Financial Distress Map

Graphical Web Conference
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Guy Weir & Mark Thurstain
Which? exists to make individual consumers as powerful as the organisations they deal with in their daily lives.

We began life in a garage 56 years ago as a volunteer organisation committed to providing expert and impartial advice. We are now the largest consumer body in the UK with over 800,000 members: we understand consumers and what makes them tick.

We operate as an independent, a-political, group social enterprise working for all consumers and funded solely by our commercial ventures. We receive no government money, public donations, or other fundraising income.

We work closely with political, corporate and regulatory stakeholders to drive change for consumers.

We plough the money from our commercial ventures back into our campaigns and free advice for all. Over the last 10 years this has enabled our charitable arm to increase its spending six-fold to £10m a year.
Which? Consumer Understanding

Which? Consumer Insight produces regular research on how consumers are coping with their finances and their experience of the current economic climate.

- Consumer Insight Tracker: monthly survey of 2000 UK adults

- Which? Lived Inflation Index & Spending Power Index

- Financial Distress Map

- Analysis of government data

- Which? Consumer Spending

The insight helps us identify trends and issues facing consumers to feed into our policy, campaigning and editorial work.

www.which.co.uk/consumerinsight
The problem

- Which? runs several regular and ad-hoc web based polls, from which a range of research reports, and data are published.

- These polls are mostly quota sampled to be nationally representative of UK households, and provide us with evidence to support our policy and campaign work, generating press coverage and informing national debate about consumer issues.

- However, we were missing a way to better engage members/supporters/local communities and crucially politicians with these data.

- We decided we needed an interactive map to bring life to differing experiences of financial distress across the UK.

- Our intended audience were to be web literate, and fairly data savvy. We wanted to appeal not only to data journalists, opinion leaders, policy wonks etc., but also to the intelligent lay person, supporters of W? campaigns, and the general public.

- Because of this we decided to aim for simple and transparent functionality throughout.
The stats - our financial distress score via geo-demographics

Five levels of financial distress

Our squeezometer groups UK adults according to the financial difficulty they had in the past month. Respondents are grouped on the most severe difficulty they said they’d faced.

Level 1
Cutting back only
8% (+1)

Level 2
Using savings to cover spending & cutting back
3% (-1)

Level 3
Borrowing from friends/family, using credit or authorised overdrafts & cutting back
8% (0)

Level 4
Using unauthorised overdrafts or payday loans
3% (0)

Level 5
Defaulted on loan, bill, or housing costs
8% (+2)

Starting with our financial distress (FD) measure - from 3 months of our tracker poll added together for a large sample (6,000+).

FD then calculated for each of 50 geo-demographic sub-groups (2001 Output Area Classification).

Around the UK each of 230,000+ output areas given these FD percentages.

FD percentages aggregated to higher geographies from OA building blocks (weighted to 2011 HH populations).

5 FD percentages combined into a weighted summary score, and presented as percentiles on the map.

Which? works for you
Mapcase – visualising map data over the web

Mapcase is a simple data map sharing tool created by Geofutures. It can be used privately within an organisation, or on a public website.

- Uses familiar Google Map interface (although not tied in to this)
- Maps change according to scale, presenting GOR data at a national level, parliamentary data at a regional / sub regional level, and LSOA data at the neighborhood level.
- Datasets are interactive with connectivity between graphs and the map base.
- Transparency tool enables users to visualise two maps simultaneously.
- Viewpoints of maps can be shared via social media, facilitating further discussion.

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The Technical Considerations

- Web sites have become applications (i.e. single page apps are really common) but the language used to build them hasn’t moved that far from a simple scripting language. It isn’t possible to build complex software with plain JavaScript so there are many approaches to fix a major problem with the web. We have chosen GWT as the code can be written in Java (and compiled into JS) so we get the mature development environment that comes with Java.

- Java is a mature language with advanced features result in a stable codebase. Components are genuinely reusable and breakages are much easier to spot than in plain JS environments.

- The map interface had to be as pared back as possible whilst maintaining a high level of functionality and interoperability that is more often associated with a GIS (Geographical Information System).

- The balance point between payload and information delivery had to be found. Mapcase uses a lot of vector data (rather than tile or image formats) in the maps which can slow browsers. There is always a balance between map detail and rendering speed.

- The system has been built from the ground up to scale horizontally. This means many parallel instances of our servers can be run with virtually no shared resources. This means it is super simple to scale within any cloud provider’s environment.

- Recent enhancements to Mapcase include improved compatibility with mobile devices, full screen display and improved positioning of screen real-estate.
How it’s been used so far - informing the debate

- Used as backbone for Guardian Money story.
- Featured in Guardian data blog.
- Used as ‘hook’ in engagement mail-out to MPs to ensure consumer voice is heard pre 2015 election.
- Engaged consumers/supporters sharing bespoke maps of areas of interest.
Next steps

- Update the map - most likely every 6 months.

- Refine data by incorporating recently released Output Area Classification 2011.

- Re-use the map framework for alternative topic themed maps using the same techniques. For instance private pension prevalence; savings resilience; consumer engagement measures; consumer spending from Living Costs and Food Survey; Lived inflation.

- Further develop map ‘framework’ with Geofutures
  - Improve narrative annotation
  - Embed direct social media sharing
  - More comprehensive gazatteer
  - Implement new types of data layer where (point locations, contours, etc.)
Any questions?