



The use of full and multi bureau credit data within insurance pricing

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Insurance providers have always known that understanding their customers is the key to making accurate decisions about risk and therefore pricing. The best risk decisions are based on data, but not just any data. To be useful to data scientists, pricing analysts and underwriters, customer data needs to be :-

- Accurate** error-free and exact;
- Timely** available in real time and for any customer interaction such as a quote, renewal, MTA or claim;
- Predictive** of the desired outcomes such as fraud, claim risk, cancellation and renewal;
- Relevant** to a reasonable proportion of the target group - a dataset can be very predictive but if it can only be applied to 0.1% of the population then it may not be worthwhile;
- Current** including any recent changes in circumstances or events. Equally a broad spread of data is required so that seasonal variations and trends can be properly understood;
- Compliant** of course all data must be compliant according to its type, source, accuracy, consent and permitted use according to any relevant legislation in the territory that you are operating in.

This applies to both data used to build models and to the data that is called upon at the point of execution.

With the information revolution in the new millennium came ever increasing volumes of data and alongside that, the computing power to process it at high velocity. The financial services sector was quick to use personal data to check the accuracy of applications, predict fraud and automate most aspects of credit decisioning.

The insurance industry was also quick to pick up on these developments and began to use its own data such as CUE alongside driver and vehicle information but also postcode level rating and perils data e.g flood, subsidence and theft risk.

In 2008, public credit bureau data proved to be a very powerful predictor of fraud, claim propensity and early cancellation, boosting insurer margins. When this data was made available at the point of quote, real time pricing decisions could further reduce fraud and lower claim rates.

So successful was this new approach that now most mid-to-large insurers use all of these datasets equally well, across all lifecycle stages from quote through to renewal.

However the issue for insurers now is, if everyone has access to the same data - there is no competitive advantage.

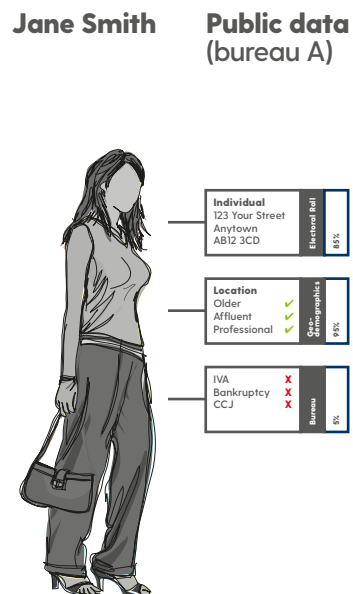
Whilst it is undeniably a predictive data set, public bureau data has its limits.

Public bureau data

The illustration outlines the typical variables that are included as 'public bureau data'. Name and address verification against sources such as the Electoral Roll and PAF as well as postcode geo-demographic indicators designed to understand the age, lifestyle and affluence of the area are returned, whilst Individual Voluntary Arrangements, bankruptcies and County Court Judgments are also included where present.

The issue with public data is whilst it is compliant and mostly accurate, much of it reflects past rather than current financial stress, hence it is not always predictive of future claim propensity.

When a consumer first starts to feel financially stressed, based on a disruptive life event or excessive expenditure trending over time, it can take many months - even years - for that to appear as a CCJ or an IVA.



Equally many people who had an IVA or CCJ two to three years ago will have successfully rehabilitated themselves but this would not be apparent on the public data and which only applies to around 4% of the UK adult population anyway.

There is however, a much wider cohort of 15-20% of the UK population entering a financially stressed state but this data is only returned as part of a full or private bureau search.

Full or private bureau data

A wide variety of industries allow customers to access credit, including banks, building societies, credit card companies, utility providers, mobile and fixed line telephony providers, media companies, finance houses for hire purchase and many more.

These companies must contribute to one or more of the credit bureau reciprocal databases - Insight, Share and CAIS - in order to access this data and as such can more accurately assess an individual's financial status.

The illustration shows the additional information available when accessing 'full' or 'private' credit bureau.

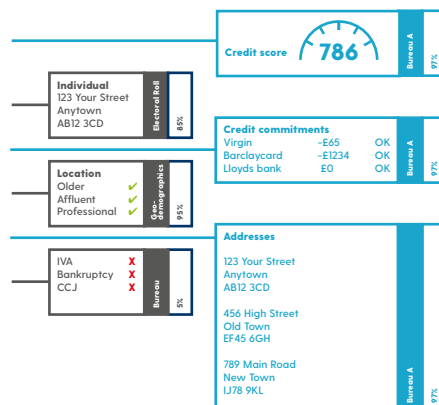
Each credit bureau has reciprocal agreements with its contributing clients, but there is no obligation to contribute to the other bureaus other than 'responsible lending' guidelines.

If we were to grade the general predictiveness of public data, for predicting insurance risk as a 1, private data has been shown to be up to 4 times more powerful in retrospective analytical tests.

Jane Smith



Private data (bureau A)



Data access

There are strict rules stipulating how insurers and brokers may access private bureau data, and this is limited to its use for pricing premium instalment plans only and not for direct use in insurance premium calculations. Innovative insurers have for many years used the instalment plan price or APR as a proxy for the underlying data, however its power is inevitably diluted and the insurance provider, or their agent, must contribute to one of the credit bureau's shared databases under the principles of reciprocity.

Tracking instalment plan performance can be onerous and is usually left to a finance house, often engaged by the broker rather than the insurer, as the instalment credit product is viewed as an 'add-on' attracting a commission.

Recent developments have seen brokers grant their panel insurers a 'delegated authority' status to access the data.

There is another way for insurers to access full credit bureau data and that is by obtaining explicit consumer consent. Under GDPR and the Data Protection Act that preceded it, there is a clear principle that the data ultimately 'belongs' to the consumer, who may grant explicit access to it - you only have to ask!

Where you have the ability to include a consent box at the point of customer interaction e.g. via direct channels over the web at quote or renewal, you may ask the customer for their explicit consent to access their full credit bureau data. To get the optimal response insurers must consider the motives of the customer when asked this question and the highest affirmative response rate will be obtained when no motive to withhold consent is apparent, particularly the fear of being disadvantaged.

Full credit bureau data is widely used around the world and is unarguably a powerful input to an insurer rating model. In the UK, where compliance issues have largely made this data inaccessible, things have changed.

Multi bureau data

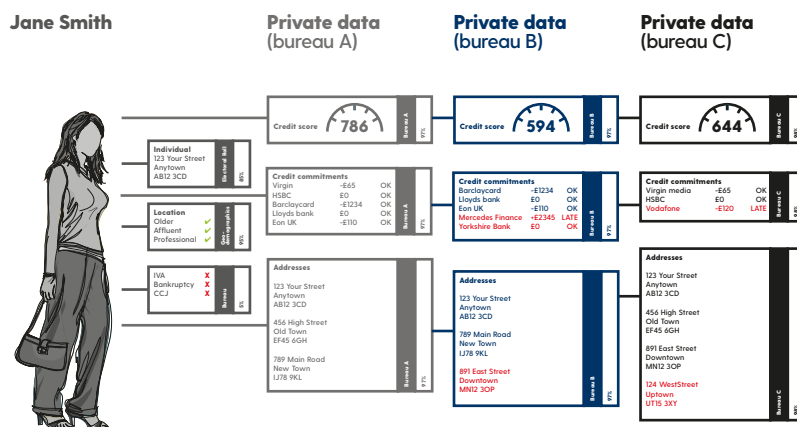
It doesn't stop there though. What is less widely known is that using data from multiple bureau sources will almost double the level of predictive power of one source alone. This is because each credit bureau has a distinct population of credit lenders signed up to its reciprocal database and using it to leave their search footprints.

In the past, each bureau has specialised in certain sectors such as sub-prime, payday lending, utilities or insurance and as such, each of their databases has relative strengths and weaknesses. This means that individual bureaus hold data that the others do not, meaning that one bureau will be aware of an individual defaulting on a loan or a credit card but the others may not.

In addition each bureau will use its own proprietary matching, deduplication, data retention and processing algorithms. This again leads to significant variances in the data returned. Additional credit account, history, searches and linked addresses will be found on bureau A when compared to bureau B and indeed, bureau C. We have found that these differences apply to around 20% of cases, creating powerful swap-sets around the margins.

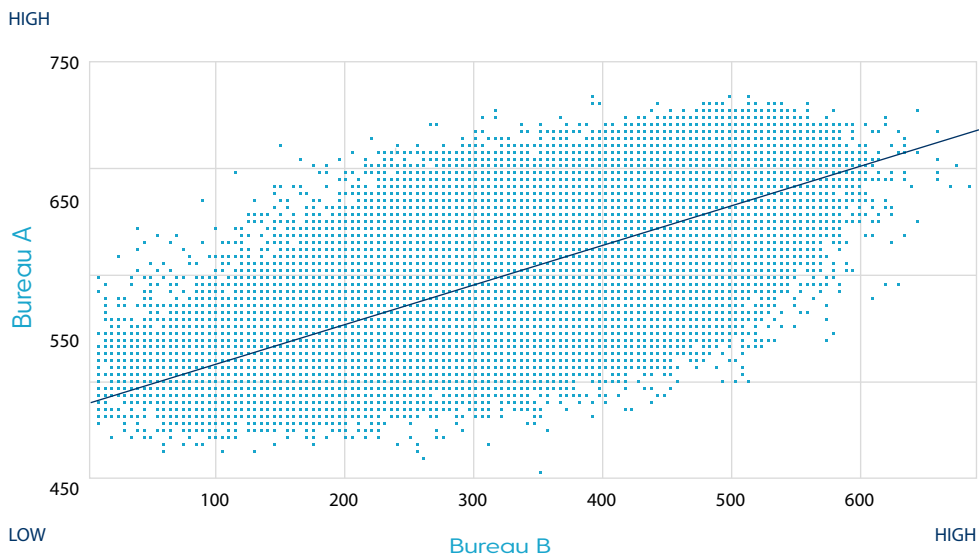
This requires a process of reconciliation and normalisation which seeks to create a combined and consistent view of each individual's credit and financial position.

In the example below an additional two more bureau searches have been added - bureau B and C. Bureau B has additional accounts that bureau A does not have in addition to an additional Linked address, resulting in a lower overall credit score. Likewise bureau C has credit history information from Vodafone that bureaux A and B do not have as well as an additional address. They have therefore come to different conclusions regarding their credit score.



Another way to illustrate this difference statistically is when comparing two normalised bureau scores. The diagram below plots two of the bureaus generic scores against each other. If they were in complete agreement as to an individual's credit score and risk, the individual points would be aligned in a perfect diagonal line across the chart.

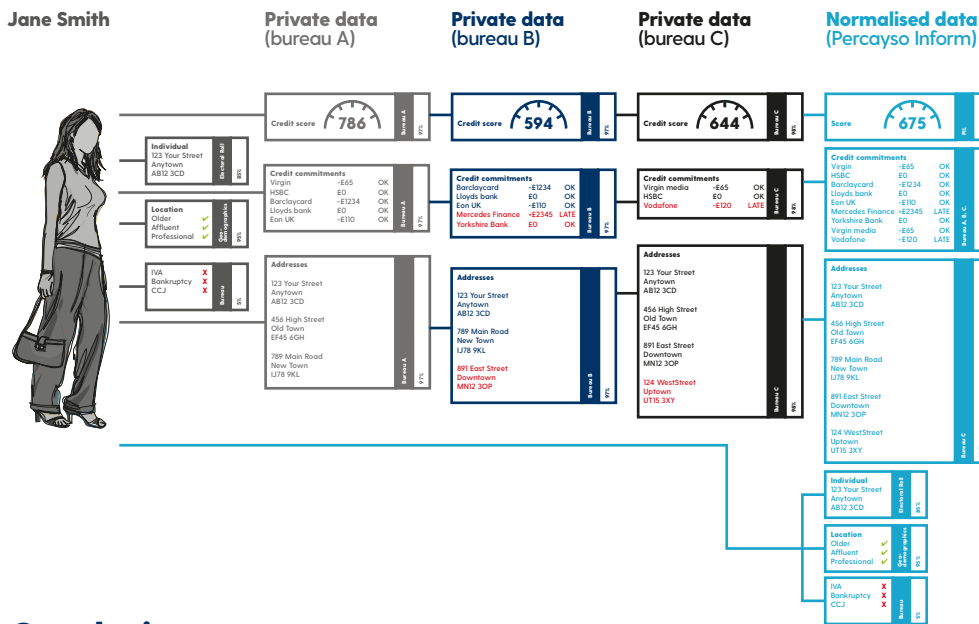
Diagram: Bureau A score versus Bureau B score



From the chart it is clear that there are many instances where bureau A rates the individual as a high risk and bureau B rates them as a low risk and vice versa. This further confirms the requirement to take a dual or multi bureau approach to enable such differences to be effectively reconciled.

Neil Smyth, Percayso Inform Head of Analytics comments: "Full credit bureau data combined across multiple bureaus is one of the most powerfully predictive datasets for understanding loss ratios and claim risk in insurance data enrichment."

In this final example we can see the complexity, and also the benefit, in bringing all of that information together to enable a 360 degree view of that consumer's financial status - it is only when this is achieved can an insurance provider have a truly accurate picture of the risk they are assessing.



In order to have a complete, consistent and 360 degree view of your customers' financial stress and the impact this may have on their claim and fraud risk, likelihood of cancellation, cross sell opportunity and loss ratio, a multi bureau approach is required.

This approach is able to yield up to 8 times the power of public bureau and up to twice full bureau from one bureau. There is a distinct complexity to working with multi bureau data, it is specialist work and only a handful of individuals and organisations possess the necessary experience, skillset and tools to approach this worldwide. Of course there is an additional cost implication, however the business cases we have put together so far point toward a far greater gain in outcomes related to:

- **reduced fraud**
- **increased premiums**
- **lower loss ratio**

Summary

There is much to be gained from harnessing the power of public, full and multi bureau datasets as an input into insurance risk pricing and strategy. Full credit bureau data represents a major step up in predictive power from the public data and there is a further uplift to be had when moving to using data from more than one bureau source.

There is an inherent level of complexity to this process both in the analysing, normalising and processing of such data, the compliant use of the data and being clear on how this will impact on your distribution strategy - however the business case is clear, demonstrable and significant.

Get in touch for further information.

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