# Not another data article!

You don't have to look too hard at the moment to find a pensions article that touches on, or even focuses on, data. Working with masses of data in our pensions day-to-day life isn't anything new. But after listening to a podcast I thought I'd use this article to reflect on changes over the years in how we collect and use data.

I recently listened to a Peter Crouch podcast (That Peter Crouch Podcast) on data analytics, as part of my team at work's podcast club. In case you don't already know of it, it is one of the most listened to podcasts in the UK and, although (as you'd expect) the focus is on aspects of football, it also touches on a lot of other areas of our lives. In this particular episode, Peter and his team discussed the role of data analytics within football. In particular, they noted that over the last 10 years or so, data analytics has changed from a minor function performed by someone sitting in a cupboard to now being one of the most important issues within the club.

Peter thinks that football managers may well talk more to their data analytics team now than any other individual at the entire club, including their assistant!

Data has always been at the heart of pension schemes but the podcast got me thinking about the changes to the way in which we have collected and used data over the years.
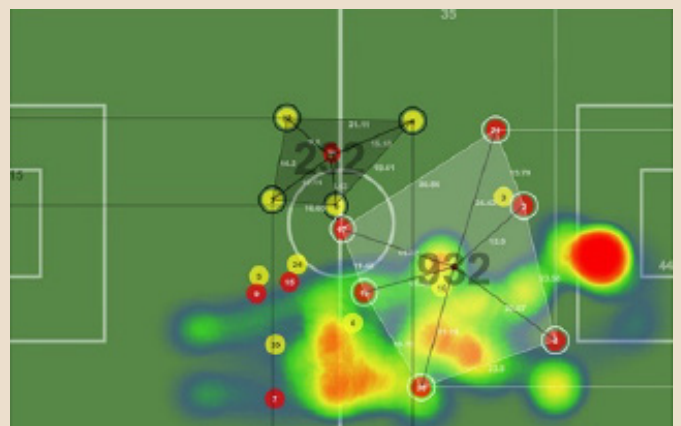
The data analytics role within pensions

In the football world, data analytics will include analysis of each football player's statistics, e.g. ball retention, number of goals scored and metres run. I've translated this to the pensions world by thinking about some of the roles of key data processors involved with pension scheme data, how they used data previously and whether there have been any changes.

Scheme administrator:
"Let's start at the very beginning"
Maria von Trapp, "The Sound of Music" (Rodgers and Hammerstein)

Data collection is a key function for any data analyst. A data analyst has to request the information they would like to be able to do their work if they are not the owner of the data in the first place. The way data is stored has changed significantly over the years due to advances in technology. Twenty years or so ago data would have been recorded in paper files, data sheets and member cards. Data then moved onto microfiche and now is computer-based.

The next big thing was the internet! It started with pension information moving online, for example notices, accounts, member booklets and newsletters. I can remember the industry being very concerned about holding member data online until security had been improved and was well-tested. We therefore had a transitional stage where members could access forms but had to download them and print them off, tick the relevant boxes and then post them back to the administrator. As the industry's comfort in internet security grew so did its move to automation. This resulted in smoother, shorter processes, which in turn saw shortened processing times, and improvements in data quality, reducing the number of errors and therefore allowing members to make decisions based on more accurate information. I am sure this was an answer to one of my PMI exam questions a number of years ago. In my opinion it should remain a question, as it's important to understand where we have been when considering where to go next.

In the same way that the perceived increase in importance of the data analytics role within the sports industry has been gradual, the changes in the way data is processed have not happened overnight. The transition is ongoing and schemes are at different stages. We have recently seen a shift to online member verification, spurred on by Coronavirus. We've included a case study about the way in which Barnett Waddingham worked with the Pension Protection Fund (PPF) to introduce more online member services.

CASE STUDY

Background - We worked with the PPF to improve the data verification process needed for schemes in PPF assessment. Members used to receive a printed form showing all their core data and asking them to confirm each data field was correct. This traditional method meant printing letters, postage costs, collating all the responses when they came in, and manually checking and keying in all the changes. For some of the fields, such as date of birth, changes could only be made once appropriate documentation had been seen. As a result, the letter coming back from the member could include important documentation which needed to be kept safe and securely returned. There was also a risk that the printed form could be intercepted and reveal personal information about the member.

Action taken -
We introduced a significantly improved three-step process:

• **Step one -** we moved the data verification aspect of the task online. Members log in to their Member Self-Service record where they can see a screen showing all their data fields. They tick boxes when fields are correct. Where fields are incorrect they provide us with the correct information. That action either updates the field in our administration system immediately, or prompts the member to provide documentary evidence.
• **Step two -** members can use the 'Upload documents' functionality in Member Self-Service to scan and upload their documents to us. This was set up as part of a wider drive to reduce incoming post in the earlier stages of the Coronavirus pandemic.
• **Step three –** members can confirm their identity to us online, as opposed to sending us original documentation. This has reduced post, costs and time.

The PPF is pleased that we have been able to implement an online solution to data verification. Not only has this resulted in a more efficient process, it offers an enhanced member experience and reduces the risk associated with sending personal data in the post.

"It is a capital mistake to theorise before one has data."

Sherlock Holmes, A Scandal in Bohemia
(Arthur Conan Doyle).

Sports analytics includes both data collection and data analysis. The role of an actuary is more of the latter. So, how has data analytics changed for an actuary over the years?

Changes in investment reporting have made it considerably easier to track asset totals, which in turn has led to a move to more real-time funding information being available online to stakeholders. Interactive software has allowed stakeholders to make real time decisions. It has also led to more automation in the way decisions are made due to an increase in trigger-based approaches.

Another factor is the ever-changing funding regulatory landscape, and the resulting increase to the pension scheme data that has to be collected. The Pensions Regulator (TPR) in particular now asks for considerably more information via the Scheme Return than in the past, and we could write a standalone article on the data analytics carried out by TPR. We also know we will be asked to provide data for the Pensions Dashboard and, given the general desire to increase the use of electronic communications, administrators will need to start thinking about collecting member email addresses at the very least.

Obviously, there are other areas we could look at, such as employer information for covenant assessors and data used by auditors or investment managers. In summary, all of these will have seen improvements in the way in which data is collected, used and reviewed. This will have led to better quality data which in turn should lead to better decision-making by the relevant stakeholder.

Make sure your data is meaningful

"Players would run more in training to manipulate the stats"

Peter Crouch – That Peter Crouch Podcast

Peter Crouch describes how players would run further and faster to improve their statistics within training, with the hope that this would translate into more time on the pitch on match day. Peter went on to explain that although working hard at training was a part of being a good footballer, the other part was talent. It could be that the statistics collected for you weren't as good as other players but that this was because you held on to the ball for longer and therefore didn't need to work as hard, and made others around you work harder to try and tackle you.

I thought this was an interesting example of how you can manipulate data to try and influence decision-makers. In reality though, those within the football world are wise to this. Another funny statistic, if you like football, is that Peter has more assists than Ronaldo in the Premiership. Although this might come as a surprise, it's because he played many more seasons in the Premiership than Ronaldo.

"How does this translate into the world of pensions?", I hear you ask. Well, you can spend a lot of time trying to collect data, but if you don't know what it's needed for you may find that some of

that effort was wasted. For example, if you are calculating a retirement pension and you do not have the final pensionable salary in order to calculate the pension, then work will need to be done in order to collect this data, perhaps by reviewing files, asking the employer, asking the member or determining details from contributions. However if you already have pension figures then, in most cases, historic pensionable salaries will not be needed as part of a bulk annuity transaction. Similarly, it's very unlikely that you will need member contribution data for pensioners – if this is missing make sure it's definitely needed before you try to collect it.

The data items to administer a pension scheme on a business-as-usual basis are different from those that insurers require when looking to carry out a bulk annuity transaction. In particular, insurers prefer schemes to have good data relating to spouses – something that often used to be missing from scheme administration records.

To the right is a case study about a data review. It highlights why it is important to understand what the data will be used for.

The client's problem - The client (the Trustee Board of a defined benefit pension scheme) was seeking independent assurance of their scheme's data quality, both as a part of its programme of good governance practice and also as a result of discrepancies in benefit calculations that had recently to come to light. The client was therefore keen to commission an independent third party to carry out this work, rather than its current administrator.

The client's objectives were for an independent specialist to review the data held by its current administrator in order to:

• Perform the common and scheme-specific data tests as required by TPR and compare these to its current administrator's calculated scores

• Understand the suitability of the data for bulk member exercises (such as de-risking and GMP equalisation), in terms of the way the data is held, its quality and overall completeness

• Determine whether there were any immediate areas of concern based on our experiences of data analysis and the common issues that can arise from poor data which can hinder good administration practice.

How we achieved the client's objectives - Our initial approach was to complete an analysis of the nature of the scheme - its history and benefit structure - to fully understand the scope of the data needed for review and ensure fulfillment of the client's requirements.

Having received the data it was subsequently tested and analysed using our in-house testing tools, developed to meet the requirements of TPR's common and scheme-specific data tests. We also compared the data held with the data requirements for bulk member exercises and GMP equalisation/conversion.

Results and benefits - We were able to use our wide-ranging experience across Barnett Waddingham and our dedicated GMP projects team to produce a report for the Trustee Board in line with its original objectives, clearly presenting our findings and highlighting any areas of concern. We received very positive feedback:

"Many thanks for your data report. It is very comprehensive and also very readable, indeed I'd be happy to use the word exemplary."
- The Independent Trustee on the Board

The review highlighted a number of issues, particularly in respect of historically inconsistent pension tranching, which affected both the increases to current pensions in payment, and prospective GMP equalisation calculations. Having identified the issues, we were able to assist with the rectification of affected pensions and provide pragmatic solutions for resolving the missing data required for GMP equalisation.

This led to the Trustee Board asking us to undertake a benefit audit on a sample of members to dig into these issues further.

Ultimately, the Trustees gained comfort from:

• an independent review of their data

• required improvements to the data being identified, and prioritised according to the scheme's needs

• a plan for addressing the data problems associated with GMP equalisation

• an understanding of the data gaps to be resolved in the longer-term to improve the scheme's data position before considering an insurance transaction.

Fit for transfer?

Continuing the football theme, transfers between football clubs are made after considering football player statistics. I believe that we can learn a lot from this approach. In my opinion, further advancements can be made when undertaking administration transitions. That's not to say that things haven't already come a long way - there was once a time where a change in pension scheme administrators meant sending boxes of files to the new administrator.

Despite significant advancements, quality of data is still a major issue when carrying out a transition. In my opinion it's a barrier to many administration transfers. Maybe the data dashboard is something that will force the issue here. The Pension Administration Standards Association (PASA) have provided guidance in this area and TPR has also discussed its intention to look into barriers to moving services. Maybe we could learn some lessons from PPF transfers.

Neymar Da Silva Santos Junior during his presentation as new FC Barcelona player, on June 3, 2013.

PPF member data – fit for transfer?

The PPF's 'mission' is to pay the right people the right amount at the right time. In order to achieve this, it is vital that the data sent to them by administrators is, as far as possible, accurate and complete.

One of the most significant tasks during a PPF assessment period is to review and cleanse the data held in respect of the membership. This task must be started as early in the assessment period as possible to allow sufficient time to review the data and ensure it is fit for purpose.

Data audit

Part of the review process involves carrying out a data audit. This measures the quality of scheme data using two sets of tests - the common data test and a series of conditional data tests. These measure the presence of data needed to confirm a member's identity and status and also act as a definitive source for the calculation and payment of members' benefits during the assessment period and beyond.

The PPF expects some elements of member data (including personal member details, service dates, benefit splits and salary history) to be verified as part of the data audit. Other data items that should be reviewed include whether there are any divorce orders in place, whether members have received any augmentations or transferred-in benefits and whether there have been any historic exercises such as a one-off pension increase or a pension increase exchange. This information will also be required for the benefit audit which will be completed later on in the assessment period.

Data is analysed by performing reasonability checks and a gap analysis on the electronic data held, and by cross-checking different data sources, e.g. electronic data and paper records.

The majority of the data will need to be recorded on the PPF's Data Interface Layout (DIL). It is essential that electronic data is kept up to date throughout the assessment period as it will be used to complete the DIL on transfer to the PPF.

During the data audit, it's essential to focus on the requirements of the PPF and the data it will need on transfer.

Once the audit is complete the findings are reported to the trustee and the PPF, along with recommendations on rectification work to be undertaken to ensure the scheme's data is fit for transfer.

Data verification

The other method used to clean data during a PPF assessment period is data verification. The purpose of the exercise is to provide members with their data and to ask them to confirm its accuracy. It is important to give members the opportunity to review the data held for them as it will be sent to the PPF and used to calculate their compensation.

The exercise should commence after the initial data audit has been completed. If the audit highlights any gaps in the membership data, groups of members can be targeted to provide additional information, for instance details of any transferred-in benefits or Additional Voluntary Contributions paid. As detailed in our earlier case study, at Barnett Waddingham this exercise is now conducted online via our Member Self-Service portal.

Rectification work

It is essential that all records are updated and any rectification work is completed before the statutory "Section 143" valuation commences, which determines whether a scheme will transfer to the PPF. The PPF expects all issues relating to member data to be resolved before the scheme transfers into the PPF.

During the process, the administrators working on the assessment period are focussed on the data requirements of the PPF (which are considerably simpler than those of most operational pension schemes). Data reviews and cleansing happen relatively quickly and the PPF assessment period is generally under two years.

Data strategy

Data collection and analytics in football has led directly to decisions being made in terms of the overall strategy to win an individual game - for example, who to play, when to substitute individuals and for whom, and spotting weaknesses in the opposition and how to benefit from them. It also influences major decisions such as which players to buy and sell.

Similarly, a data strategy including objectives and a plan to meet them can be a really valuable tool to inform next steps for a pension scheme. Endgame journey planning discussions present the perfect opportunity for trustees to discuss their endgame objective and then determine a strategy to ensure their data is ready. This in turn can be used to build an efficient, logical plan to review and cleanse data.

Barnett Waddingham

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Key learning points

I realise this is a long article about data. If you have made it this far congratulations, and thank you. As a reward I wanted to pass on some of my key learning points:

• cleansing data takes longer than you think
• the starting point is determining the current condition of your data

• a fresh pair of eyes can be very helpful – doing something in a particular way because that's how it's always been done doesn't mean it's right
• ensure you know the reason why you are using data as the required information will differ according to the task
• be data-ready for an opportunity
• understand where all your data is stored
• Peter Crouch's podcast is really funny and not just for those who like football.

Pensions Management Institute

Knowledge