MOODY'S ANALYTICS

DEFAULT CASE STUDY

The GAME Group Plc

Firm Seeks Extra Lives through Administration

Moody's Capital Markets Research, Inc.

Authors

Irina Makarova
+1 (212) 553-4307
irina.makarova@moodys.com

About

Analyses from Moody's Capital Markets Research, Inc. (CMR) focus on explaining signals from the credit and equity markets. The publications address whether market signals, in the opinion of the group's analysts, accurately reflect the risks and investment opportunities associated with issuers and sectors. CMR research thus complements the fundamentally-oriented research offered by Moody's Investors Service (MIS), the rating agency.

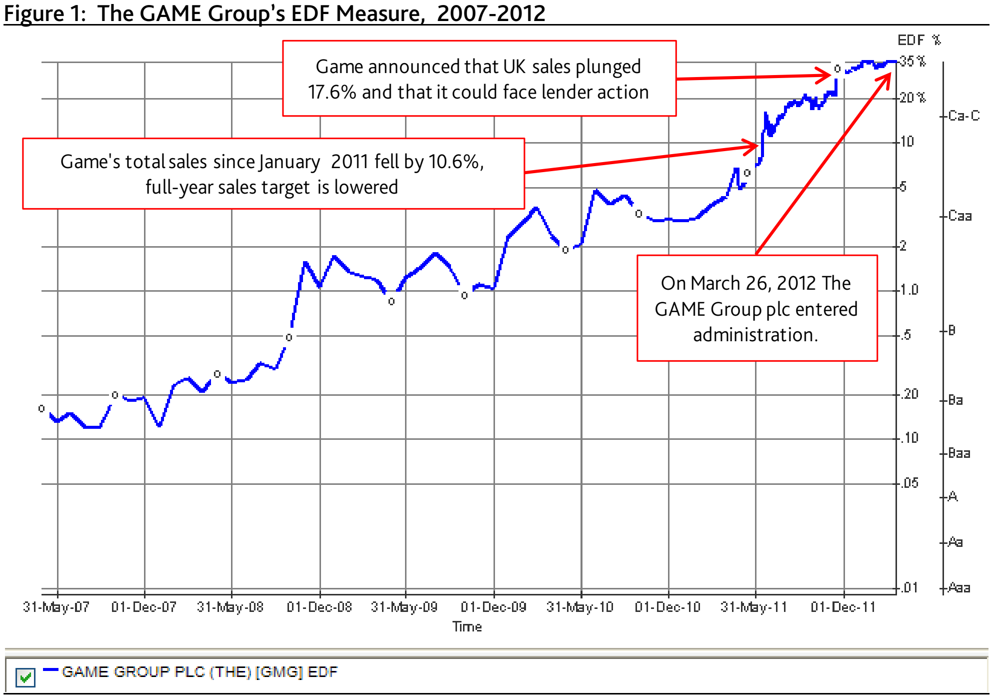
CMR is part of Moody's Analytics, which is one of the two operating businesses of Moody's Corporation. Moody's Analytics (including CMR) is legally and organizationally separated from Moody's Investors Service and operates on an arm's length basis from the ratings business. CMR does not provide investment advisory services or products.

Read the full CMR FAQ
capitalmarketsresearch@moodys.com

Summary

- The GAME Group plc is a United Kingdom-based video games retail company. On March 26, 2012 The GAME Group plc entered administration.
- GAME's one-year Expected Default Frequency™ (EDF) metric showed signs of distress starting in 2008. GAME's bankruptcy followed a string of profit misses and declining sales. In November 2011 GAME Group's EDF measure jumped sharply from very high levels (around 18%) to extremely high levels (in excess of 30%) suggesting imminent risk of default.
- The changes in The GAME Group's EDF measure can be understood in terms of the EDF's two primary drivers: market leverage and asset volatility. GAME failed to adapt its business model to changes in the video games retailing industry, in which consumers increasingly purchased games online rather than in stores. In response, its financial risk, measured by market leverage, and its operating risk, measured by asset volatility both increased sharply over the past five years, resulting in an escalation in its EDF measure.

Figure 1: The GAME Group's EDF Measure, 2007-2012



EDF Measure Warned of Bankruptcy Risk

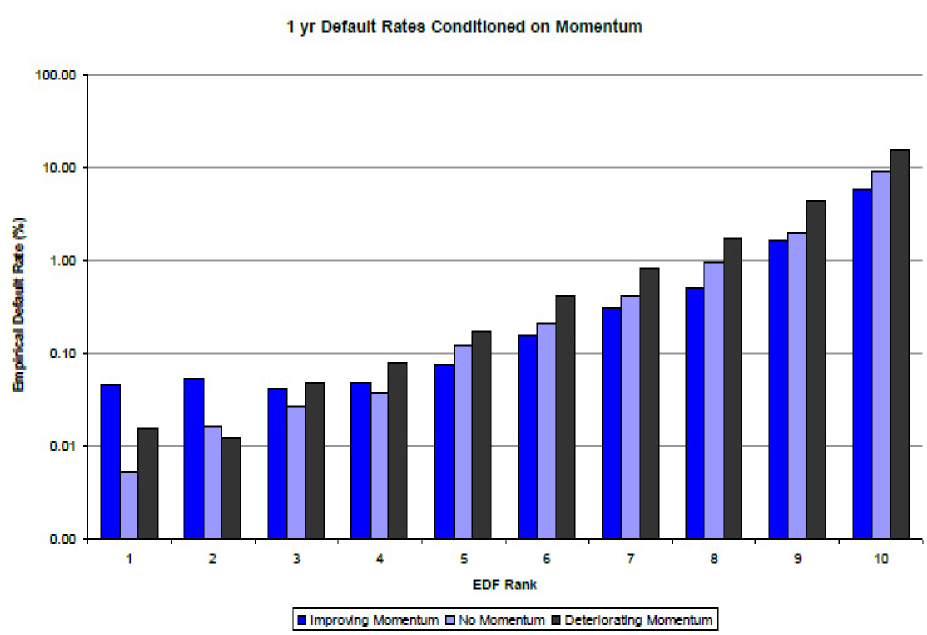
The GAME Group Plc's decision to apply for administration under the bankruptcy laws of the United Kingdom follows years of deteriorating financial performance for the video games retailer. On March 21, 2012 GAME's shares stopped trading on the London Stock Exchange, and five days later, on March 26, the company applied for administration. Because GAME lacks an agency credit rating and does not have traded bonds or CDS from which to infer risk from market spreads, Moody's Analytics' public EDF model provides a unique tool to assess the credit risk of the company. The EDF measure for the firm provided a timely early warning signal of financial distress.

As Figure 1 shows, the Expected Default Frequency (EDF) measure for GAME Group Plc has signaled a high level of default risk since at least 2008, and the pace of increase in its EDF metric accelerated over the twelve months prior to its entering into administration. Two months prior to its bankruptcy, GAME's EDF metric was at 35%, the maximum level of the EDF and a level historically associated with a high probability of default in the near term. As early as the summer of 2011, GAME's EDF level was 16%, which is consistent with a Ca rating on Moody's rating scale.

From the time of its announcement in the summer of 2011 that the company was struggling to keep up profits amid falling revenue to March 2012, GAME's EDF measure increased by 118%. Furthermore its EDF metric was deteriorating at an increasing rate. Moody's Analytics' research has shown that deteriorating momentum in EDF credit measures signals a much higher likelihood of default, whereas entities with improving momentum show relatively lower levels of default risk.[1]

Figure 2 summarizes the research results. EDF levels are placed into ten equally sized buckets on the horizontal axis (deciles). For each bucket we track direction of momentum (which is measured as change in the past twelve months). For the highest EDF level group (the 10th decile), the one-year default rate for the firms with deteriorating momentum is 15%, while that for the firms with improving momentum is only 6%. The data shows that analyzing the EDF level of a firm together with the momentum in its EDF measure leads to a better understanding of the risk of default.

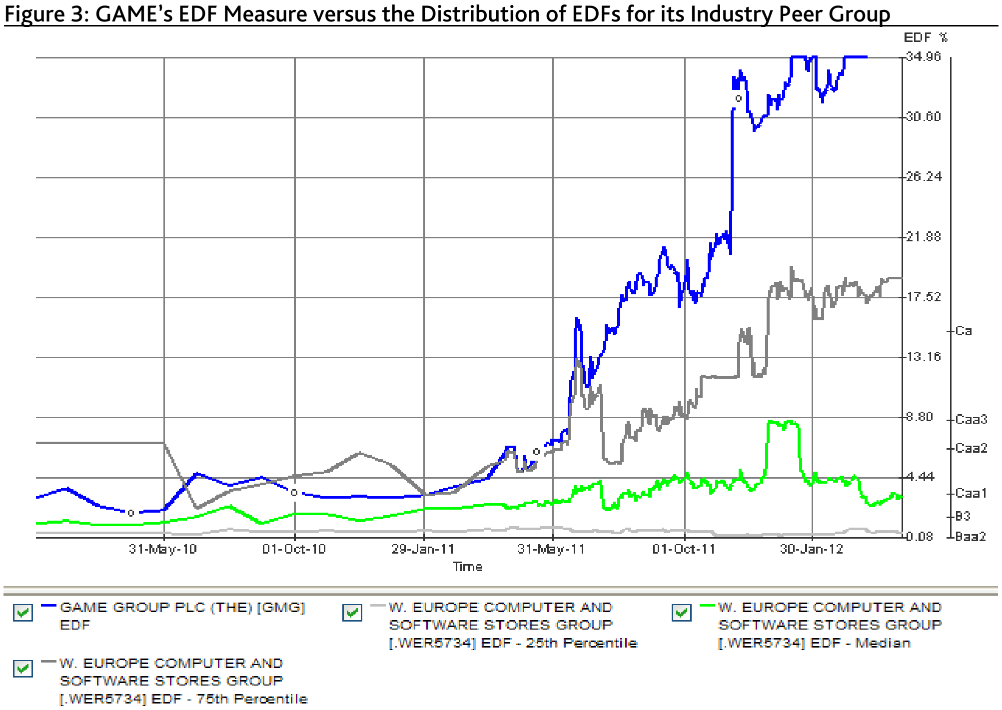
Figure 2: One-year Default Rates Conditioned on EDF Momentum



[1] Complete details of the EDF Momentum research can be found in the methodology document "Using EDF Momentum to Provide Insights into Credit Migration and Default Risk," available on www.moodysanalytics.com.

In addition to the level and change in a firm's EDF measure, performance relative to a peer group, such as industry sector, helps identify default risk early. In Figure 3 we show GAME's EDF metric versus the distribution (the median, 25th, 75th percentiles) of EDF measures for its industry peer group, the Western European computer and software stores group. Relative to the other firms in its industry group, GAME was showing elevated and rising risk of default as far back as the beginning of 2009. Its EDF measure began to significantly underperform its industry sector, crossing the 75th percentile of firms in the industry in July 2011. At the time the company went into administration on March 26, GAME's EDF measure was 11 times greater than the median EDF for its industry group.

Figure 3: GAME's EDF Measure versus the Distribution of EDFs for its Industry Peer Group



On April 1, 2012 OpCapita LLP, a private investment firm specializing in turnarounds in the retail, consumer and leisure sectors announced that GAME Group Plc had been bought by a private investment vehicle advised by OpCapita LLP. Under the purchase agreement, Baker Acquisitions will buy 333 GAME's U.K. stores, which will save the jobs of nearly 3,200 GAME employees.

GAME's EDF Measure Reflected Increasing Financial and Operating Risks

An analysis of the drivers of the firm's EDF metric sheds additional light on how and why the firm became financially distressed and ultimately defaulted in March 2012. In this section we examine the drivers of Moody's Analytics EDF model and show that they have direct connections to basic concepts of fundamental credit analysis.

Ultimately, GAME failed to adapt its business model to changes in the video games retailing industry, in which consumers increasingly purchased games online or in supermarkets rather than in dedicated stores. This structural change in the industry was compounded by a recession in which consumers became very price sensitive. How did the drivers of the EDF model capture these changes? As we discuss below, both the firm's financial risk and its business risk (operating performance) – the two main drivers of EDF measures – languished over several years.

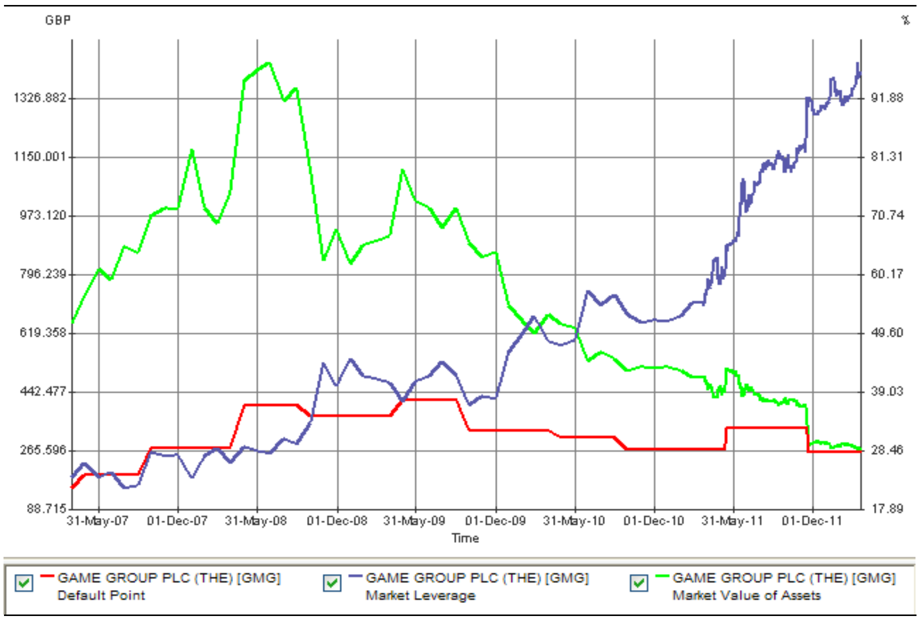
Moody's Analytics' public firm EDF model belongs to a class of credit risk models referred to as structural or asset value models. The basic assumption of asset value models is that there is a causal, economically motivated reason that default occurs. Default is highly likely to occur when the market value of the firm (the sum of the value of its market capitalization and debt) is insufficient to cover its liabilities due at some future date – i.e. firms tend to default when they are insolvent. This follows from the fact that equity holders are residual claimants on the value of the firm. If the market value of the firm is negative, equity holders can and often will "put" the residual value of the firm to creditors.

The above economic intuition can be translated into three quantifiable variables: the expected value of a firm's assets (*A*), the volatility of its assets (denoted by σ), and its default point, *X*, which is determined by a firm's liabilities. The interaction of the three variables is encapsulated by the firm's distance-to-default (*DD*) which, under some largely innocuous assumptions, can be expressed as:

$$DD \approx (\ln(A)-\ln(X)) / \sigma$$

This simple equation essentially states that a firm's relative credit risk (measured by *DD*) is a function of its financial risk and its business risk, two factors that are core concepts of fundamental credit analysis. The numerator of the above equation measures market leverage – i.e. financial risk. All else equal, higher leverage decreases *DD* and hence increases the probability of default. The denominator of the *DD* equation can be viewed as business risk. Firms in industries with high asset volatility tend to exhibit higher risk of default, all else equal. Once we have calculated a firm's *DD*, we can derive its probability of default (its EDF measure) by looking at the historical average default rate consistent with each *DD* level.

Figure 4: GAME's Market Leverage, Market Value of Assets, and Default Point



GAME's heightened EDF metric level was primarily the result of high and rising market leverage (that is, financial risk). Figure 4 shows the time series of the firm's market value of assets, its default point, and its market leverage.[2] In early 2008, GAME's market leverage began a sharp increase, driven by both a jump in its default point (which is derived from its short-term and long-term liabilities) and a decline in the market value of its assets. The equity market responded to the company's increasing troubles by bidding the value of its shares lower, leading to a reduction in the market value of its assets, which in turn led to an increase in its market leverage.

Its market leverage rose from 27.48% in January 2008 to 96.73% in March 2012. During the same period of time the market value of GAME's assets dropped 72% from GBP 997 million to GBP 269 million in March 2012. At that point the value of the company was almost at the same level as its default point of GBP 260 million. In other words, the firm had virtually zero net worth. When a firm's market value of assets falls

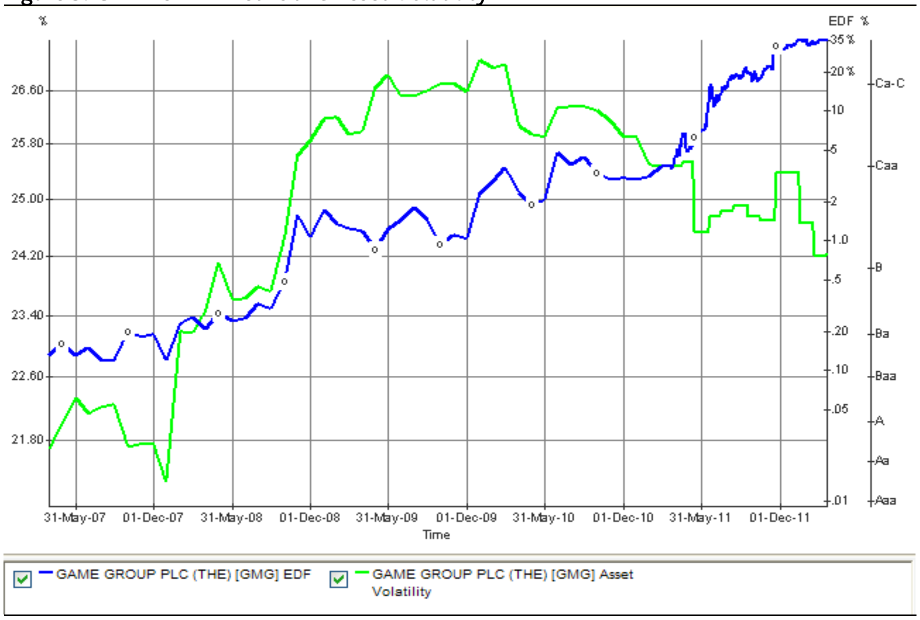
[2] Calculated as a percentage of asset value.

below its default point it is technically insolvent and it is highly likely that the firm will be unable to sell assets or raise additional capital to pay its debt.

However, another important contributor to GAME's mounting problems was increasing business risk. GAME's asset volatility, which is the standard deviation of the annual change in its market value of assets, increased at the same time that market leverage was increasing (Figure 5). The rise in asset volatility reflected the increasingly competitive and difficult operating environment. As we noted above, GAME was facing a secular change in the way consumers bought video games at the same time as a general downturn in the economy.

The combination of higher leverage and higher asset volatility led to a sharp drop in its distance to default and a material rise in its EDF measure. Over the last five years GAME's asset volatility increased by about 12% to its current level of 24.25%. Asset volatility declined right before the company announced its insolvency filing, but by that time the market value of the firm's assets was already in free fall, and its EDF measure was at its highest level or risk (35%).

Figure 5: GAME's EDF Metric and Asset Volatility



Summary

The GAME Group plc does not have any credit risk measures like bond or CDS spreads available, and it is not rated by Moody's Investors Service. However, the public EDF measure is able to capture and quantify changes in the company's risk of default. At the time the company announced their potential risk of going into administration, its EDF metric was already at 35%, a level at which historically firms often default or go through major restructuring to avoid default. Another major signal of the company's future credit event was the deteriorating momentum of the EDF measure. Over the nine months prior to its default on March 26 2012, GAME's EDF measure rose by 118%. The drivers of the high and rising EDF measure were both higher market leverage (financial risk) and higher asset volatility (business risk). From January 2008 to March 2012, the firm experienced 250% increase in market leverage and 72% decline in its market value of assets. The firm suffered years of declining sales from high costs, fluctuating working-capital requirements, an inability to challenge competition from on-line retailers, and the breakdown of relationships with suppliers. On April 1, 2012 Baker Acquisitions, a private investment vehicle advised by OpCapita LLP, announced that it will buy 333 GAME's U.K. stores, which will save nearly 3,200 employees.

Report Number: 141652

Author
Irina Makarova 1.212.553.4307
irina.makarova@moodys.com

Editor
Dana Gordon 1.212.553.0398
dana.gordon@moodys.com

Contact Us
Americas : 1.212.553.4399
Europe: +44 (0) 20.7772.5588
Asia: 813.5408.4131