The Value in Mining and Understanding Big Data: A Focus on the Construction Credit Professional

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Abstract

Extending credit is a risk. Whether furnishing to a single project or selling on revolving terms, credit risk management requires you to be well informed. In the age of Big Data, there is no shortage in the amount of available data and the information that can be derived from it. You must overcome the challenges of correctly utilizing the information and understand the value it generates.

This article will focus on finding the value of Big Data by combining information obtained from industry experts, paid sources such as credit reports, trade credit groups, mechanic's lien activity - and how credit professionals can use those results to increase sales while reducing risk.

Credit Management Requires Innovation – Find and Create Innovation in Big Data

Credit Management isn't solely about reducing risk. You must reduce risk while you increase sales and promote long term growth. As credit teams shrink, you are required to do more with less - a model that plagues credit departments, regardless of industry.

Now more than ever, credit departments need innovation. Can you imagine achieving today's results with yesterday's tools? You aren't using an abacus to balance budgets and you aren't blindly extending credit. You are using sophisticated software and reviewing various credit facets before you extend credit.

Whether developing a new credit scoring formula or taking advantage of existing processes, in the era of Big Data, access to innovation is at your fingertips.

It is imperative to examine and fully understand data and the potential implications. You should listen to industry experts and analysts: review credit indexes, credit reports and bankruptcy reports, as well as lien filings & foreclosures. It's vital to analyze the collective opinions and statistics to effectively create a comprehensive credit picture.

But be careful. Big Data can easily become bad data.

> "Without context, Big Data is flat data. That may be understating context's importance because without context, *Big Data* insights can be *bad* data insights. However, with good context you'll really understand the "what" and the "why" of these mountains of information so you can make insightful and reliable decisions." - Jeff Catlin, CEO of Lexalytics, Without Context, Big Data is Flat Data

Big Data is what you cultivate it to be.

Big Data Subsets:

Consider the Opinions of Industry Experts

The opinions of industry experts and index trends can provide early warning signs.

The commercial construction industry continues to grow in 2017, albeit incrementally. Certainly, there are low months and stalled sectors, but several industry experts indicate an outlook of modest growth. Minding the opinions and projections will influence credit decisions; even if only slightly.

A recent news release from The Associated General Contractors of America advised, "Private nonresidential spending inched up 0.1% for the month and 1.1% over 12 months." Obviously not celebratory news, but it's also not terrible news. This percentage provides a data point, which contributes to the frame of reference used to make credit decisions.

In an ISM news release, respondents from the wood products, machinery, electrical equipment and fabricated metal products industries indicated order activity is strong and sales are up, although the PMI decreased (see Manufacturing ISM® Report On Business®). And, in its Monthly Leasing and Finance Index (MLFI-25), The Equipment Leasing and Finance Association's (ELFA) "[R]eports economic activity from 25 companies representing a cross section of the

$1 trillion equipment finance sector, showed their overall new business volume for June was $9.8 billion, down 2% year-over-year from new business volume in June 2016."

Like Changes in the Weather, Information is Fluid

The Architecture Billings Index (ABI), provides a recent example. In June 2017, it was reported, for the fourth straight month, the industry had experienced growth. Generally, the ABI is 9-12 months ahead of construction spending, and based on numbers released in June, continued growth is expected.

> "The fact that the data surrounding both new project inquiries and design contracts have remained positive every month this year, while reaching their highest scores for the year, is a good indication that both the architecture and construction sectors will remain healthy for the foreseeable future. This growth hasn't been an overnight escalation, but rather a steady, stable increase." - AIA Chief Economist, Kermit Baker, Hon. AIA, PhD

Then, in July, AIA Chief Economist, Kermit Baker, PhD, Hon. AIA, wrote a mid-year update.

> "Despite billings at architecture firms performing quite well this year, the larger construction industry is facing a range of issues. The somewhat weaker outlook is driven by several factors, some dealing with the broader U.S. economy, some dealing with general construction industry fundamentals, and some dealing with weakness in specific construction sectors."

A reasonable conclusion: *"Yes, the construction industry is down, however, there will likely be an incremental improvement, with some sectors even thriving."* A risk reducing measure may be to exhibit caution when extending credit, based on the industry/sector and current markets.

Credit Reports - The Pioneers of Big Data Mining

You use credit reports to review an entity's viability. Credit reports are likely to include payment trends, debt to income, outstanding collections/judgments, UCC filings and DBT, and some comprehensive reports provide additional bits of relevant data, such as the entity's status with the Secretary of State.

Credit reporting could be one of the earliest *successful* portals of Big Data. Credit bureaus have compiled information relevant to a business' credit, analyzed the data, and provided it for consumption as a trusted recommendation.

Although they have a "trustworthy reputation" each credit bureau scores differently, which can easily cause a disconnect for the creditor. To overcome the disconnect, be resourceful (i.e. innovate) and review reports from multiple sources. Understand the data within the report is only as reliable as the information provided to the bureau.

Compliance with Secretary of State - An Early and Often Overlooked Warning Sign

A business should be in good standing with the Secretary of State. A lapse in compliance with the Secretary of State can be an early warning sign of an entity's financial distress, though this information is frequently overlooked. If a corporate search reveals a status of anything other than "active," it is worth further exploration.

A company's corporate status could change for a multitude of reasons, including a change in the company name, the dissolution of the company, neglecting to file an annual report or changing the formation type. Our research discovered that in an average year, 23% of businesses experience a change in their corporate status with the Secretary of State. Of these changes, over 10% of businesses dissolve or close their doors.

Bankruptcy Statistics Speak Volumes

In a press release published 7/21/17, United States Courts Judiciary News announced bankruptcy filings were down 2.8% year over year. As of 6/30/17, there were 23,443 business bankruptcies filed in 2017.

Retail and restaurant bankruptcies impact all vendors, whether the vendor is supplying inventory or pouring building foundation. While some industries may experience a reprieve of failure, the retail industry is expected to hit its highest rate of failure since the recession. Research shows 19 distressed retailers have over $3.7 billion in debt maturing over the next 5 years.

Industry Trade & Credit Groups - Your Peers Know Best

In many instances, peers can be an invaluable resource. Frequently hosted in an online chat-like forum or face-to-face meetings, peer discussion groups allow discourse on current issues or concerns to the group for advice, recommendations and best practices.

While credit-granting processes and credit management have evolved, common issues remain: debtor isn't paying timely, debtor is providing a "pay-when-paid" excuse, debtor has little credit history, etc. These aren't *new* issues for credit professionals. Take advantage of the experiences of others. It is critical for credit professionals to collaborate - it takes a village.

In a report on the Restaurant Performance Index from the National Restaurant Association, only 39% of restaurant owners expect sales growth in 6 months' time. Some experts believe the restaurant industry is an early predictor of the overall economy -- if restaurants are down, other facets of the economy will soon follow.

No matter the economic state of the country, understand and remember that bankruptcy will always be a risk. Do not become complacent. Remain vigilant and take precautions to ensure you are a secured creditor.

Accounts Receivable - Your Personal Big Data Pool

Don't overlook the valuable information within your own accounts receivable (AR); it, too, is Big Data. Payment trends and behaviors provide additional insights. The trend of accounts becoming 30, 60 or 90 days beyond terms is an early warning sign of stifled cash flow. Yet one more data point to consider.

When negative trends appear in AR, it provides opportunity to evaluate the collectability of past due accounts. If collection efforts are necessary, creditors should leverage the security of mechanic's liens and UCC filings.

In April, Commercial Collection Agencies of America released data on business-to-business accounts placed for collections.

> *"Annette M. Waggoner, Executive Director, reports that the number of commercial (business-to-business) accounts placed with agency members rose by 10.82% in 2016 when compared to 2015.*
>
> *The dollar amount of accounts placed increased by 10.58%. Ms. Waggoner noted that the second quarter of 2016 registered the largest dollar amount of placements in the eight quarter history studied, while the fourth quarter registered the second largest dollar amount of placements.*
>
> *The association also studied the average-sized account placed with agency members, which ranged from just above $2,400 to slightly above $3,100 in both 2015 and 2016. The average-sized account in the fourth quarter of 2016 was 16.64% higher than in the fourth quarter of 2015."*

Trends from AR do not have to be negative to provide valuable information. Data is what you make of it. Positive trends in AR likely correlate to a company's growth and/or improved working capital.

Competitive Intel - Got Context?

Credit reports and mechanic's lien activity provide obvious benefits for analyzing credit, but they can also provide valuable competitive intelligence.

As Jeff Catlin said, Big Data is empty without *context*. The same data set can provide additional insight, simply by changing the context.

Know what your competitors are doing and, if needed, leverage it. Are they filing UCCs? How much credit are they extending via open and/or revolving lines of credit? Are they filing mechanic's liens? Are they entangled in mechanic's liens, indicating money issues?

A Case Review: What Big Data Uncovered in Mechanic's Liens & Related Documents

A sound Mechanic's Lien/Bond Claim process is a statutory asset to the construction credit professional. Secured creditors who have implemented a mechanic's lien process see a reduction in DSO, improved cash flow and working capital.

You should know whether your customer or potential project is encumbered by mechanic's lien filings. There are clear fiscal/risk mitigation benefits of knowing who is involved in mechanic's lien filings. With this information, you are provided an opportunity to mitigate loss.

Reviewing mechanic's lien filings can provide basic project information, information related to a party's footprint, and even sales opportunities (paired with competitive intel as mentioned earlier).

Mechanic's Liens Can "Answer" Questions

The number one, and perhaps most obvious question when a mechanic's lien is filed: Where is the money?

Data from mechanic's lien filings can also provide answers. You can determine whether your customer is filing and/or a party to mechanic's liens, whether your competition is filing and/or a party to mechanic's liens, whether there are existing fiscal issues on a project you are furnishing, and whether issues have been resolved via filed releases of lien.

Mechanic's Lien Activity - An Indication of Strained Capital

A review of mechanic's lien filings may uncover, among other valuable information, significant financial distress. If a business has been party to several mechanic's lien filings, red flags fly, as this party has been unpaid. Unless they have an abundance of working capital, several filings should raise concern.

Unfortunately, mechanic's lien filings are rarely presented as risks via credit reports, and they are therefore often neglected in the credit decision process.

According to data from our proprietary national commercial construction database, there has been a significant decrease in the filing of mechanic's liens. In fact, nationwide, mechanic's lien filings are down 46%, with 25,610 liens filed from 1/1/17 to 7/31/17 versus 48,315 liens filed from 1/1/16 to 7/31/16.

A decrease in mechanic's lien filings could be interpreted many ways. In no uncertain terms, a decrease in mechanic's lien activity is indicative of improved cash flow. After all, the need to file a mechanic's lien arises when a party fails to pay the would-be claimant.

Mechanic's Liens - Rich in Text and Provide Valuable Information Basics

A mechanic's lien filing provides a veritable table of contents for a project. Although each mechanic's lien document may vary in format and contents, the mined information can prove to be quite useful.

Mechanic's lien filings include valuable party information: who is the property owner, who is the contracting party(s), is there a lender, etc. While identifying the pertinent parties, it's likely to also include party location and contact information.

Further, a mechanic's lien filing may include project-specific information: where is the project located, what was furnished to the project, and the ever-powerful claim and contract amounts.

In addition to claim/contract amounts, some states require copies of open invoices and/or a statement of account to be recorded with the mechanic's lien.

Another piece of overlooked information is that the filing may identify the document preparer. Why does this matter? It provides a point of contact, likely a third party/impartial party, who could serve as a conduit if an opportunity to negotiate presents itself.

In Construction, the Business Location Matters

Pay attention to your customer's footprint. Let's say you have contracted to furnish to a project in California. A review of mechanic's lien activity reveals mechanic's liens related to your customer, however, have all been filed in Texas and Arizona - nothing in California.

It could be a fluke - perhaps your customer has always been paid and always remits payment for projects performed in California. But it may also signal new territory for your customer. Is this their first venture in California? If it is, are they familiar with contracting requirements, mechanic's lien requirements, waiver requirements, etc? Further, do the parties on the ladder of supply have the working capital to take on projects outside of their typical footprint?

Mechanic's Liens Provide Leverage & Sales Opportunities

Aside from the competitive intel, familiarity with current mechanic's lien activity may empower you to extend credit in a higher risk scenario. When you secure mechanic's lien rights, you create an opportunity to sell to higher-risk customers you may not typically sell to. When you secure mechanic's lien rights *and* monitor ongoing mechanic's lien activity, you further protect yourself by creating an opportunity to react to potential payment issues faster.

The Absence of Data Is Still Data

The *lack* of mechanic's lien filings is also useful information. Obviously, if mechanic's liens haven't been filed, it is an indication there may not be payment issues. It could also be a sign that liens have been bonded off or the owner or contractor has provided a bond to prevent the filing of liens. Fortunately, Big Data may also provide information on bonds that have been recorded to prevent lien filings.

A Frame of Reference: How Small Bits of Data Can Be Powerful Together

Here is a real-life example of the power that small pieces of (big) data can have when we innovate and combine them for a comprehensive picture. In many cases "cloud" technology is utilized as the repository in a Big Data environment:

- A construction company filed for bankruptcy protection earlier this year. Some creditors were "blindsided" and were unsecured for tens of thousands of dollars. But the signs, like puzzle pieces, were there to be pieced together from the Big Data.

- The signs came from various sources including credit reports, DBT alerts, mechanic's lien activity, UCC filings and a change in status with the Secretary of State.

- When analyzing this case in reverse order of events to determine which event may have triggered a fight or flight response, the review began with the bankruptcy petition. The bankruptcy was flagged via bankruptcy monitoring, which provides notification of bankruptcies for specific parties. A copy of the petition was reviewed, including the list of creditors.

- Next, the debtor's corporate certificate was pulled from the Secretary of State. The corporate certificate indicated the company voluntarily dissolved 2 months prior to their bankruptcy filing. Generally, any status aside from "active" or "in good standing" warrants a call to your customer.

- Two credit reports were reviewed, one pulled just a few months prior to the bankruptcy filing and one pulled the day of the bankruptcy filing. Surprisingly, and with dismay, it was learned that warning signs were present. The initial report revealed the entity was a moderate risk, based on reported collections, monthly average DBT, and approximate debt to income. The credit report also indicated there were several UCC filings. The subsequent report identified the party as high risk for failure: a DBT of 100+ days, additional accounts turned over to collections and their corporate status had changed with the Secretary of State.

- Finally, a query run via a commercial construction database displayed 3 mechanic's liens totaling just under $1 million. These liens were all filed within a few weeks of each other, but all were filed 4 months prior to the bankruptcy date. This company was the general contractor for all three projects.

An Innovative Analysis

Based on review, the first warning sign would have been 7 months prior to the bankruptcy filing: the derogatory marks on the credit report, followed by mechanic's lien activity 4 months before bankruptcy, and finally the change in corporate status 2 months before bankruptcy.

Additional warning signs followed, of course, with the bankruptcy alert itself and the 2nd credit report. This data does not include additional signs, such as growing DBT & invoice avoidance. At a minimum, there is enough data available, that action could have been taken 2 months prior to the customer's bankruptcy.

Do not rely on one source of information. Remember, it takes a village; when you combine and analyze multiple data points, you make a better informed credit decision.

Listen, Read, Monitor, Implement & Innovate: Secure Credit

Credit Management requires an array of accessible resources and considerations. Remember to listen, read, monitor, implement & innovate.

Listen to the experts. Keep up with current events and economic forecasts, but remember that opinions and predictions (not facts) can swiftly change.

Read the indexes, read articles from your peers and attend industry trade groups. Information from your peers can prove to be invaluable and provide insight not found in credit scores and bank statements.

Monitor and *review* credit reports, as they should provide a company's net worth, payment history, likelihood of default, and credit limit recommendations, as well as UCC filings and collection placements.

You should also periodically *review* the company's status with the Secretary of State; in the event of status changes, you should immediately start a dialogue with your debtor.

Implement, monitor and *review* mechanic's lien activity, whether related to your customer, project or competitors. The data you can harvest from a mechanic's lien can quickly prove useful, if you let it.

Innovate. Whether utilizing a pre-existing credit model as is, or tweaking a model to meet your needs, take advantage of the technology. Collaborate to create a better credit risk model. Take advantage of Big Data, and don't be afraid to get creative with interpreting the data. Your innovation could influence the industry.

Technology and Data Sources Applied with Big Data

Technology, when applied with multiple data sources, is an extremely and immensely valuable tool to the credit professional. Refined technology assists in mining massive amounts of available data. Unfortunately, mining the *right* data is a challenge.

There are innumerable risk-related computer programs available. SaaS (Software as a Service) platform features can include general financial analysis and risk estimating, general or customized project management and project life cycle, P & L projections/operations and customized calculations based on business need.

The driving force behind the technology in SaaS is to support the credit professional. Great SaaS platforms accommodate customization, the ability to pull in data from Internet accessible repositories, flexibility and ease of use, while still remaining economical.

Big Data sources such as credit reports, state and county recording offices, industry trade/ credit groups and message boards - even online reviews, provide pertinent information that can often be presented in an organized fashion via technology, such as SaaS. The combination (multiple data sources and technology in Big Data Analytics environments) allows the credit professional to apply advanced decisioning, such as robotics and artificial intelligence, in a way that moves transactional processing to process ownership.

Big Data operations support not just the Construction Credit Professional, but *all* Credit Professionals.

About the Author and NCS:

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NCS is an industry leader throughout the U.S.and Canada in collections, mechanic's lien laws and UCC filings. NCS offers proactive solutions to secure your receivables, minimize credit risk and improve profitability. See more at: www. ncscredit.com