companywatch
financial analytics

IT'S MORE THAN A SCORE

THE ULTIMATE GUIDE TO COMPANY CREDIT SCORES

LIFTING THE LID ON HOW COMPANY CREDIT SCORES ARE BUILT, AND HOW THEY ARE APPLIED TO FINANCIAL RISK DECISION MAKING

CONTENTS

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“Commercial credit…is the vital air of the system…. It has done more, a thousand times more, to enrich nations, than all the mines of the world.”

1834 speech by U.S. Senator Daniel Webster.

CONFIDENCE AND KNOWLEDGE

These words from 1834 still resonate with us here at Company Watch - the ability of businesses to trade with each other on payment terms which allow time for value to be created in the economy is one of the most important foundations for economic growth. However, there are certain conditions that need to be met in order for businesses to be able to deliver goods or services and then wait for payment, or to establish a production process which depends on receiving reliable supplies. These are ***confidence*** and ***knowledge: confidence*** in the general economic situation, that there are no unexpected shocks which might impact the ability of a customer to pay or a supplier to deliver what has been agreed; and ***knowledge*** that robust, credible information about the individual business to which credit is being extended, or trust to deliver supplies is being placed is available.

At Company Watch it is our mission to build a service which enables the economy to grow. We do that by helping our clients navigate times when their confidence in the general economic situation is tested, and providing the data, tools and analysis that equips them with the knowledge to take evidence-based decisions on how they can protect and grow their businesses according to their own risk appetite.

So where did it all begin? People began recording the details of good and bad payers as long ago as the 18th and 19th centuries, but it was the experience of the 1837 financial crisis in the US which led Lewis Tappan to found the Mercantile Agency in New York in 1841.

Tappan's Agency sent field agents to collect business information such as sales estimates and bill paying ability from traders in different regions. The Mercantile Agency then assessed companies' ability to pay their debts and published these ratings in a series of guides - available to subscribers of the credit service. Over the following decades, this and other agencies grew and expanded beyond the US as trade became increasingly national and international.

We've come a long way since the 1840s: Exponential growth in and connectivity of data sources, and increasingly sophisticated analytic and modelling tools means that today's credit scores would be quite unrecognisable to those pioneers from the 19th century.

However, despite the sophistication of today's tools there is still an underlying immutable truth. George Fuechsel, an early IBM programmer, is credited with coining the phrase "garbage in, garbage out", and while we have become pretty adept at dealing with less than perfect data, the phrase does highlight the importance of the quality of what goes into the heart of a credit score - data, and data sources.

At their heart all commercial credit referencing agencies function in a similar way. They source raw data on the finances of companies and the individuals associated with that company, as well as any footprint the company has left in its dealings with other businesses, and then apply their own proprietary methods of modelling and analysing these data to arrive at their score. Most, if not all, possible data sources that could be used in credit referencing are available to any referencing agency. Which data sources are used will depend on the focus of the agency and the intended application of their score.

As in any manufacturing process, the quality of the raw materials is a great determinant of the value and use of the product. Data, as the raw material in the manufacture of a credit score is no different. Original data sources often require significant work done on them before they are ready to enter the modelling process. Sorting, cleansing, analysing are all vital steps in the preparation and presentation of a score. How an agency approaches this work is the beginning of how different scores are developed and how as agencies we differentiate from each other.

How a credit reference agency positions their score will also vary and is why many companies use more than one agency score in their risk decision making. For example, an agency may source data on companies on a global basis in order to offer a consistent scoring method for almost any business, anywhere in the world. While this has geographic breadth it may lack analytical depth. Conversely, an agency may focus on a wide and variously sourced set of data sources to deliver a very rich and deep score for companies in a specific market or niche. Where this lacks geographic breadth it produces depth of analysis.

Of course, from wherever raw data is sourced, however these are analysed and modelled, and then however the results (score) is visualised and presented, it is only when the risk owner applies the score to their decision making does the real story start.

At Company Watch, we set out to produce this guide to give you the backstory about data and credit scoring, and explain why credit scoring as a decision making tool is 'more than a score'.

WHAT CONSTITUTES A COMPANY CREDIT SCORE

Since those early Mercantile Agency credit reports, compiled by intrepid field reporters, company credit scoring has moved forward immensely. The two major factors driving the development of credit scoring have been the availability of growing numbers of data sources, and the modelling capabilities that are the cornerstone of modern data science: coming about through the application of ever more sophisticated algorithms, machine learning and artificial intelligence (AI).

Of course, having access to data sources and being able to model these data into a score isn't the complete story on how credit scoring is developed and presented. After all, if any credit reference agency (CRA) has access to the same data, and employs the same modelling techniques then company credit scores are largely the same aren't they? Actually they are not, and this is why it is useful to look a bit deeper into how a credit score is put together and presented.

BACK TO BASICS

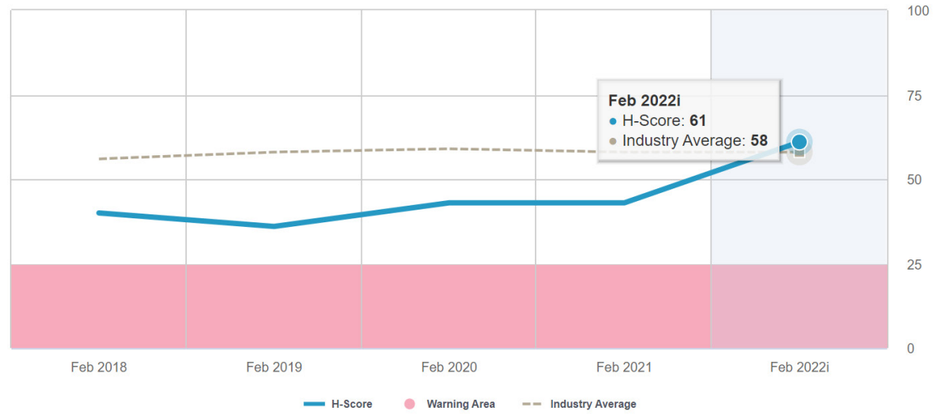
Traditionally, credit scoring models have been based on a ‘scorecard’ approach. This means taking attributes like time since incorporation of a company, group structure, age of accounts, number of directors, financial indicators, applying different weightings and producing a score which was typically focused on how likely a company would be able to pay a supplier in a 30-60 day payment window.

For the user of the score it can be hard to determine the reasons driving the changes as the interdependencies are difficult to untangle unless the agency provides drill-down explanations. A typical user of this kind of score might be someone who needs an overview, probably of many companies, incorporating a breadth of information and where, through processing, they have the ability to accept a loss ratio, or lost opportunity ratio (rejecting companies that may have been OK to deal with).

Other approaches, and the one taken by Company Watch, has been to focus on single attributes of risk and provide a level of explainability about why a company is scoring well or badly. In the first instance we launched the H-Score® which took a deep-dive into the underlying financial health of a company - providing an overall score along with the contributing factors to the score.

More recently we have taken the same approach with the text accompanying financial reports in our TextScore®. This model can be used in a similar way to the traditional score - i.e. as a segmentation tool for multiple companies, but it is also used by people who require a deeper understanding of individual risks - typically in strategic procurement and customer planning - because of the longer-lens view of risk these scores provide (likelihood of the company still being in business in the next 18-24 months).

For risk managers using internal data and models, a third-party score that concentrates on a single, defined area of risk can be a useful additional input in the risk management process and can avoid the problem of double-counting, or placing too much weight on the same factor.



(Company Watch H-Score®)

Some organisations want to implement a single-score/single supplier of credit scores across all the regions in which they operate. While the contractual and operational simplicities are enticing, we would urge caution. Remember that the data which is available in the UK is unusually rich: the availability of information varies greatly between countries so you should not assume that a CRA providing scores for UK companies has access to the same quality of data for regions such as the Middle East, South American and Africa. Typically data in these regions has to be collected in-person from the appropriate registry on a request basis, filing and reporting requirements vary significantly and in many regions there are no automated transfers of data from the registries to CRAs.

HOW DO YOU JUDGE?

If data sources vary so much, and data quality is not consistent across regions and continents, how do CRA providers manage these? There are a few questions that lift the covers on how a CRA is addressing these issues.

1

GINI COEFFICIENT

What is the model's Gini coefficient? This should ideally be broken down by region and company size. Originally built as a model to measure income inequality in a population, the Gini coefficient can also be applied to credit risk models to determine the predictive power of the model. In simple terms, a Gini coefficient takes a range between 0 (a completely random model, with no predictive power and 1 (a perfect model).

2

DATA MATCHING

What is the approach to data matching? For example, if data sets don't have unique identifiers (e.g. Companies House registration number for UK companies is a unique ID), what confidence is placed in name or address matching? And if data have been matched at less than 100% confidence is this shown in the scores?

3

UNSTRUCTURED DATA

Is there an approach to cope with messy or unstructured data where matching intervention would be needed? These data can be difficult to score, or at least include in a scorecard type metric, and potentially damaging to a score if the calculation includes information that is only a possible, rather than exact, match.

REMEMBER A MODEL IS A REPRESENTATION OF REALITY

Thanks to the 2020/21 Covid Pandemic, Professor David Spiegelhalter became something of a household name - the expert called upon to provide context and interpretive rigour to the barrage of numbers being put into the public domain.

In his 2019 book, *The Art of Statistics,* Spiegelhalter reminds us that "a model is like a map, rather than the territory itself. And we all know that some maps are better than others: a simple one might be good enough to drive between cities, but we need something more detailed when walking through the countryside." (p.139)

Spieglhalter goes on to quote George Box: "All models are wrong, some are useful". This is a chilling thought indeed for a CRA if taken at face-value, however it goes to the heart of being able to use models in context: they are developed to facilitate quick understanding of multiple data points, but they are a *representation* of reality. They are built using observations of the past to try to help us navigate the future. When we make decisions using these models it is important to remember that future outcomes are not set in stone: understanding the strengths and limitations of a model – how well it performs and *what* it is actually measuring – is the key to understanding the risks involved in the decisions you make.

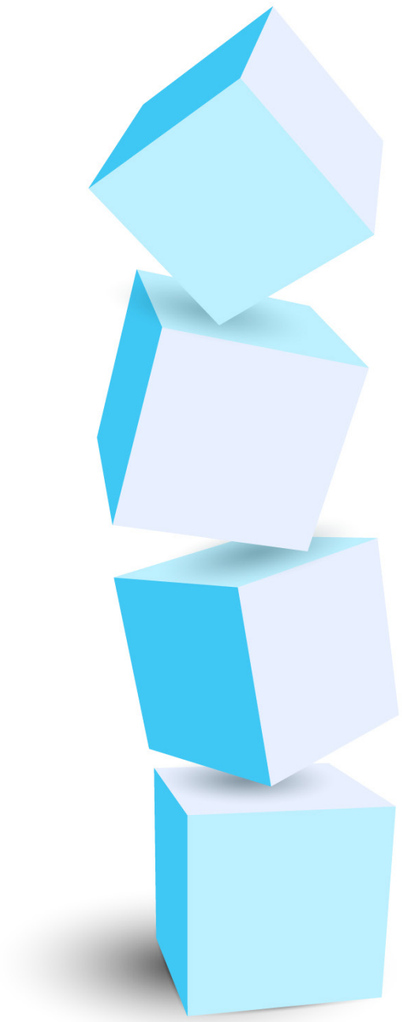
Understanding the CRA's strategy for dealing with the messy stuff is really useful in assessing the application uses of their score and data. It isn't always possible to include such data in scores or reports, but for someone dealing with risk understanding what the blind spots might be is really important. The 'messy' area of credit scoring can also open the door for slightly different tools to help risk managers. Unstructured data, for example the text accompanying financial reports, can hold many clues to the financial risk inherent in a business, and the ability to mine, theme and match these statements for clues becomes a powerful addition to a risk manager's armoury. Historically, underwriters have spent hours reading through images of financial statements searching for key risk indicators (e.g. 'bank covenant', 'supply chain finance', 'debt restructure') - using techniques such as OCR and document reconstruction can dramatically cut the manual effort involved and allow people who previously spent hours reading to use that time analysing instead.

At Company Watch we have developed two tools that can help in this use case: first, our TextScore®, a machine learning tool that analyses the words in financial statements and looks for patterns that may be indicative of a change in performance. The results of a TextScore® analysis can be used to supplement classic scoring to add a layer of insight otherwise not easily connected with the risk being assessed.

Our second tool shows that, as with any production process, by-products can often prove to be just as valuable as the main product: TextScore® necessitated us building a bank of OCR documents - i.e. documents that we had transformed from being image files into machine-readable text. We indexed these documents and allowed users to search across the whole data set or restrict to a relevant portfolio. While TextScore® provides a risk assessment of the unstructured document on a one-by-one basis, SearCHeD allows the identification of key words and phrases across a population which can then be interrogated further as required.

There is a further step that a CRA can provide the risk manager to go 'beyond the score', the ability to interact with the score itself. This is an interesting and exciting development of credit scoring. Imagine, as a risk manager you have the ability to interact with the credit score to conduct what/if scenarios. Think of these as laboratories, where you can test conditions that could be based on internal policies or external market conditions, to assess their impact on a credit score, and thus your judgement of risk. We'll expand on these areas of messy data and interacting with models in later chapters.

If these are the basics of a credit score let's now go into credit scoring in more detail...



DATA, THE BUILDING BLOCKS OF SCORING

Having established the basics of credit scoring, the origins and the methods, let’s take a deeper look at the raw material of any credit score, data.

In the data age, there are potentially limitless data sources available to a CRA. The issue is therefore less about availability (although there are some notable exceptions when it comes to official Government-held data sets) and more about applicability, quality, and integrity (where integrity means accuracy and timeliness of the source data and also its completeness - are all members of the possible universe included in the data set).

Over the page, we list the most common data sets used by CRAs.

DATA SOURCES AND WHAT'S AVAILABLE

COMPANIES HOUSE (CH) DATA

The spine of all data for limited companies. If you can't find a company at CH then it is not a limited company. CH also defines the relative size of companies in terms of their reporting and filing requirements from micro-entities expended to file minimal accounts, to large companies who would file full accounts.

COUNTY COURT JUDGMENT (CCJ) DATA

This indicates if a company has been taken to court for non-payment of a debt and if a ruling has been made in favour of the claimant.

GAZETTE DATA

The repository of statutory and legal notices, particularly relating to adverse and insolvency proceedings.

OTHER GOVERNMENT DATA SETS

Other Government / Local Government data sets that add context e.g. State Aid, HSE Information, VAT data, Land Register, Prompt Payment code.

COMMERCIAL CREDIT DATA SHARING (CCDS)*

A scheme whereby CRAs Designated by the British Business Bank are able to access current account information from SMEs which bank with the 9 Designated Banks (RBS, Lloyds, HSBC, Barclays, Santander, Clydesdale and Yorkshire Banks, Bank of Ireland, Danske Bank, First Trust Bank). Other banks may join on a voluntary basis.

OPEN BANKING*

A scheme to allow SMEs to share banking information on a consent basis.

PROPRIETARY DATASETS

E.g. payment data* - these schemes are set up by larger CRAs to encourage reporting of payment experience into a central pot.

NON-LIMITED BUSINESS INFORMATION*

Not all businesses are set up as limited companies. A business can trade without being registered at Companies House so some CRAs use various techniques to gather data on the existence of such entities. Non limited businesses tend to have small turnovers.

SHARE PRICES AND MARKET DATA

For publicly traded companies, information about current and historic share prices can give an indication of the market sentiment.

ALTERNATIVE DATA

This can literally mean anything, for example, images of car parks for retail stores; train data - how many journeys made on public transport; Pret Index.

* Indicates that this is a Partial, Incomplete dataset and may not be representative of the population as a whole.

COMPLETE OR PARTIAL DATASETS, DOES IT MATTER?

COMPLETE

A critical question to ask about a dataset is “is it complete?” This matters because, in a complete dataset you can draw conclusions about the ABSENCE of information - and sometimes that absence of information can tell you more about a situation than information itself. An obvious example of this would be lack of information in Companies House: if, given a Company Registration Number (CRN), you cannot find the company at Companies House then it does not exist as a company. No other dataset is quite so clear-cut: while other Government data sets are complete - i.e. there are not relevant events that are not recorded in it - because Government data does not routinely use validated Company Registration Number (CRN) as a primary key, but rather relies either on non-public Corporation Tax number or simply name - it is often the case that data cannot be completely matched to the spine of Companies House data (due to spelling errors and name changes for example). Examples of such data sets are the CCJ data, HSE, VAT data.

PARTIAL

Partial data sets are where the data sets themselves only contain a proportion of the total possible members of the set. Partial data sets certainly have their value, but it is more difficult to draw definitive conclusions - lack of information about a company in these kinds of data sets doesn’t mean that the data doesn’t exist, it just means that it has not been collected or matched. Payment data is an example of such a data set - it is a voluntary ‘opt in’ programme whereby companies agree to provide sales ledger and payment performance data to CRAs. While hundreds, or even thousands of companies may opt in to provide this information, there are millions of companies registered at Companies House: when you look at a company report and there is no payment information, or very old information, the conclusions you can reasonably draw are limited.

If you consider two companies side-by-side, one which has payment information showing negative experience and the other with no payment experience you should keep 2 points in mind:

1. **It doesn’t mean that the poor performance is entirely indicative - it is just what has been reported - there could be many more payment experiences of this company which are good, but just haven’t been reported.**

2. **Lack of any payment experience means the company has not done business with companies reporting into this payment programme. It may be a very bad payer, but to companies which either do not report or report to a different programme.**

Note also that some large companies which report payment experience into a CRA-run programme state this explicitly on invoices to encourage prompt payment of their invoices - which may not be indicative of how the company pays its suppliers in general.

Finally, this type of data can be prone to matching issues - it involves collecting data from lots of different companies, relying on multiple internal systems and data processing policies: not all companies use a validated CRN as a unique identifier and so understanding how data collected through these programmes will be validated and matched correctly is very important.

What does all this mean to a CRA client? It means that you need to be aware of the nature of the data sets that are included in modelling, understand if there might be blind spots (what are the matching limitations of the datasets being included) and use the scoring model with this knowledge firmly in mind.

YOU'VE FOUND A DATA SOURCE, SO HOW CAN YOU NOW MAKE USE OF IT?

We have identified a variety of data sources and understand their provenance and limitations, so now what?

Bringing the data from source into a central data warehouse is the next key step. We'll discuss sorting and matching data in the next section, but the first step is establishing how data can be extracted from source and brought into the CRA environment. Fortunately much of the data identified above is available via streaming API or in bulk data downloads - these can all be configured to run on schedules to allow a near continual flow of updated data.

It is important to understand that although datasets may be delivered electronically the underlying data has gone through manual update processes - for example Accounts and Shareholder data from Companies House can only usefully be extracted via document images: this means that the electronic data received is produced by a manual keying exercise. Clearly anything that involves a manual process and relies on individual interpretation of data (even using carefully constructed keying policies) can lead to data inconsistencies and errors which can be difficult to check automatically.

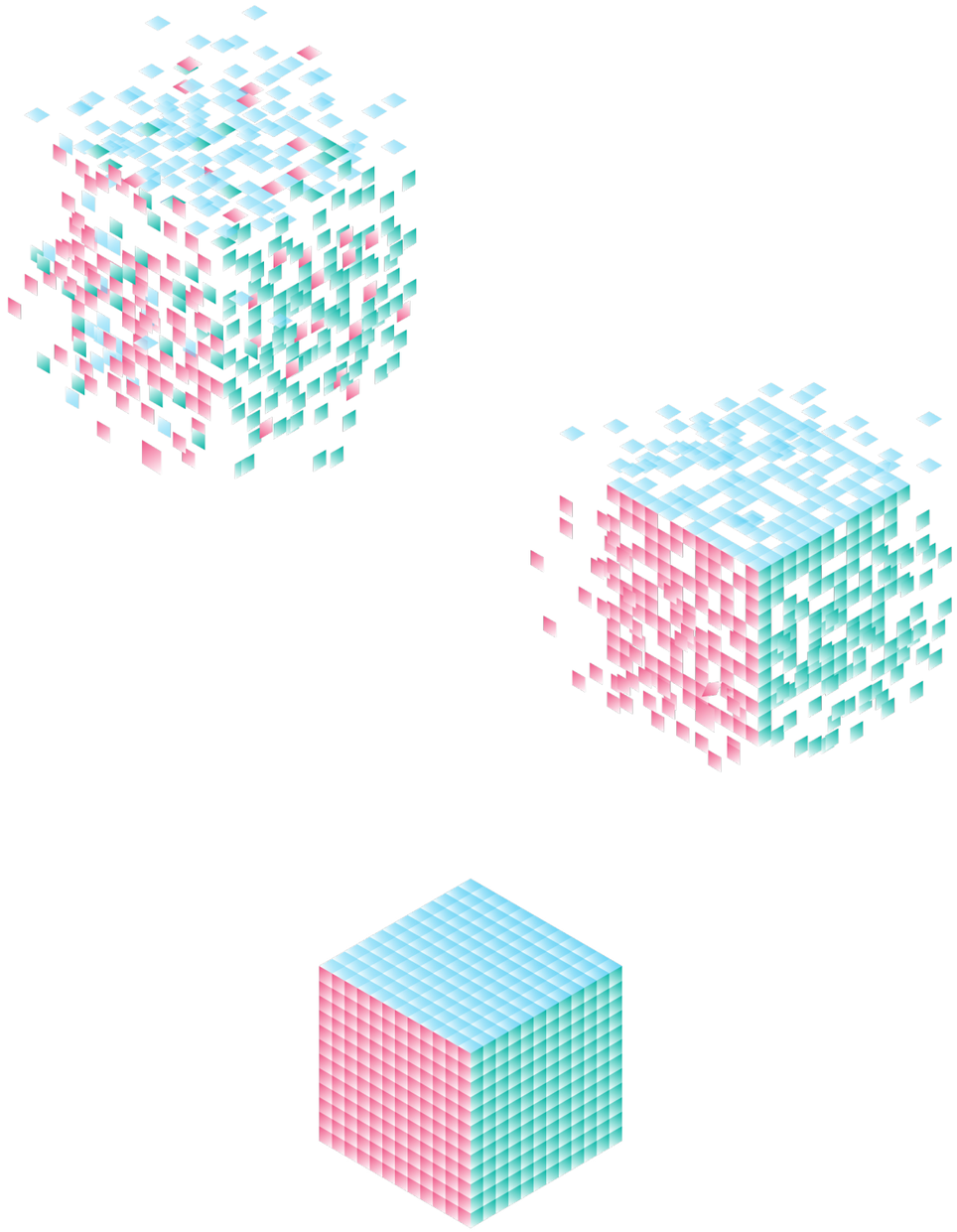
Companies House is starting to make use of more electronic filing (iXBRL) for company accounts, and the long-awaited reforms to Companies House will hopefully accelerate the uptake and standardisation of electronic filing.

DATA QUALITY, WE KNOW IT'S IMPORTANT, BUT...

At Company Watch we spent the first seven to eight years focusing on data sets that met our pretty exacting quality requirements and not scoring data which didn't meet these standards. However, we understood that we were fighting a battle which was unwinnable in the early 2000s and is even more futile in the digital age of the mid 21st century. So we have taken a more nuanced approach based on our founding principles of transparency and explainability: we now do score a much broader range of companies than when we first launched our H-Score® back in 1998.

We receive millions of data points in our system - it is inevitable that errors and inconsistencies will slip through the net. In order to minimise these we have adopted the following approach: we use a data supplier to undertake initial checks on keyed data - we then undertake our own automated and sampling checks on the data we receive, trying to identify single errors and also look for patterns that may be symptomatic of misapplied keying rule or an error in keying logic. Of course some things are easier to spot than others: balance sheets which don't add down or a director date of birth from the 15th century, others are much harder - impossible even without manual review (e.g. mis-typed name, or transposed date of birth - 02/03/1975 instead of 03/02/1975).

We have been vocal in calling for reform to Companies House, the corporate registry in the UK. For too long Companies House has been allowed to operate as a filing cabinet - a repository of information which is not verified. We publish a warning to our users on our Angelia platform to remind them that Companies House information is unverified and to approach information with a critical eye.



SORTING. RAW DATA NEEDS SORTING FIRST

We have sourced data, taken into our data warehouse, and checked it for quality, now before finally using it the data needs sorting. It sounds a simple and obvious task, but like much related to working with data, it is seldom that straight forward!

Imagine a time when everyone created beautiful data sets, applied consistent and complete unique identifiers, and they could all be linked perfectly together no matter their origin. For now this utopian view is just a dream and anyone working with data, however small the data sets, will know that sorting is just not that easy. All raw materials need to go through a process in order to be usable, and the sorting of data sets is ours.

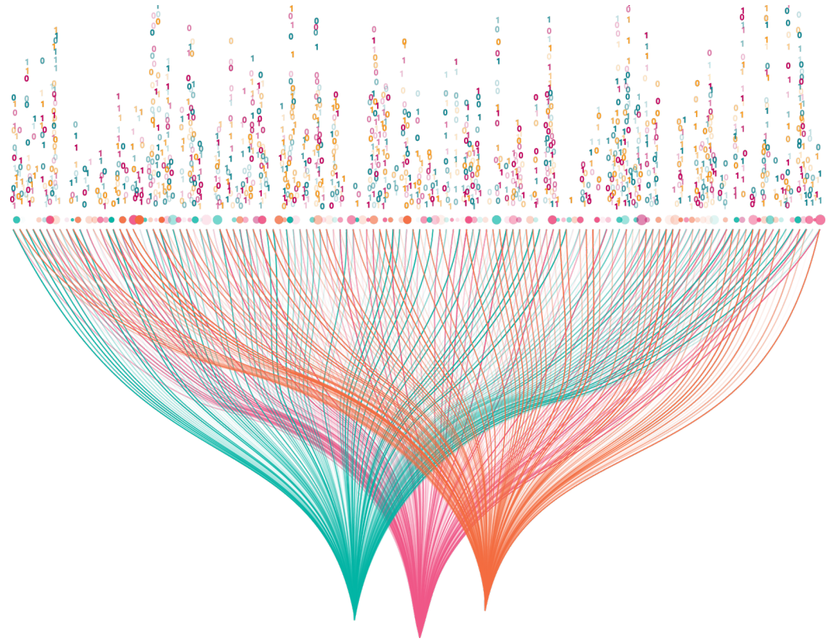
DATA MATCHING

Good news! In theory, the problem of joining datasets has been solved. Use a unique identifier (UID) to unambiguously identify a company. There may be many problems with Companies House, but this is one thing that gives us a headstart in the UK, there is an official source of truth to uniquely identify a company, the company registration number or CRN.

Having a CRN is a great start, but what is the quality of that number? Has it been validated, and can it be relied upon? While the CRN originates from Companies House, what about other data sets created by other Government organisations or departments? Has the CRN been checked and validated against a master source? A master source would be Companies House or a CRA using Companies House data as a source.

The UK Government runs the Companies House register, but the UID it uses to identify companies is not the CRN but the Corporation Tax number, a number not always disclosed outside of Government, and for which there is no publicly available index that data users can consult. Government sourced data may have CRNs, but in our experience this is not always the case, and where it is, it isn't always validated.

Grappling with unclean data sets and then having to match them can be daunting, we know, we do this all the time. If you are collecting data yourself don't be put off by the scale of the task, implement a data collection process that can improve data quality over time. Always aim to have at least an annual touch-point with current customers and suppliers to collect or verify their information. Most importantly, ensure that your onboarding process collects the data you need as well as possible, from the start!



TIP

If you are building internal data sets, for example asking customers and suppliers to complete onboarding forms, always ask for the Company CRN, ideally with a link to Companies House or a CRA to validate the entry. If the Company isn't registered at Companies House be sure to mark this on the record and ask for a VAT number and again validate against HMRC or a CRA source.

WHAT HAPPENS WHEN THERE ISN'T A UNIQUE IDENTIFIER?

If you ask our Chief Data Scientist here at Company Watch - the person who has been responsible for building and delivering the new scores that we've launched in recent years, he would say that solving the company matching problem at scale remains his greatest achievement at Company Watch.

Life with unique identifiers which are consistent across data sets allows us to unlock all sorts of interesting ways of looking at data. But having multiple data sets with no automated way of linking them together has tended to be the situation we have most often found ourselves in. Developing a matching algorithm which can take company names, addresses and other attributes into account and link them together in an automated, scalable way has been transformational in being able to start sourcing new data sets where CRN isn't available. Our work on thinking about how to incorporate such data sets into our new models is just beginning.

THE ONLY CONSTANT ARE THE INCONSISTENCIES

The inconsistencies which appear in data sets of the scale used by CRAs are inevitable - millions of data points which are not verified at point of entry and have often been subject to manual third-party intervention (keying).

We have techniques for trying to ensure internal consistency of data - using a data warehouse to try to limit the number of times the same data is stored in different tables and sourced from different inputs. We have adopted a 'single source of truth' for our main data warehouse and implemented strict rules around syncing secondary tables when the master source is updated.

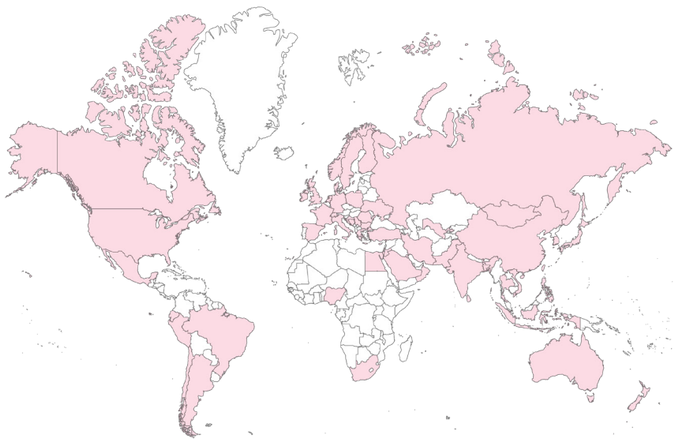
Ensuring that all data which enters our warehouse is time-stamped and that we can roll back to specific points in time to establish what we knew on a particular date allows us to maintain an audit trail and, crucially, build robust models and test them.

COVERAGE, DO YOU REALLY HAVE ALL THE DATA THAT YOU NEED?

Coverage, or the scope of what needs to be analysed in the context of a risk or credit decision, is going to be determined by your business needs. It may be that geographic reach is critical in order to make some assessment about international entities, or it could be depth at an individual company or group level. What is true, is that seldom will one CRA's solution truly cover reach and depth adequately, and this should be a factor in how you select and deploy CRA tools.

But this deals with data available and accessible today. The possibilities for new data sources are expanding constantly and so whatever CRA tools are used an understanding of the data strategy of the CRA will be helpful.

When it comes to coverage it is a far bigger consideration than whether geographic reach is available, or the depth of company insight. It is about how to build the most complete and comprehensive picture of a risk so that the best decisions can be made.



WHAT IF? ANALYSING WHAT A COMPANY CREDIT SCORE MIGHT BE TELLING YOU

The basis of credit referencing is the credit score. Each CRA will have a score determined by their model of analysis. But it doesn't end with the score.

Scores, while highly valuable, are a static assessment of risk and in practice you are more likely to be looking at the score of a company in the context of a wider set of analyses determined by the practices and principles of your business. If this is the case then wouldn't it be useful to be able to 'bend the score' or use the base credit score to experiment with different scenarios for the company whose risk you are assessing? What if sales declined in the next 12 months? What if profitability were to take an up turn?

At Company Watch we believe that risk assessment is far more than a credit score. Of course a well modelled and robust score is vital, but equally vital is the ability to experiment with a company's performance and to see what impact any change in situation would have on their credit score and therefore whether that company is a better or worse risk for you. We call this 'experiments' and it is a capability built into the heart of our platform.

Experiments produce a 'what if' scenario to stress-test a supplier or customer's financial health using their management accounts or forecasts. A new score is generated immediately, and gives you the ability to 'predict' the future against a set of performance criteria.

OVER TO YOU

We set out to lift the lid on credit scoring and data sourcing and management as we believe that having a greater understanding will help you get more from your credit referencing decisions.

With this in mind we believe that there are three key points that can bring the greatest value to the selection and use of any credit referencing tool.

1 For risk or credit decisions of any complexity it is unlikely that any single credit reference agency tool will suffice in assessing those risks.

2 Too many important signals about risk performance are contained in unstructured data sources like reports, comments by executives and so on. Unless the credit referencing tools can systematically use these data types to enhance risk assessment then any risk or credit decision will be in some way compromised.

3 It goes without saying that markets and economic conditions are volatile, but in 2022 this is more painfully true than ever. Unless you are able to model scenarios of how changes in market conditions can impact the risk you are holding you will be constantly playing catch-up, and only reacting after the event. Using modelling tools to understand how evolving situations can impact your risk gives you crucial time to act to de-risk your positions.

A FINAL WORD. PHILIP KING

We hope you have found this document useful. In concluding the piece we wanted to ask a risk practitioner to contribute their views and so we spoke to Philip King.

In a career spanning over 40 years, Philip has held senior credit management roles in the high-tech and communication sectors, including spells at Olivetti and Vodafone. More recently, he held the role of interim Small Business Commissioner for 17 months across 2020-2021 and, prior to that, was Chief Executive of the Chartered Institute of Credit Management (CICM) for 14 years, leading the Institute to Chartered status in 2015.

Philip is the author of the Managing Cashflow Guides (of which there have been 600,000 downloads) for government, and the architect of the Prompt Payment Code which the CICM administered on behalf of the Department for Business, Energy and Industrial Strategy (BEIS) until its administration was transferred to the Office of the Small Business Commissioner in 2020. He has worked closely with successive governments in championing best-practice credit management and supporting small business.

Having recently semi-retired, he now holds several roles through which he maintains his passion for credit and cash flow management, and supporting small businesses. Philip was generous of his time to give us his perspective on the function and use of a CRA. This is what Philip had to say.

USE OF CRA INFORMATION

It's vital to decide why you want CRA information and what you want it to do for you:

- **How much detail do you want?**
- **How deep do you want to dive?**
- **Are you looking to minimise the likelihood of suffering a loss?**
- **Do you want to identify opportunities to expand sales?**
- **Do you want to build strategies to reduce the exposure to high-risk clients?**

For those who might remember the insolvency of Woolworths in 2009, I remember talking to a credit professional whose business was a key supplier to the company. They had made a strong financial return over many years, they knew that there were still profitable sales to be made, yet they knew the insolvency was looming. Their strategy was to reduce the exposure so that the loss, when it came, was at an acceptable level and allowed them to continue to support the business in the meantime. They moved most of their sales to a consignment stock arrangement, invoicing in line with sales activity. As a result their open account balance reduced over time to an acceptably low level.

GETTING TO 'YES'

Not every sale has to be on open-account terms, and having an appropriate level of company intelligence and data can help inform decision-making. Consignment stock can be used, as in the example of Woolworths quoted elsewhere in this paper, but there are other methods too.

During my career in credit management I worked for a computer manufacturer where one of our main routes to market was a network of dealers, distributors and installers whose credit profile was almost always too risky to justify the granting of credit but, without them, we would have had no business in the sectors they served.

The answer was to find ways to say 'yes' rather than the easier, and more obvious, 'no'. On occasions we used consignment stock arrangements, and we also set up escrow agreements to protect the proceeds of sale, back-to-back guarantees, direct invoicing to the end-user party rather than the dealer, and several other strategies that allowed us to trade successfully.

TextScore® & SearCHeD

Over time, most credit managers build a number of things they look out for when reviewing company accounts, returns and other documents. This often includes words or phrases that are particularly significant or relevant.

TextScore® takes this concept to a whole new level. Having the ability to find where these appear in documents can be really powerful and I know, from my own experience, that the notes to accounts often contain gems of information that can easily be overlooked.

SearCHeD goes even further by looking across a population to establish where the use of a particular word or phrase occurs beyond the norm. Both of these help remove some of the blind spots referred to in this paper.

BEWARE OF PAYMENT DATA

Payment data is a useful indicator but it's little more than that. It depends on the volume of clients sharing payment information, their diligence at flagging 'disputed' invoices, the accuracy of the customer names and details on their database, and the proportion of the 'target company's' suppliers who are providing data to the CRA you're using. I remember talking to a Government Minister a few years ago who insisted that the payment experience data provided by one particular CRA was a factual representation of exactly how they paid all their suppliers. He couldn't understand why this conflicted with the data reported by the company on the government's Payment Practice Reporting portal until I explained.

'WHAT IF' ANALYSIS - EXPERIMENTS

Imagine being able to plug in some alternative numbers that allow you to see what would happen if certain events, expected or unexpected, impacted one of your key customers.

What if energy costs rose by 250%? What if shipping costs increased by a factor of 3? What if the price of raw materials rose by 30% or more?

How about plugging something you know has recently happened into the latest numbers available and seeing what impact the event has had. Experiments allow you to plug factors like this into the company analysis and see the impact on the H-Score®, and hence whether the events increase the likelihood of insolvency. This also allows you to overcome the fact that company accounting data is both fixed and past.

BALANCE SHEET				
Intangible fixed assets	5,360,000	5,393,000	6,119,000	6,264,000
Tangible fixed assets	22,780,000	23,162,000	26,108,000	19,023,000
Other fixed assets	5,872,000	6,416,000	6,911,000	11,092,000
Fixed assets	**34,012,000**	**34,971,000**	**39,138,000**	**36,379,000**
Stock / W.I.P.	2,339,000	2,069,000	2,433,000	2,617,000
Trade debtors	448,057	424,000	495,000	598,000
Other debtors	4893751.773	4,631,000	6,654,000	6,367,000
Group balances	171,191	162,000	174,000	170,000
Cash and equivalent	4,337,000	3,521,000	3,408,000	2,916,000
Current assets	**12,189,000**	**10,807,000**	**13,164,000**	**12,668,000**
Total assets	46,201,000	45,778,000	52,302,000	49,047,000

(Company Watch Experiments Functionality)
Model risk scenarios and forecast distress

CRA DATA IS PART OF THE STORY

CRA data and scores are valuable and getting more sophisticated. Some of the tools provided by Company Watch, for example, blow the mind of someone like me who started their credit management career using Dun & Bradstreet registers!

But they only tell part of the story and need to be supplemented by other credit management tools and techniques. It's only when you walk through a company's warehouse and see how thick the dust is on the boxes that you know the true value of the stock appearing on the balance sheet. A half-hour in a company's premises can tell you so much about its culture, its strategic direction, and its values.

Learning through conversation about key suppliers, their ability to meet the demands of your customer, and how much they value them can be telling. Knowing about key customers and their future sustainability can be crucial.

When Woolworths went bust in 2009, and Carillion in 2018, it was often the businesses further down the supply chain who suffered the most. Suppliers to Woolworths had taken preventative measures but many further down weren't even aware the products they were supplying were ending up on Woolworths' shelves. I talked to numerous sub-contractors who were several tiers down and didn't know Carillion was their ultimate paymaster.

Knowing your customer is vital but so is knowing your customer's customers and suppliers several rungs up and down.

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“It's only when you walk through a company's warehouse and see how thick the dust is on the boxes that you know the true value of the stock appearing on the balance sheet.”

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