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DATA ALLIANCE

U.S. Middle Market Risk Report (Overview)

(Data as of December 2017)

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Private Firm Summary

This semi-annual report examines credit risk in the otherwise opaque U.S. private firm credit market. We report trends in five different areas of risk measurement: realized defaults, internal bank ratings, new originations, financial statement-based information, and model-based risk estimates. We derive the statistics in this report from Moody's Analytics C&I Data Alliance (formerly called the Credit Research Database (CRD®)).

This report contains EDF™ (Expected Default Frequency) values calculated using the RiskCalc U.S. 4.0 Corporate Model. The EDF analyses in this report present CCA (credit cycle-adjusted) and FSO (financial statement-only) EDF values. For each analysis date, the most recent statements are used to generate an EDF value. No statements older than 24 months are used, with the first score reported four months after the statement date and 24 consecutive monthly scores after that time. The four-month lag represents the average amount of time it takes the bank to receive the borrower's financial statement.

Download the full report here

This report is an overview of our Middle Market Risk Report. We highlight key findings from the report. If you are interested in more details, you can download the full report here :

https://dataalliance.moodysanalytics.com/#/insights

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*This report only contains the oveview section since it is an excerpt of the main report. You can download the full report by accessing the link on the first page.

Highlights

Private firm default rates have declined steadily during the past five years. At 1.4%, the rolling 12-month default rate is down 74% from its September 2009 peak of 5.2% (Figure 1). This trend has been driven primarily by a decline in the charge-off rate, now at its lowest level in ten years. In addition, the percentage of borrowers in non-accrual status has decreased 56% since September 2009. The number of borrowers rated "Substandard" has seen a steady increase since the first quarter of 2016, above pre-crisis levels, reflecting banks' cautious lending practices (Figure 2).

Banks downgraded 27% of borrowers on internal rating scales during the past year, compared to 29% in 2016 (Figure 7).

Mining, Oil & Gas showed the highest percentage of balances adversely rated in 2017, 37%. Agriculture & Hunting and Wholesale follow at 27% and 13%, respectively (Figure 6). Across all industries, except Mining, Oil & Gas, the percentage of balances adversely rated remained relatively unchanged during the past year.

The median RiskCalc 4.0 CCA EDF value for the U.S. bottomed at 0.54% in June 2014, increased to 0.72% in December 2016, and has fallen back to 0.61% as of December 2017 (Figure 9). The median CCA EDF value for Non-Pass borrowers decreased from 2.56% December 2016 to 1.98% in December 2017 (Figure 10).

The median of borrowers' financial ratios generally improved in 2017. Debt Coverage has decreased from the previous year - during 2016, it was at its highest level in the past ten years. Leverage, as measured by retained earnings over current liabilities, has continued to improve during the past decade. Sales Growth and Change in ROA, despite slowing in 2016, have both remained positive after the financial crisis, indicating steady growth for borrowers. Median borrower size has risen each year since 2012, indicating banks' preferences in lending to larger borrowers, though the high value in 2017 is due to the timing of financial statements filing and will likely revert to trend once banks collect smaller borrowers' financial statements. We also observe rising Inventory to Sales and Liquidity ratios, while Current Liabilities to Sales and ROA ratios have fallen slightly.

Industries with the greatest risk in December 2017, as measured by RiskCalc CCA EDF credit measures, were Mining, Oil & Gas, Information & Culture, and Transportation (Figure 14). However, the average EDF value for Agriculture & Hunting has decreased by 38.5% during the past year . Other Svcs showed the largest EDF value increase, climbing 32.3% over the previous year (Figure 15).

The median FSO EDF value of vintage loans, grouped by year of origination, has declined steadily over the past decade. This finding indicates an improving overall credit risk profile for middle market portfolios and tighter lending standards (Figure 12). Among the ten states showcasing the largest change in EDF levels during the past ten years, Oklahoma, Washington, and Alaska experienced less significant decreases in EDF (Figure 18). Massachusetts and Washington showed the largest improvements, with 65% and 64% declines, respectively(Figure 18). EDF values have declined in most states during the past year, although Alaska and Kansas saw EDF measure increases of 37% and 7%, respectively (Figure 20).

Overview

Introduction

This report uses realized default information, bank risk ratings, financial statement data, and RiskCalc Credit Cycle Adjusted (CCA) private firm EDF credit measures to provide insights into a market where data is otherwise unavailable. Data comes from the Moody's Analytics Data Alliance (formerly called the Credit Research Database (CRD)). The Data Alliance collects quarterly data from 23 U.S. lending organizations, including large institutions as well as smaller regional banks. The breadth and depth of the Data Alliance makes the data highly representative of the U.S. credit market. The Data Alliance actively works with each institution to ensure a complete and thorough understanding of loan accounting and financial statement data. The Data Alliance captures defaults in a consistent and accurate manner using information from each institution's loan accounting data.

Definition of Default

We define "default" in accordance with our interpretation of the Basel II directive. Our methodology detects default and near-default events over time for all banks. Borrowers are flagged as defaulters if they are 90 days past due with a non-pass rating, are in non-accrual status, have an internal bank rating corresponding to the regulatory ratings "Doubtful" or "Loss," or have an obligation partially or entirely charged-off. We also flag "Substandard" ratings, but consider these indicative of near-defaults and exclude them from our definition of default. After detecting all defaults, we aggregate the data into a single default event for each defaulted borrower. For date of default, we use the date of the borrower's earliest default event. For severity of default, we use the borrower's most severe default type. Table 2 shows the distribution of defaults in Data Alliance by default type.

Table 1: CRD Data Characteristics*

	Counts
Statements	2,408,923
Loan Accounting System Defaults	217,748
Statements with CCA EDF-December 2017	70,482
Defaults with Statements	65,698

Table 2: Distribution of Defaults by Type

	Percentage of Total Defaults
Substandard	38.7%
90 Days Past Due(Non-Pass)	9.1%
Doubtful	6%
Non-Accrual	27.9%
Troubled Debt Restructuring	0.9%
Charge-off	15.5%
Loss	0.2%
Bankruptcy	0.2%
Unknown	1.5%

Lending Performance Measures

Lending performance measures utilize loan accounting data provided by participating U.S. institutions. This data provides quarterly snapshots of loan level information, such as internal bank ratings, coupon rates, balances, and commitments for each institution's middle market commercial portfolio. We use this data to detect default events, to map internal bank ratings to a standard regulatory rating, and to track balance and commitment information over time. The Data Alliance began collecting this data in 1999.

Private Firm Default Rates

We present the default rate in three forms. Figure 1 provides a rolling 12-month default rate for U.S. private firms by default type. As noted, a borrower is considered to be in default if 90 days past due with a non-pass rating, in non-accrual status, rated Doubtful or Loss, or partially or entirely charged-off. This default rate does not include borrowers rated as Substandard. Figure 3 presents the same information on a balance-weighted basis, with the default rate expressed as a percentage of the banks' outstanding balance amount, as of each quarter end date. Figure 2 includes borrowers rated as Substandard in its rolling 12-month default rate. While Figure 1 and Figure 3 represent actual default occurrences over time, Figure 2 illustrates how banks perceive potential, future default risk. We calculate the default rate using all loan accounting records, regardless of whether or not there is a corresponding financial statement.

*CRD Data characteristics exclude companies in industries such as Finance & Insurance, Public Administration, Management, and Education.