but these lack the ability to react instantly to current events and reassess credit. In today's environment, treasurers need to keep a pulse on credit risk even between reporting periods, and they need an alternative to traditional methods to do so.

Solutions do exist for those looking to determine counterparty creditworthiness, including several that generate some form of probability of default (PD) as an output. These solutions come in a wide variety of formats and normally have their basis in credit default swaps (CDSs), bond prices or equity prices. They range in sophistication from the direct observation of raw form metrics to more elaborate models that use raw form metrics as an input to produce a more actionable output.

Equity pricing, bond pricing and CDS prices can be used as a proxy for monitoring a company's creditworthiness. They are simple to implement and can be used in their raw form without any complex adjustments. Additionally, these metrics tend to be publicly available since they relate to publicly listed companies (in the case of equity metrics) or publicly issued debt (in the case of bond pricing metrics). But the downsides associated with the use of these simpler metrics can be lack of coverage and false or missed alarms given the non-credit-associated volatility in observed prices. For example, the prices of all of these metrics suffer swings that are driven by non-credit-related events, such as interest rate movements and general market expectations. This 'statistical noise' can severely reduce their viability as a tool for monitoring credit risk in the short term.

CDS prices, in particular, have a proven track record of successfully being used as a proxy for default risk; for example, they have accurately predicted defaults of sovereign counterparties. Only about 2,000 companies currently have a traded CDS, however – a very small percentage of the listed universe with 93% of the instruments from developed market issuers. Additionally, less than half of these companies can be considered to be liquid CDSs, which is a salient drawback for the regular monitoring of counterparty credit risk.

As in the case of CDSs, bond pricing is naturally connected to credit risk, since the prices of debt instruments are strongly determined by the creditworthiness of the underlying issuer. While their coverage is slightly better than CDS prices, just 5,260 companies have listed debt – that's only about 8.5% of all listed companies with 78% of instruments representative of developed markets.

Equity prices benefit from providing the most coverage for listed companies; but they tend to generate false triggers, more so than CDS and bond pricing. By nature, equity price movements result from reactions to various non-credit-related events, such as announcements of earnings expectations and merger rumours, and these don't have any bearing on a company's creditworthiness.

The need to smooth out the 'statistical noise' and reduce the occurrence of false positives has been a primary driver for market players to disregard the use of raw form metrics. As such, this has led to the creation of more sophisticated, synthesised metrics, which take the raw form data as their primary inputs, but use mathematical modelling techniques and perhaps some secondary inputs to improve on the accuracy and granularity of the outputs.

PD Model Market Signals

This challenge around finding the right credit metrics to assess counterparty risk has led to the development of PD Model Market Signals, an equity-based model that calculates probabilities of default on a daily basis. The model, developed by S&P Capital IQ, uses a complex mathematical formula that combines equity prices with three other inputs: country risk, industry risk and sovereign CDS-based market-derived signals (MDS). By incorporating these additional inputs, the model achieves higher levels of accuracy, granularity and discriminatory power, even for companies in emerging and frontier markets. As such, they help to mitigate the issues seen with the models mentioned earlier, reducing statistical noise and false negatives.

Sovereign CDS-based MDS are incorporated as the first model stabiliser, which allows it to capture any sudden deterioration in sovereign credit quality. MDS are derived from a statistical model that evaluates CDSs to create a measure that facilitates the interpretation of market information.

Industry risk is accounted for as a second model stabiliser in order to capture differences in the operating conditions for companies in different industries. This also allows the model to reflect the point in time of the economic cycle for each specific industry. Practically speaking, companies in different industries also tend to not operate at the same leverage levels. For example, mining companies usually have lower leverage than those in the health-care sector. Consequently, this should translate into different asset value threshold levels, below which a default could be triggered. This is not the case in many industry-standard models, which assume a fixed threshold.

By using a proprietary **country risk score**, the model can look past the credit quality of the sovereign to the underlying business operating environment and ease of doing business in a country. This score incorporates factors such as the business environment of these countries and includes three key risk dimensions – the rule of law, government and human development – using publicly sourced indices to incorporate factors such as the strength of a country's legal system and levels of corruption within government, political stability and bureaucracy, and other factors such as education levels and literacy rates.

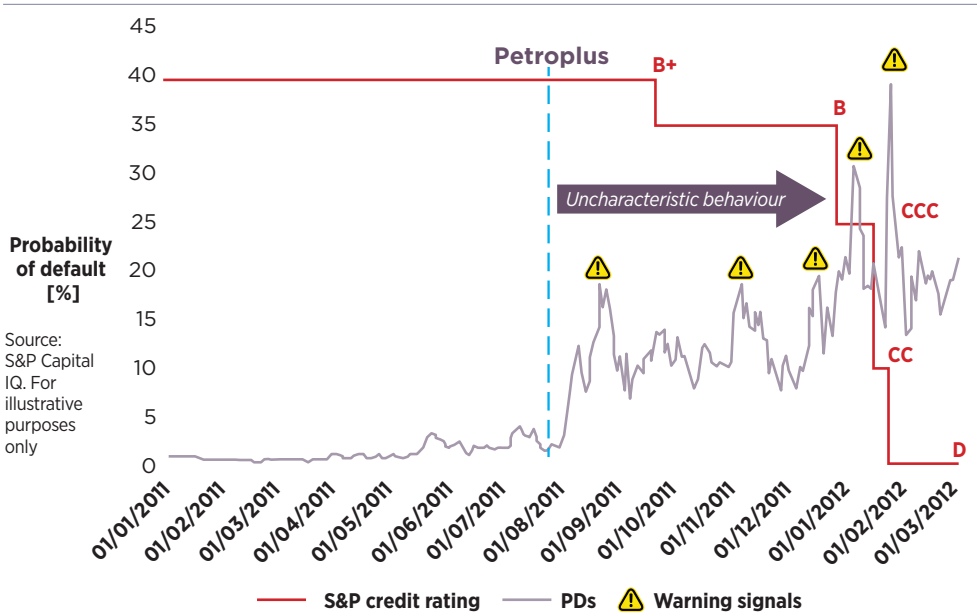
To demonstrate how Market Signal PDs work, a prime example is Petroplus, a petroleum refiner and wholesaler, which defaulted at the end of 2012. As of January 2011, the Standard & Poor's Ratings Services' credit rating was B+ and it migrated to D (defaulted) by February 2012. By contrast, the Market Signal PD remained relatively stable until August 2011, when an extended period of uncharacteristic behaviour and high volatility occurred, providing alerts even in between reporting periods. Between August 2011 and the default date, the PD escalated from less than 5% to nearly 40% with at least four clear indications of heightened risk when the PD reached peak levels of nearly 20% and 35%. This alone provided several early warning signs that Petroplus's credit quality had been deteriorating.

The volatility of the credit environment continues to highlight the importance of timely credit risk management at large corporations. Apart from this traditional risk management use case, Market Signal PDs are being used as a short-term credit risk metric for:

- Practical credit risk tolerance articulation for credit policies around monitoring;
- Effective use of resources that allows the layout of a framework for prioritising counterparties that require more in-depth analysis; and
- Input to the strategic review of credit risk trends at more general sector or geographic credit risk build-up, among others.

While there are a number of metrics available in the market that can be used to measure the credit risk of a company, finding the balance between accuracy, coverage and relevance is still a major challenge. Using equity prices as the base input ensures wide coverage, and including industry risk, country risk and sovereign MDS as additional inputs provides greater accuracy and discriminatory power.

PETROPLUS: STANDARD & POOR'S CREDIT RATING VS MARKET SIGNAL PD, 2011-2012



Source: S&P Capital IQ. For illustrative purposes only

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