Consumer Risk Metrics

Risks faced by insurance consumers and practical considerations for insurers to improve risk metrics

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Research paper from the Consumer Risk Metrics Working Party

Conclusions following initial research

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Abstract

This paper allows insight into some of the **key considerations when presenting risk to consumers**. Risk communication is a broad topic and requires extensive analysis to reach firm conclusions. The Working Party undertook a holistic review of what a Consumer Risk Metric could look like; assessing different quantitative methods to determine if one was dominant and could offer consumers a clear view of risk, and also evaluating behavioural factors. A consumer's risk-taking behaviour is influenced by both their attitude to risk and an innate preference to the level of risk that they wish to tolerate, there are many factors which impact decision taking. Often consumers do not behave in a manner which is consistent with the assumptions made in insurer's models which they use to assess risk.

Insurance comparison websites are now common place and are used by consumers to assess which products best suit their needs. A review of the methodology used by the comparison sites indicates the depth of their research to understand consumer profiles, their preferences and what drivers influence a consumers' decision process to assess and buy insurance products. These comparison websites are prevalent in general insurance and becoming more popular for life insurance.

Regulatory changes have influenced disclosure requirements for both life and general insurance; this is moving towards further standardisation and should allow consumers to more easily compare products during quotation. The Working Party considered whether these changes have gone far enough. Disclosure is largely qualitative, could the development of a risk metric assist the consumer further?

To understand consumer preferences in more depth, the Working Party commissioned an online survey within the UK. The results were largely consistent with the hypotheses set by the Working Party, although there were a number of variations. The survey results indicated consumer preference for insurers to be more responsive and accessible, e.g. when the consumer makes contact with a query or a claim. The survey ascertained that consumers are influenced by price and seek competitive quotes. Insurance advisors did not appear to be favoured by consumers or to have as much influence over policyholder's risk evaluation as the Working Party had anticipated. The survey indicated a preference from consumers for insurers to supply them with factual information so they could make their minds up themselves. Also, consumers refer to independent bodies and other user experiences when sourcing and assessing insurance products.

In summary; this review into Consumer Risk Metrics has provided an insight into policyholder preferences and what they consider useful within their decision making when they buy insurance products. Consumers from all spectrums of socio economic groups want to be well informed and have access to information which helps them select products to meet their needs. The risks faced by consumers when buying life insurance differ compared to general insurance, general insurance is typically for a one year duration and the risk appetite of a consumer is influenced mainly by price and service considerations e.g. payment of claims. The longer term nature of life insurance is an area for further review to improve risk communication to consumers; metrics should express the risks faced by consumers throughout their lifetime. Risk is not a simple topic; there is not a 'one-size-fits-all', especially over a longer time period and considering changes in personal circumstances. As a result of the initial review the Working Party has not provided a recommendation on risk metric design, this will be a future challenge for the group and the profession.

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1. Introduction

In well-developed insurance markets, consumers are presented with a vast array of insurance products. Many transactions are completed without advice, often through online purchase. The variety of insurance products available can be overwhelming, and consumers need to search for one that meets their needs and personal circumstances.

The Consumer Risk Metrics Working Party was established at the end of 2015 to study and provide recommendations to the Institute and Faculty of Actuaries (IFoA) on the measurement of insurance consumer risk. The objective of the Working Party is to promote thought on matters relating to the communication of risks faced by insurance consumers (policyholders). Consumers ought to be able to easily compare risk across different insurance products and between providers so they can choose a product that is suitable for their needs. Having a Consumer Risk Metric (CRM) could help to facilitate this process, enabling consumers to compare the riskiness of products.

There have been various instances of consumers either misunderstanding or not being appropriately informed of the coverage offered by insurance products. This includes the mis-selling issues surrounding Payment Protection Insurance (PPI), unfortunately it was sold to individuals who did not understand how it would respond and in addition it may not have been suitable for a consumer's personal circumstances. Commission charged by PPI sellers was excessive and resulted in unfair customer outcomes. Other examples include endowment products that were sold heavily in the early 90s as a means of repaying a mortgage. Many consumers purchasing these products did not appropriately evaluate the risk of a shortfall on maturity and often believed maturity payments were guaranteed. (Reported in the FSA's (2004) paper "Consumer Understanding of Financial Risk"). With this in mind, the Working Party had two key objectives:

Objective 1: the identification and understanding of consumer risks / concerns.

Objective 2: to highlight practical considerations of consumer risk metrics that allow the consumer to make an informed choice.

The remainder of this paper sets out research undertaken against these objectives.

2. Metric definition

Understanding risk from a consumer's perspective and being able to articulate what this means is the ideal position. With this in mind the Working Party's first challenge was to define what is meant by a 'metric'. A CRM can be defined as a measure which converts information relating to the outcomes of financial products into a single (or set of) numerical results which can be explained to a consumer. This could then assist the consumer to choose a product that meets their needs, by comparing the relative scores of different products.

3. Metric qualities

The standard risk metrics used by insurers, measure risk in terms of; the volatility of returns, the downside risk, a trade-off between extra risk and extra return. The Working Party considered the volatility of returns and what a risk trade-off would look like. They also assessed criteria against which to score the quality of metrics; the aim being to score the relative product risk. A metric can be split into technical (quantitative) and communication (qualitative) attributes. Technical qualities of a metric:

- Captures risk aversion of the consumer concerned more with the tail if the consumer is risk averse.

- Statistically sound, for example features such as positive homogeneity, translation invariance, monotonicity, sub-additivity, convexity. (Quantitative Risk Management; McNeil A.J., Frey R., and Embrechts, P.; first published 26 September 2005; Princeton university press).

Key communication qualities of a metric:

- Explainable to a customer.
- The broad methodology can be deduced with limited actuarial knowledge (common sense).
- Relatively easy to implement.

If a CRM is developed and implemented then consumers may expect to put reliance on it when making decisions. By way of example, in consumer lending the Annual Percentage Rate (APR) is used widely to select the lowest overall interest rate loan.

4. Quantitative review of Consumer Risk Metrics

The next challenge was to find the most suitable statistical techniques and express these in a manner which consumers can understand. Different statistical techniques were assessed; the terms in italics are possibly more consumer friendly expressions:

- Expected Shortfall (@25%): *Average of bottom quarter of results*
- Lower Quartile: One in four, worst scenario
- Value at Risk (@X%): *one in 1/X worst scenario*
- Standard Deviation: *spread around the average*
- Spectral Risk Measure: *risk averseness weighted average*
- Mean below the Mean: Average below the average

The Working Party compared statistical methods to determine if one was dominant and could offer consumers a clear view of risk. The research examined risk metrics using three distributions modeling investment returns; these are for illustration only but representative of typical products:

- A: Normal Returns
- B: Skewed Distribution
- C: As B but adjusted to contain floor at 75

Same Mean (100) and Standard Deviation (25)
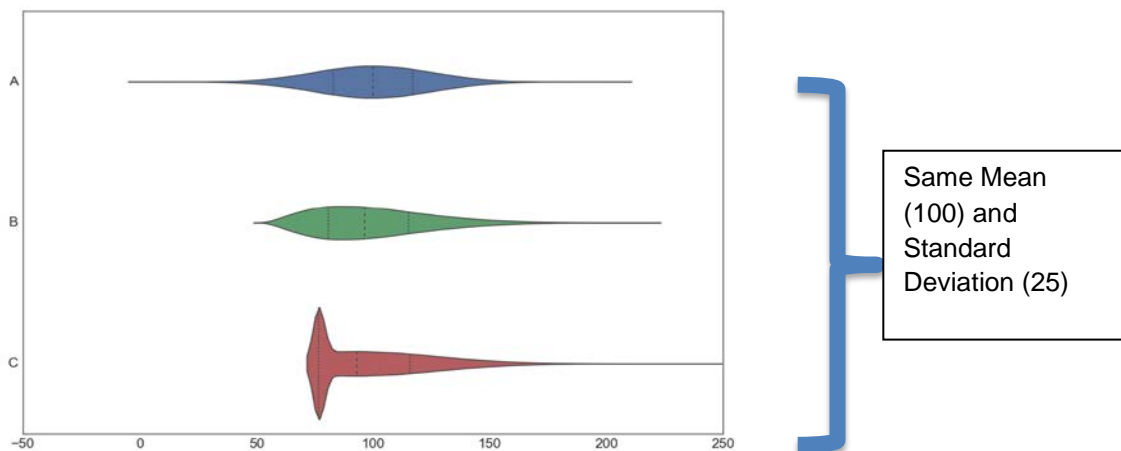
Table 1: Metric comparison (Source: Consumer Risk Metrics IFOA Working Party 2018)

The three distributions were calibrated with different shapes of return, but have the same mean (100) and standard deviation (25), i.e. using common Mean-Variance approach would lead to no difference in decision. The Working Party assumed the consumer would choose the distribution based on the

highest score. Results illustrated in Table 2 identified that under the Expected Shortfall, Product C is best, under Lower Quartile, Product A is best; and under Mean Below Mean, Products B and C equally rate. In summary, the choice of metric leads to different outcomes. One metric is not necessarily the best and consumers still need to understand the range of outcomes; using a distribution to build a risk metric leads to a loss of information. Graphical methods can alleviate this loss of information; however invite their own problems, particularly when comparing large numbers of options.

Product	Expected Shortfall 5%	Lower Quartile	Mean Below Mean
Product A	48	83	80
Product B	62	81	82
Product C	76	76	82

Table 2: Product statistical comparison (Source: Consumer Risk Metrics IFOA Working Party 2018)

A key issue is that consumers have different risk appetites, and the Working Party recognises that this cannot always be quantified and modeled as consumers are not necessarily consistent in their decision making. One solution is to allow for risk appetite, this could be achieved via Spectral Risk Measures which combines risk appetite and distribution into a single metric, putting more weight on the points of the distribution that particularly interest the individual. This is expressed; where Ms(x) is the risk metric [statistic] to output, calculated as sum over the range of outcomes (p), s(p) is the spectral function (based on consumer risk appetite), and Qx(p) is the quantile function (of distribution).

$$M_s(X) = \sum_{\forall p} s(p)\, Q_X(p)$$

The following charts show the quantile functions for products A and C, and several variations on the spectral [weighting] function, for different consumer risk profiles.
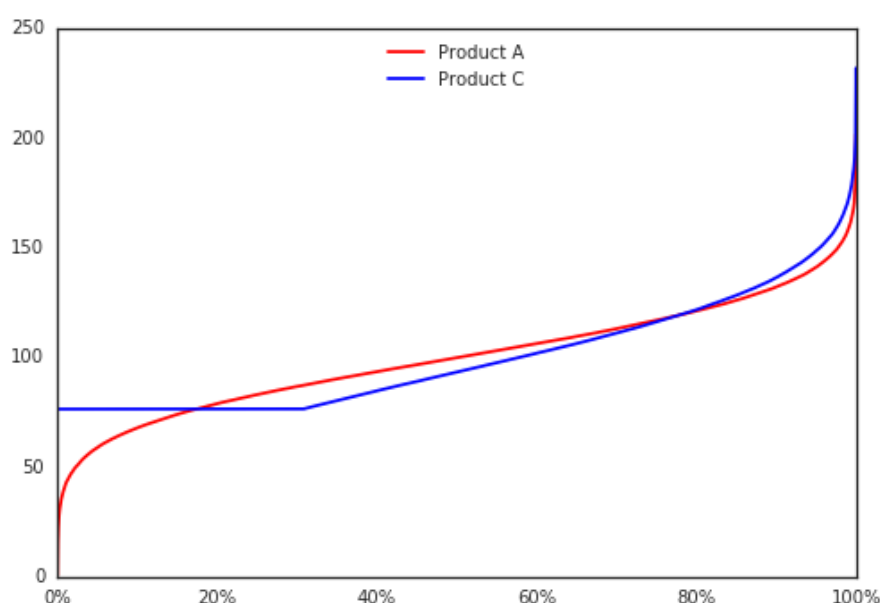

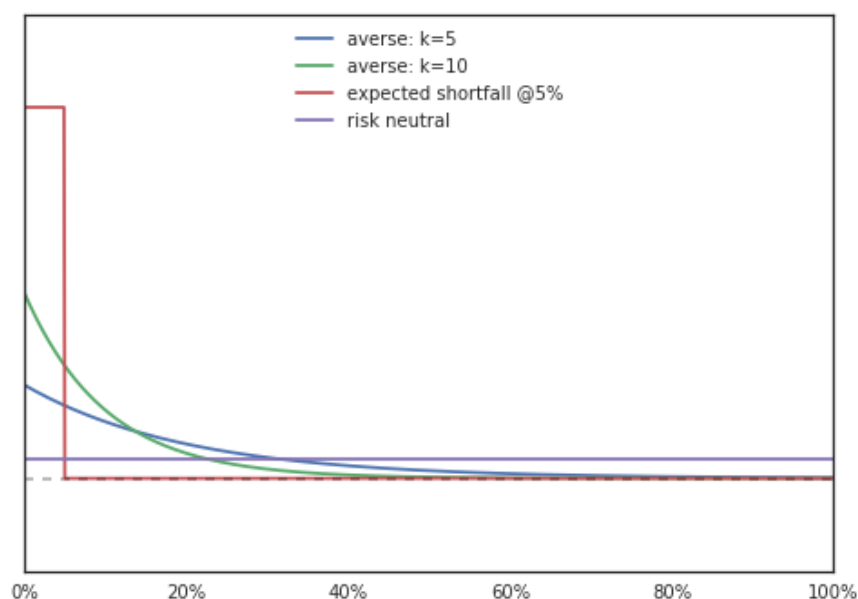Figure 1: Quantile Functions Qx(p) (Source: Consumer Risk Metrics IFOA Working Party 2018)

Figure 2: Spectral Weights s(p) (Source: Consumer Risk Metrics IFOA Working Party 2018)

The results show that as consumers become more risk averse, the Spectral Metric increases the preference for Product C, as more weight is placed on the tail. In the case of Product C, the floor means that in more adverse scenarios they would get a better return, as summarised in Table 3.

Spectral measure	Metric / Product A	Metric / Product C	Decision
Risk Neutral	100	100	Only interested in mean returns
Mild Risk Aversion	73	80	Take C
More Risk Aversion	62	77	Take C
Expected Shortfall (care equally about bottom 5%)	48	76	Take C

Table 3 Spectral risk measure assessment (Source: Consumer Risk Metrics IFOA Working Party 2018)

Quantitative methods were also assessed from the consumer understanding perspective, these are summarised in Table 4. There was not a dominant measure as all had benefits and downsides for the consumer. In addition to the quantitative review of a consumer risk metric, a person's interpretation of the metric is equally if not more important, this is reviewed in the next section.

Metric / Property	Standard deviation	Value at risk	Expected shortfall	Interquartile range	Spectral risk
Ease of implementation	✓	✗	✗	✓	✗
Simple interpretation	✓	✓	✓	✗	✗
Ease of extension to other products	✓	✗	✗	✗	✗
Stable measure	✗	✗	✓	✓	✓
Captures upside & downside risk	✓	✗	✗	✓	✓
Captures risk appetite	?	?	?	?	✓

Table 4 Risk metrics assessment (Source: Consumer Risk Metrics IFOA Working Party 2018)

5. Risk metric interpretation by consumers

Sections 3 and 4 of this paper considered the measurement of the likelihood and/or impact of the event on a consumer. The Working Party also assessed the subjective nature of risk assessment by the user of a metric. Psychologists PCL[1] assert three fundamental principles in their research:

- **Risk-taking behaviour is linked to personality**: Risk taking is an intrinsic and unavoidable part of life, not an occasional event. How a person perceives risk, reacts to risk and how much risk they are disposed to take, are day-to-day issues shaped by personality.
- **Risk-taking is not a simple linear variable**: Risk behaviour takes many forms and may be a consequence of, for example, impulsivity, poor vigilance, over-reaction, fear, over-confidence, imperturbability, excitement seeking, unwarranted trust, carelessness, prudence, and many other personality characteristics. A simple linear variable with extreme risk aversion at one end and reckless impulsivity at the other is a relatively crude simplification of this reality.
- **Risk is always situationally and subjectively defined**: Risk is all-pervasive, and anything can be perceived as a risk. People are usually more comfortable taking larger risks when they are on familiar ground. Wealth, age, financial experience and the importance of an investment in the bigger picture will all influence a customer's willingness to take financial risk.

Each of these principles makes developing a universal Consumer Risk Metric more challenging. A risk metric can be viewed as summarising more objective, probabilistic risks in a way that the user of the metric will find helpful to their particular situation. However, evaluation of risk will depend on both the risk inherent in the situation and the perception of that risk by the user of the metric.

Psychologists in general have identified five key factors that can be viewed as the 'primary colours' that underpin all personality. Together they are termed the 'Five Factor Model' and it is well supported by research findings over the past 20 years. One particular firm PCL, reviewed by the Working Party, identified 25 themes and arranged them on two conceptually orthogonal scales which highlight the emotional and logical drivers behind approaches to risk-taking. PCL differentiated between Risk Type and Risk Attitude. Risk Type reflects a natural disposition – to what extent you are, for example, usually optimistic or anxious, or perhaps a careful planner rather than acting on impulse. Risk Type is deeply rooted in an individual's personality and will influence how much risk they are willing to take, how much uncertainty they can cope with and how they react when things go wrong. An assessment by PCL places a candidate in one of eight categories on the Risk Type Compass®, shown by the labels at the compass points in Figure 3.

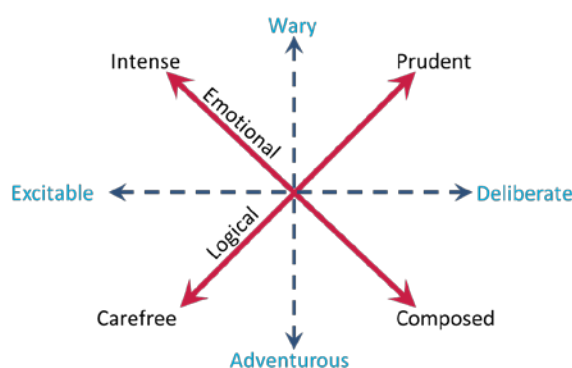**Figure 3 Emotional and logical drivers behind PCL's eight Risk Types (Source: Psychological Consultancy Limited 2017)**

Risk Attitude looks at how experience and personal circumstances contribute to risk-taking behaviour. Whereas Risk Type is deeply rooted and unlikely to vary, Risk Attitude will depend on experience and

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[1] Psychological Consultancy Limited: www.psyhcological-consultancy.com

personal circumstances. People are usually more comfortable taking larger risks when they are on familiar ground. For example, wealth, age, financial experience and the importance of an investment in the bigger picture will all influence a customer's willingness to take financial risk.

Taken together, Risk Type and Risk Attitude determine risk-taking behaviour, and PCL combine these two into a Risk Tolerance index for the purposes of financial advice. Figure 4 shows an example of how a deliberate investor might map to the risk tolerance index.
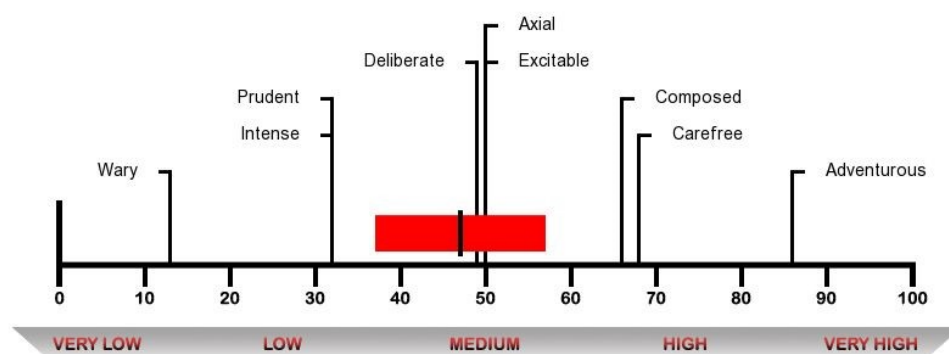

Figure 4 Risk Tolerance Index (Source: Psychological Consultancy Limited 2017)

Risk tolerance can be condensed to a single number and onto a scale of descriptive categories. This forms the basis of traditional attitude-to-risk assessment tools which are now a familiar part of the investment product toolkit for advisers. Risk tolerance varies according to the customer's Risk Type, so does their entire approach to making risk-based decisions. A traditional risk metric does not vary according to the personality type of the consumer using the metric. To be effective, a traditional risk metric will need to be put into context and where possible take into account the way that metric will be interpreted by the user. Ideally that requires an understanding of the risk disposition of the customer, which in turn implies the need for a risk personality assessment; either formally through questionnaires, or informally as part of the natural interactions of a face-to-face advice process. The Working Party recognise that many consumers buy products on-line, without advice, these are via comparison websites.

6.   Qualitative review of Consumer Risk Metrics

Capturing a consumer's risk appetite prompted a review of metrics which are used within insurance comparison websites. Comparison sites aim to provide consumers with a user friendly means to simultaneously assess products. The Working Party researched some of what was available to consumers and the methods used to display qualitative comparative information.

According to their website, as of 21 April 2018 MoneySuperMarket.com (MSM) is the UK's leading price comparison website. Along with MoneySavingExpert and Travelsupermarket it comprises Moneysupermarket Group PLC, a member of the FTSE 250 Index, with annual revenue for 2017 of £329 million. The number of average monthly users of MSM is quoted as 6 million. The scale of MSM means it has sizeable resources to develop methodology to help their customers find "the product most suited to their needs".

MSM, for a range of general insurance products, compares the price of different providers' products. However, increasingly, additional information is provided to allow the customer to assess the quality of the different offerings as well as price. For household insurance, for example, as at April 2018 ratings are given for overall quality, claims experience customer ratings, legal expenses, home emergency and accidental damage. For household, MSM produce five different metrics for each of the more than 80 providers they compare. For legal expenses, home emergency and accidental

damage add-ons, the metric is largely measured by the benefits provided by the policy. For claims experience, a metric is derived from data collected by MSM and by a specialist market research company; customers rate their experience of actual claims. The overall quality score is derived by firstly asking customers what three most important factors affect the quality of their insurance, and then testing every policy for these three factors, which were claims handling, what the insurance includes, and the quality of customer service; customer priorities and requirements being used to drive how the second and third of these were measured.

From this, it is clear that MSM have committed a considerable amount of resource to the production of their metrics, and that the on-going maintenance of these metrics will continue to require substantial resources. MSM offers both life and general insurance products with separate metrics to draw comparison between products and providers. The metrics are useful for consumers who are MSM customers, however not all insurers provide information on exactly this basis or appear on the MSM website therefore it is not easily scalable.

The Working Party also considered the role played by Consumer Groups and whether they used metrics to assess the risks faced by consumers. There are many Consumer Groups dedicated to financial matters which impact consumers, however the focus is predominantly on debt issues and there is less reference to investment/insurance product selection. The Working Party found this avenue of research to be limited and therefore it was not progressed further. If a risk metric was to be designed and tested in the future then a consumer group could be used to gauge the effectiveness and then incorporate their recommendations.

7. How insurance disclosure can help consumers understand risk

There has been considerable research into the information given to consumers at the point of sale. For example, the content and format of product information required by the Insurance Distribution Directive (IDD) is largely prescribed. The implication is that when presented with the right information, consumers will make better decisions.

IDD is a European directive that provides an updated legal framework which governs how insurance and reinsurance products are sold and aims to improve customer protection. IDD is due to come into effect in October 2018, both regulators and the insurance industries across Europe have been making preparations. The IDD introduces a detailed standardised Insurance Product Information Document (IPID) for all non-life consumer insurance products. The content of the IPID is defined in the IDD.

The European Commission has also introduced new regulations to make the complex investment environment more understandable by consumers. The FCA has mandated a Key information document (KID) to comply with the Packaged Retail and Insurance-based Investment Products (PRIIPs) law. The FCA has specified the format. "Each KID will need to contain the following information, presented in a pre-determined sequence of sections. The sections are:

- What is this product?
- What are the risks and what could I get in return?
- What happens if the PRIIP manufacturer is unable to pay out?
- What are the costs?
- How long should I hold it and can I take money out early?
- How can I complain?
- Other relevant information" (FCA, 2018).

The documents and requirements are prescriptive in nature. "A KID can be up to a maximum of 3 sides of A4-sized paper and may refer to other documents such as a prospectus if the cross-

reference is related to the information required to be included in the KID, or refer to where detailed information can be found." (FCA, 2018) The contents should be clear to ensure the consumer receives the right information on the risk exposure.

In addition to format and content, the KID also contains a risk metric. The Summary Risk Indicator SRI (market risk and credit risk assessment) was developed as part of the PRIIPs KID (Esas-joint-committee.europa.eu, 2017). The European Supervisory Authorities (ESAs) provided practical tools as risk measures for life investment products sold to consumers. The SRI is a quantitative measure which aggregates market and credit risk, the result is presented to the consumer along with performance scenario calculations. The Working Party considers this beneficial for consumers to consolidate complex statistical calculations.

In June 2017, the IFoA's Risk and Customer Outcomes Working Party published their research paper 'How can we improve the customers' experience of our life products?' one of their conclusions related to disclosure. They recommended customer outcomes could be improved if a consumer's risk profile is matched to a product. Also, customers should be made aware of 'what could go wrong'; having forward looking projections could assist in this matter. The recent regulatory changes in product disclosure will benefit consumers; however do they go far enough?

8.   Consumer risk metrics survey 2017

Following the technical research conducted by the Working Party, empirical evidence was needed to gain an insight into insurance consumers' risks and concerns. The feedback would gauge what consumers would like to see from insurers to better optimise the suitability of insurance protection to their risk profile. A survey was performed to collect data to understand insurance consumers':

- Concerns: what is their perceived insurance risk?
- Opinions: what insurance providers can do better to address their concerns?
- Preferences: what information is used to make insurance / risk decisions?
- Behaviour: how do they want to see insurance information provided to them?

Survey hypotheses

The Working Party established hypotheses to explore the level of consumers' engagement with insurance and how insurance products satisfy their risk profile; these are illustrated in table 5. The survey was an opportunity to test the hypotheses which could then inform the design of a CRM.

Hypotheses	Description of the hypotheses to be tested during the survey
Hypothesis 1	**Peace of mind** is a policyholders' main concern. Policyholders want assurance / peace of mind from their insurance policy
Hypothesis 2	**Anticipation of needs**. Policyholders would like insurers to better anticipate their needs and provide value added services (being a partner rather than researching into Big Data, Artificial Intelligence)
Hypothesis 3	**Advisors and price influence** policyholders, typically insurance advisors (life) and price (general insurance)
Hypothesis 4	**Keep it simple -** Policyholders want simplicity in communication

Table 5 Working Party Hypotheses to be tested during the survey

Consumer Risk Metrics survey questions and methodology

The survey was performed on-line by YouGov; it comprised a preliminary background question to filter respondents who had one or more insurance policies, as eligible to take the survey. The survey contained 6 multiple choice questions, the complete questionnaire is included in Appendix 2. Details of the survey methodology are in Appendix 1 and a critical appraisal within Appendix 5. A breakdown of the survey demographics is included in Appendix 3.

Survey population sample

The population sample covered 11 regions in England, Scotland and Wales. A total of 6,000 individuals from the YouGov population set were assigned the survey. 4,131 respondents had one or more insurance policies. 3,393 responses were deemed usable for further analysis. Some responses were considered unusable for further analysis due to inconsistencies within the data. The relatively high number of responses that could not be used raises concerns as to how well respondents understood the questions.

Summary of the key findings from the Consumer Risk Metrics survey

Full details of the survey are included within Appendix 4; this section provides an overview of the key findings. The survey questions are cross referenced and shown in italics along with the relevant hypothesis within tables 6 and 7.

The survey confirmed consumers want insurers to be responsive and accessible in addition to providing them with peace of mind. This means if insurers focus on improving customer experience service delivery and have metrics to demonstrate this e.g. paying claims quickly, this would help satisfy consumers.

What are insurance consumers concerned about?	
Be more responsive, accessible and give me peace of mind	Top concerns were the responsiveness of their insurance provider (57%), provision of peace of mind (53%) and accessibility (44%). This result is consistent across both genders and for all age groups, social economic groups as well as for working and non-working respondents. *(Question 2; this supports hypothesis1)*.
I want to easily understand my insurance products	The ability to easily understand their insurance coverage (66%) is called for by customers across all spectrums. *(Question 3)*
You do not need to predict what I want	Consumers did not expect their insurers to anticipate their demands and needs (24%). *(Question 3; invalidates hypothesis 2)*.
You do not need to show me empathy	Consumers seek little empathy (17%) from their insurance providers. *(Question 2)*.

Table 6 Key findings from the consumer Risk Metrics survey - consumer's concerns

An objective of the survey was to better understand the form of communication that consumers prefer; the survey indicated the "keep it simple" style of communication was not favoured. Consumers showed a preference for unbiased, factual information from insurers and they would refer to independent bodies and other user experiences when researching insurance. The trust element to the insurance industry is lower than some of the Working Party had expected.

What style of risk communication would consumers like to see from their insurers?	
Price is important to me	3 out of 4 factors which influence policyholders related to cost; price affordability (58%), price relativity (50%) and fees / charges (25%) are key factors in the decision making process of an insurance consumer. Price sensitivity increased with age. *(Question 4, supports hypothesis 3, for general insurance as premium affordability is a driver)*.

I want to research before buying insurance	Half of the respondents said they will compare and check user/independent reviews before buying or making a decision on their insurance purchase. Aggregators and comparison sites play a significant role. This is observed as not too dissimilar to consumer experience in other industries where aggregators are increasingly playing a major role *(Questions 4 and 6).*
I do not want to be influenced by the media or advisors when buying insurance	Media and insurance advisors/broker did not play a significant in the decision making of consumers (Media 5%, Advisors/Brokers 7%); this could be a contributing factor to the advice gap. Limited confidence in engaging advisors with financial issues and the lack of trust following past instances of misselling in the country. *(Question 4, this invalidates hypothesis 3 for life insurance as advisors do not appear to play as an important as the Working Party had expected).*
I like to see what others have to say	Insurance consumers are most receptive when information/reviews are coming from other users (27%), and independent bodies such as Which, an independent consumer research group or the Actuarial profession (36%). *(Question 6).*
Social media does not influence our insurance decision making	Social media did not influence the insurance purchase of most consumers; though for the younger segment of the population and those in the socio-economic grouping of C2 and below were more receptive to this channel of communication. *(9%) (Question 6).*
Simple metrics do not tell me what I want to know	The simple style of communication in the form of a counter or a rating was not favoured by respondents to the survey (17%) *(Question 6, invalidates hypothesis 4).*

Table 7 Key findings from the Consumer Risk Metrics Survey - risk communication preferences

9. Review of progress against the Working Party's objectives

The aim of the Working Party is to promote thought on matters relating to the communication of risks faced by insurance consumers (policyholders). Thought has indeed been given, and at times the Working Party felt overwhelmed by the scope of the research which in retrospect was too broad. Reviewing progress against the Working Party objectives:

- **Objective 1: the identification and understanding of consumer risks / concerns.** The Working Party assessed the risks and concerns faced by consumers and the role performed by insurance to mitigate these. The YouGov survey indicated consumers look for unbiased information from insurers and easy to understand coverage. The insurance industry is built upon reputation and trust, a policyholders' risk assessment of their needs and selection of insurance protection should result in good customer outcomes. The survey indicated consumer preference to refer to independent bodies and other users when sourcing and reviewing insurance information. Consumer's lack of expectation of guidance from insurers and intermediaries surprised the Working Party. What could the insurance industry do to improve this?

- **Objective 2**: **to highlight practical considerations of consumer risk metrics that allow the consumer to make an informed choice.** The quantitative review of risk metrics identified that there was not a dominant measure for the consumer to aid their choice of products. Comparison websites whose analytics provide customers with a range of products are a practical method to deliver consumer choice. Changes introduced in customer facing documents represent progress to provide easy to understand and comparative disclosure to consumers.

  Metrics developed in the future must be sufficiently robust to address the key concerns faced by insurance consumers and to be personalised so they are meaningful, this personalisation is a theme for future research. A consumer's risk profile is complex, consumers may not think

and behave exactly as insurers try to predict within their models. Insurance models should be adjusted to take into consideration the behavioural variance. 'Behavioural research shows us that consumers are not the economically rational "super consumers" research models might assume.' (FCA (2017) FCA Mission: Our Future Approach to Consumers).

10.   Further research recommended by the Working Party

This insight into Consumer Risk Metrics demonstrates there is still further investigation needed; this is the start rather than the end. As the communication of risks faced by consumers is an important matter for insurers and regulators, the Working Party recommend specialist research in conjunction with the regulator to focus on specific areas of risk communication with the aid of metrics which all insurers could adopt for ease of product comparison by consumers. Metrics within the FCA's general insurance value measures pilot schemes (2016 and 2017), should be reviewed and potentially used more extensively to enable consumers to compare products. So far the FCA has concentrated on metrics for general insurance claims frequency; claims acceptance rate and average claim pay out, in relation to selected firms within their pilot. (FCA (2018). General Insurance value measures data – year ending 31st August 2017). The Working Party's survey indicated consumer preference for insurers to be responsive and fulfil their insurance obligations e.g. paying claims in a timely manner. Insurers' development of metrics to demonstrate offering a superior claims service would be attractive to consumers and seen to add value.

Throughout the review, the Working Party has acknowledged the importance of a personalised risk measure(s) for consumers; how this can be achieved warrants further investigation. To be successful, the method must generate a level of risk self-awareness in the consumer, whether this is ascertained by a series of questions or on-line assessment should be researched. Risk ownership by the consumer is essential to avoid un-due influence and potential mis-selling. Increased personal risk awareness would make the development of risk metrics by insurers more meaningful and generate fair customer outcomes.

For life insurance, a consumers' risk profile could change over time as it is impacted by life events, metrics are needed which can factor in longer term changes instead of a one year view of risk which is suitable for general insurance. Price could still be a dominant factor but there are other considerations which would need to be incorporated within a risk metric design for life products.

The research and survey focused on British consumers, these results may not be representative of consumer preferences in other locations. A comparative review could be performed in other countries for both general insurance and life, this might identify a different attitude to risk and how insurance can be used to mitigate risks faced by consumers. For example, the Working Party is aware of other studies which could be used as a comparison (Society of Actuaries (2014)).

The on-line survey was useful to gain an insight into insurance consumers' attitude to risk and their preferences. Further analysis of the survey results is recommended. Also to compare the survey results with another on-line survey conducted at the same time into consumer attitudes towards life policies having a 'With Profits' benefit. The relatively high number of responses in the in the survey which could not be used raised concern as to how well respondents understood the questions. In future research, to avoid misinterpretation, the Working Party recommend deep dive interviews to explore fully the motivations and reasons for some of their answers; this could inform the future design of consumer risk metrics.

11. Acknowledgements

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13. Appendices

Appendix 1 - Survey process and methodology

The Working Party received funding from the Institute and Faculty of Actuaries' Life Board to conduct a survey. Following a request to tender from a number of leading survey companies, YouGov, who is registered with the Information Commissioner, was selected to perform the survey, as it scored the highest using the following selection criteria:

- Fit to criteria in Request for Tender
- Robustness of proposal
- Practical application
- Evidence of similar projects
- Ability to meet within timescale
- Value for money

YouGov was appointed for the Consumer Risk Metrics survey in conjunction with a Working Party that were performing research into consumer attitudes towards life policies having a 'With Profits' benefit. The Consumer Risk Metrics survey and Value of With-Profits surveys were independent surveys released at a similar time by YouGov as part of the YouGov daily Omnibus survey. The aim of the survey was to reach a representative cross section of the UK population which could be analysed by:

- Gender
- Age Range (5 bands)
- Social economic Grade (ABC1 / C2DE split)
- Government Office Region
- Marital Status
- Working Status
- Family composition in the household, and
- Social Media Usage

The YouGov surveys were performed using their online interview administered to members of the YouGov Plc UK panel of 800,000+ individuals who have agreed to take part in surveys. The survey process is as follows:

- Emails were sent to panellists selected at random from the base sample. The e-mail invited them to take part in a survey and provides a generic survey link.
- The interested panel member clicked on the link they were sent to the survey that they were most required for, according to the sample definition and quotas. (The sample definition was "GB adult population"). Invitations to surveys do not expire and respondents can be sent to any available survey.
- The responding sample was weighted to the profile of the sample definition to provide a representative reporting sample.
- The sample data selected aimed to mirror the population distribution based on the latest census or from industry accepted data.

The Consumer Risk Metric survey went live on 1st and 3rd November 2017. Survey results, including the underlying data, were provided to the Working Party in December 2017.

Appendix 2 – YouGov Survey questions

Number 0 is the qualifying question which determines eligibility to take the survey; this was taken from YouGov's set list of insurance policies.

0. **Which of the following insurance policies do you currently own?** Please tick all that apply. Standalone home contents insurance policy (i.e. policy does not have buildings insurance)
     i. Standalone home buildings insurance policy (i.e. policy does not have contents insurance)
     ii. Joint home/building and contents insurance
     iii. Motor insurance (fully comprehensive)
     iv. Motor insurance (third party only)
     v. Motor insurance (third party fire and theft)
     vi. Travel insurance (single trip – in this case please select this option if you have had cover at any point in the last 12 months)
     vii. Travel insurance (annual cover)
     viii. Mobile phone insurance
     ix. Pet insurance
     x. Life insurance
     xi. Credit card or loan Payment Protection Insurance (PPI) (pays your credit card or personal loan costs if you can't work because of ill health and/or unemployment)
     xii. Mortgage Payment Protection Insurance (MPPI) (pays your mortgage costs if you can't work because of ill health and/or unemployment)
     xiii. Income Protection (IP) (e.g. pays you a monthly income if you're unable to work due to accident, sickness or unemployment)
     xiv. Private Medical Insurance (PMI) (e.g. cover for treatment or medical expenses)
     xv. Private Dental Insurance
     xvi. Individual income protection (IP) (paid for by myself)
     xvii. Group income protection (provided by my company)
     xviii. Mortgage payment protection
     xix. Life insurance
     xx. Critical illness
     xxi. Personal Sick Pay
     xxii. Over 50s plan
     xxiii. Other
     xxiv. Don't know
     xxv. None of these

1. **You previously said that you hold at least one insurance policy. Thinking about your expectations as a customer regarding your insurer. Which, if any, of the following do you agree with?** (Please select all that apply).
     i. I expect the insurer to carry out what they say they will do
     ii. I expect the insurer to anticipate my needs
     iii. I expect the insurer to provide expertise and "pay up" when there is a claim
     iv. I expect the insurer to keep premiums low and maintain high service levels
     v. I expect the insurer to be fair (e.g. I can change or surrender without excessive charges/ penalties)

      vi.   I expect the insurer to help me understand what I'm buying and how I can claim/ guide me on financial protection

     vii.   I expect the insurer to provide "real insurance", with detail so that I know what is covered

   viii.   None of these

     ix.   Don't know

2. **For the following question, please think about all your insurance policies/ insurers that you deal with. Which, if any, of the following are key concerns for you?** (Please select all that apply. If nothing in particular concerns you, please select the 'Not applicable' option)

       i.   Assurance (e.g. to provide peace of mind in times of crisis or in the insured event, pay on time or provide me with the assistance needed to get me out of the crisis)

      ii.   Reliability (e.g. mistakes made by the insurer are not being corrected)

     iii.   Not able to speak to a person live or go to a service areas/ website

     iv.   Responsiveness (e.g. responds quickly to my requests)

      v.   Suitable (e.g. receiving appropriate advice for my needs from the insurer)

     vi.   Empathy (e.g. to be my friend whenever I or my loved ones reach out to my insurer)

    vii.   Trust and Value (e.g. making me aware of better opportunities for me)

   viii.   Accessible (i.e. being able to reach them on mobile, online, social media, etc.)

     ix.   Other

      x.   Don't know

     xi.   Not applicable - nothing in particular concerns me

3. **Still thinking about all your insurers that you deal with... Which, if any, of the following would you like to see your insurer do?** (Please select all that apply)

       i.   Continuously help give me the best value for my policy, and not only when I threaten to renew/ leave

      ii.   Help me understand what my own best interest are and my potential risks (i.e. not the best interests/ risks to the insurers)

     iii.   Treat my money as mine, rather than the insurers

     iv.   Anticipate my needs and understand the risks that I face. Even prompt me to re-assess my cover (e.g. if asset values have increased)

      v.   Have real experts and professionals to support me and understand my policy

     vi.   Make it easier and quicker for me to claim and be serviced - anytime, anywhere, and "one-stop shop"

    vii.   Explain what is covered and what is not in the language that I can understand

   viii.   That they do not charge me other than my premium

     ix.   Other

      x.   Don't know

4. **Still thinking about all the insurers that you deal with... Which, if any, of the following have led you to select any insurance product you own from any insurer?** (If nothing in particular led you to select any insurance product you own from any insurer, please select the 'Not applicable' option)

       i.   The amount I pay for my premium

      ii.   The amount of fees I pay to the insurer

     iii.   Word of mouth (e.g. from my neighbours, friends, family, etc.)

     iv.   Media (e.g. social media comments, blogs, websites, advertisements, etc.)

    v.   My past experiences with the insurance policies/ insurers

    vi.   The information (both written and verbal) provided to me by insurers

    vii.   Comparing the insurer with other insurance companies

    viii.   The products that the insurer provides (e.g. investments, income, etc.)

    ix.   My financial advisor/ broker/ expert

    x.   Other

    xi.   Don't know

    xii.   Not applicable - nothing in particular led me to select any insurance product you own from any insurer

5. **Which, if any, of the following would you find useful for your insurer to provide to you?** (Please select all that apply)

    i.   Provide and anticipate my insurance needs specific to my circumstance

    ii.   Give me facts about the cover so I can decide myself

    iii.   Do not try to predict the future by giving unrealistic expectations

    iv.   Informing me of all fees and charges, options, risks, benefits, trade-offs

    v.   A "yes/ no" assessment for my personal needs based on my current financial situation

    vi.   Communicate with me through the channel I prefer (e.g. face-to-face, social media, email, SMS etc.)

    vii.   Help me manage or mitigate my risks (e.g. tell me the latest scientific research to prevent stress, what to do to avoid thief in my area etc.)

    viii.   None of these

    ix.   Don't know

6. **For the following question, please think about your insurance with regards to "risk management" (i.e. avoiding any potential loss) In which, if any, of the following ways would you like insurers to express risk in a way that is easy for you to understand?** (Please select all that apply)

    i.   "Calorie counter" style - a single numerical/ alphabetical/ rating (e.g. "grade 1", "A+', etc.)

    ii.   "Amazon/ Trip Advisor" style - a star rating and user reviews

    iii.   "Which?" style - qualitative review rating by the Institute of Actuaries

    iv.   Social Media - user reviews (e.g. from YouTube, Twitter, etc.)

    v.   None of these

    vi.   Don't know

Appendix 3 – YouGov sample population demographics

This table reflects the cleansed survey sample; it shows that the sample population is skewed towards older age groups, working and retirees, social economic classes of C2 and above and those with general insurance policies. The family status of the respondents was not analysed.
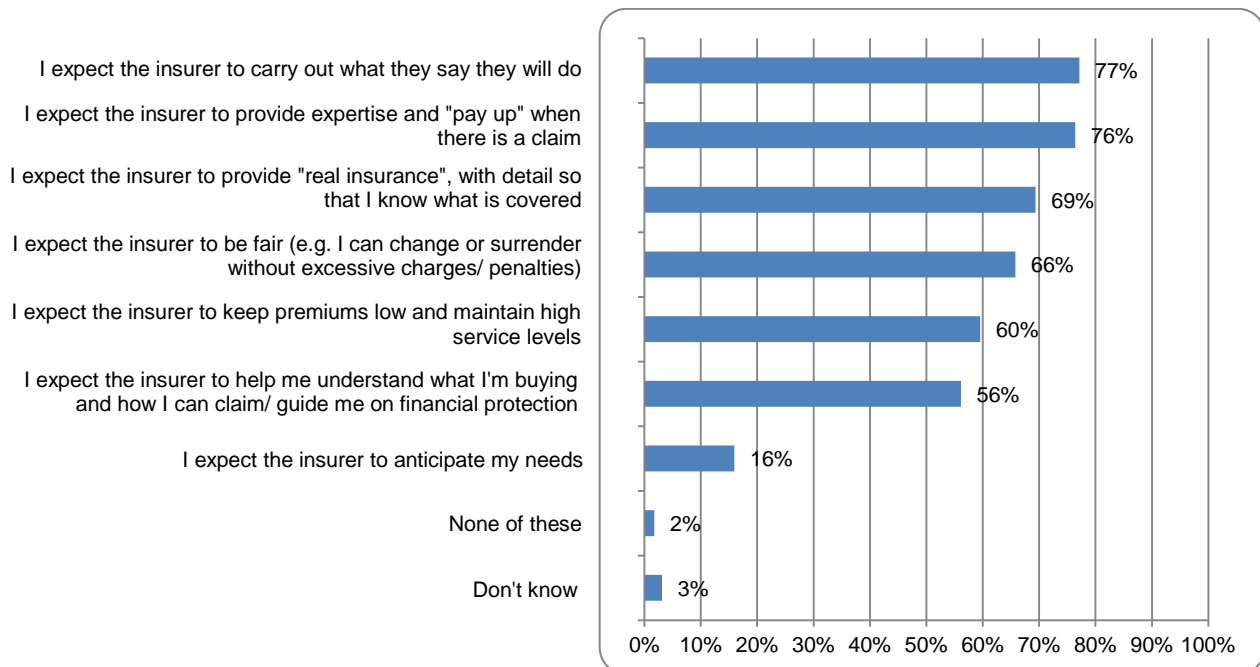
	Description	
Total Number of Respondents	3,393 individuals	
Gender	Females: 1,843 (54%)	Males: 1,550 (46%)
Age Group (years by last birthday)	18-24: 219 (6%) 25-34: 441 (13%) 35-44: 589 (17%)	45-54: 660 (19%) 55+: 1,484 (44%)
Employment status	Not Working: 230 (7%) Unemployed: 64 (2%) Full Time Student: 99 (3%) Part Time Working (<8 hrs.): 64 (2%)	Part Time Working (8-28hrs): 445 (13%) Fulltime Working: 1,499 (44%) Retired: 899 (26%) Other: 90 (3%)
Regional Spread	North East: 155 5% North West: 350 10% East Midlands: 262 8% East England: 330 10% London: 384 11% Scotland 288 8% South East 488 14% South West: 348 10% Wales: 181 5% West Midlands: 292 9% Yorkshire and the Humber: 315 9%	
Socio Economic Class	A: 458 B: 675 C1 : 999	C2: 597 D: 356 E: 308
Insurance Type*	Respondents with General Insurance cover(s): 3,331 Respondents with Life Insurance cover(s): 1,448	

Table 8 YouGov sample population demographics (Source: Consumer Risk Metrics IFOA Working Party 2018)

* Individuals can have both Life and General Insurance.

Appendix 4 – YouGov Survey detailed results

1. **Results for question 1: You previously said that you hold at least one insurance policy. Thinking about your expectations as a customer regarding your insurer. Which, if any, of the following do you agree with?**

|	
I expect the insurer to carry out what they say they will do	77%
I expect the insurer to provide expertise and "pay up" when there is a claim	76%
I expect the insurer to provide "real insurance", with detail so that I know what is covered	69%
I expect the insurer to be fair (e.g. I can change or surrender without excessive charges/ penalties)	66%
I expect the insurer to keep premiums low and maintain high service levels	60%
I expect the insurer to help me understand what I'm buying and how I can claim/ guide me on financial protection	56%
I expect the insurer to anticipate my needs	16%
None of these	2%
Don't know	3%

Table 9 Expectations of customers from their insurers (Source: YouGov Survey 2017)

Unweighted base: All GB adults who have an insurance policy (3,393)

- Consumers expect their insurers to fulfil their duties by carrying out their obligations within the policy (77%). This is marginally ahead of insurers being experts and paying claims (76%).
- Keeping premiums low and maintaining a high level of service (60%) received endorsement from insurers but was less of a priority.
- Anticipation of consumer needs by insurers was significantly lower (16%) and anticipation by consumers that they value current service more than looking ahead.
- The categories for 'none of these' (2%) and 'don't know' (3%) were infrequently used which illustrates that consumers have an expectation that insurers should actively engage with them and providing a product / service.

2. Results for question 2: "For the following question, please think about all your insurance policies/ insurers that you deal with. Which, if any, of the following are key concerns for you?
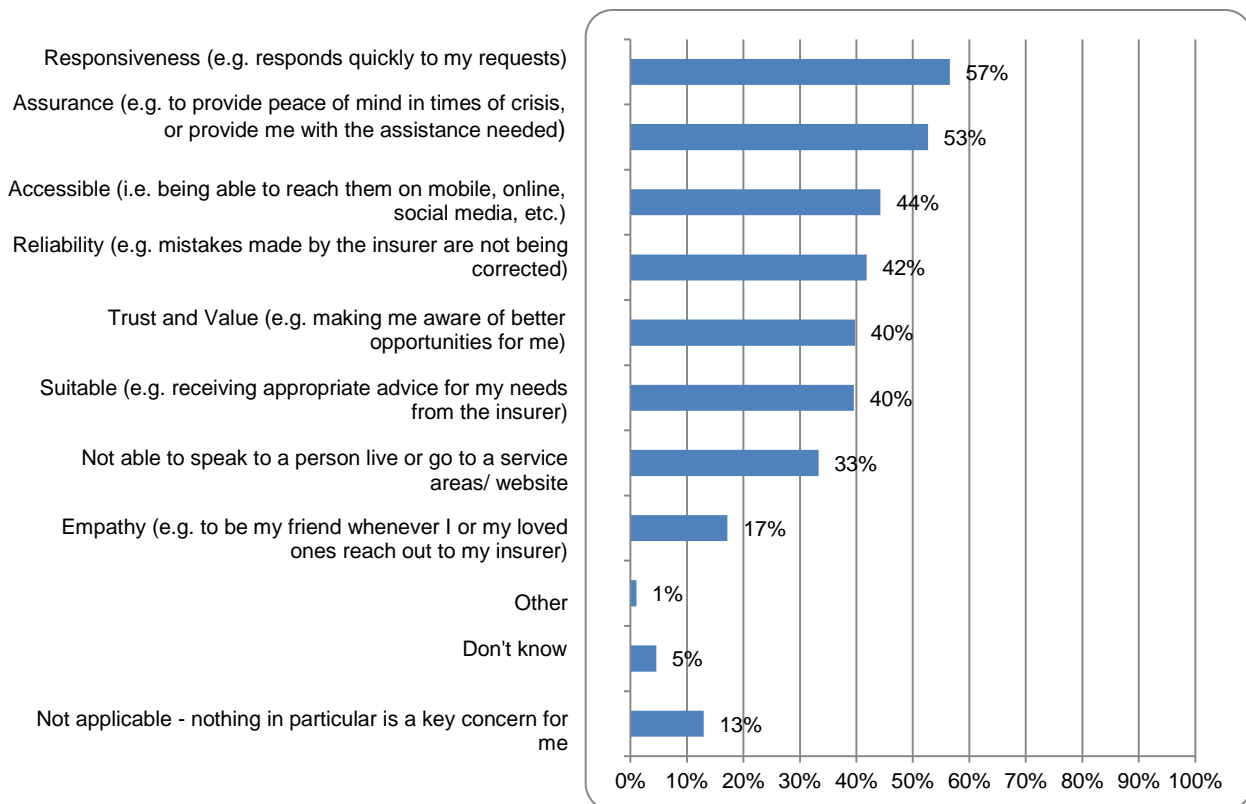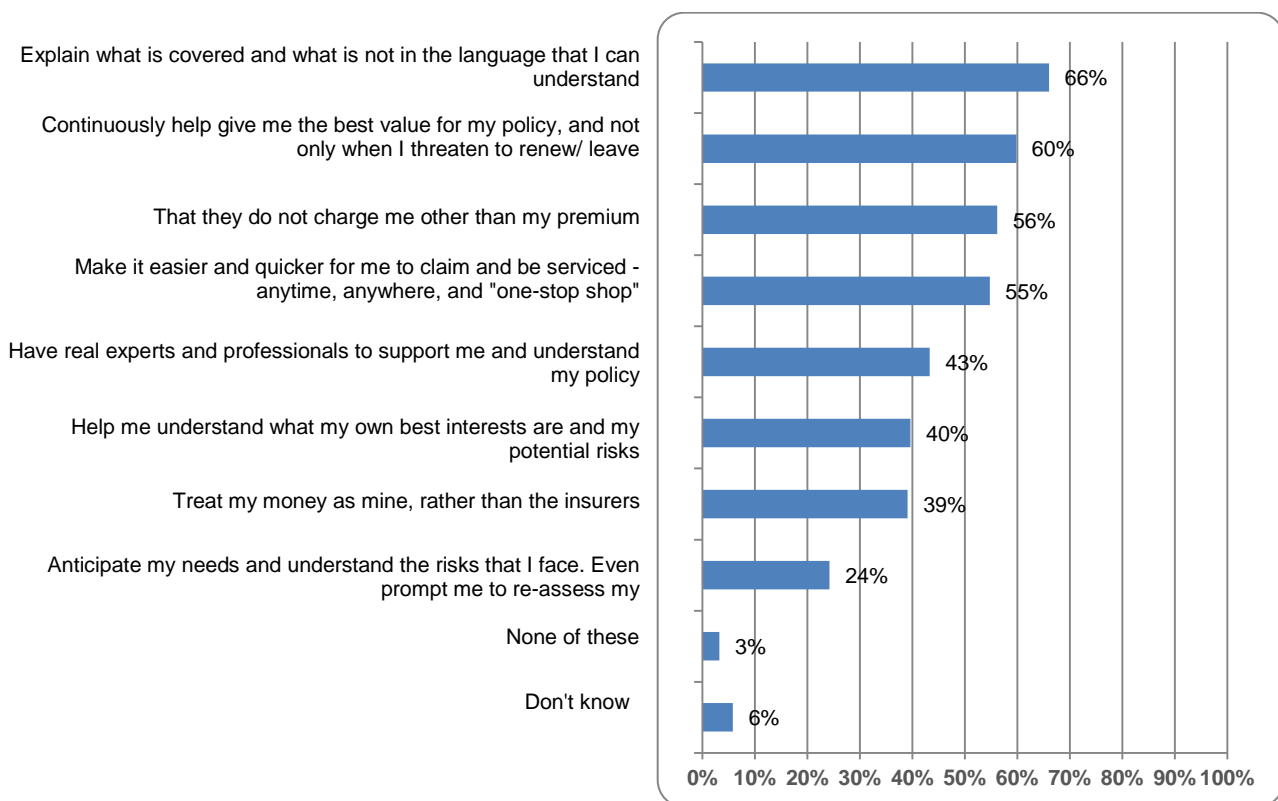

Table 10: Key concerns from policyholders in relation to their insurers (Source YouGov Survey 2017)

Unweighted base: All GB adults who have an insurance policy (3,393)

- Both Life and General Insurance consumers are concerned about the responsiveness (57%) and accessibility (44%) of their insurance, aside from the obvious assurance (53%) ability of their providers. This result is consistent across both genders and for all age groups, social economic groups as well as for working and non-working respondents. The concern is particularly prominent amongst those aged over 45.
- Consumers do not seek much empathy (17%) from their insurance providers.

3. **Results for question 3: Still thinking about all your insurers that you deal with... Which, if any, of the following would you like to see your insurer do?**


Category	Percentage
Explain what is covered and what is not in the language that I can understand	66%
Continuously help give me the best value for my policy, and not only when I threaten to renew/ leave	60%
That they do not charge me other than my premium	56%
Make it easier and quicker for me to claim and be serviced - anytime, anywhere, and "one-stop shop"	55%
Have real experts and professionals to support me and understand my policy	43%
Help me understand what my own best interests are and my potential risks	40%
Treat my money as mine, rather than the insurers	39%
Anticipate my needs and understand the risks that I face. Even prompt me to re-assess my	24%
None of these	3%
Don't know	6%

Table 11 what consumers would like their insurers to do (Source: YouGov Survey 2017)

Unweighted base: All GB adults who have an insurance policy (3,393)

- The demand to better understand one's insurance coverage (66%) is called for by customers across all spectrums.
- The demand for insurance providers to better anticipate the demand and needs of their customers is not as high as the working party has expected.

4. Results for question 4: Still thinking about all the insurers that you deal with... Which, if any, of the following have led you to select any insurance product you own from any insurer?
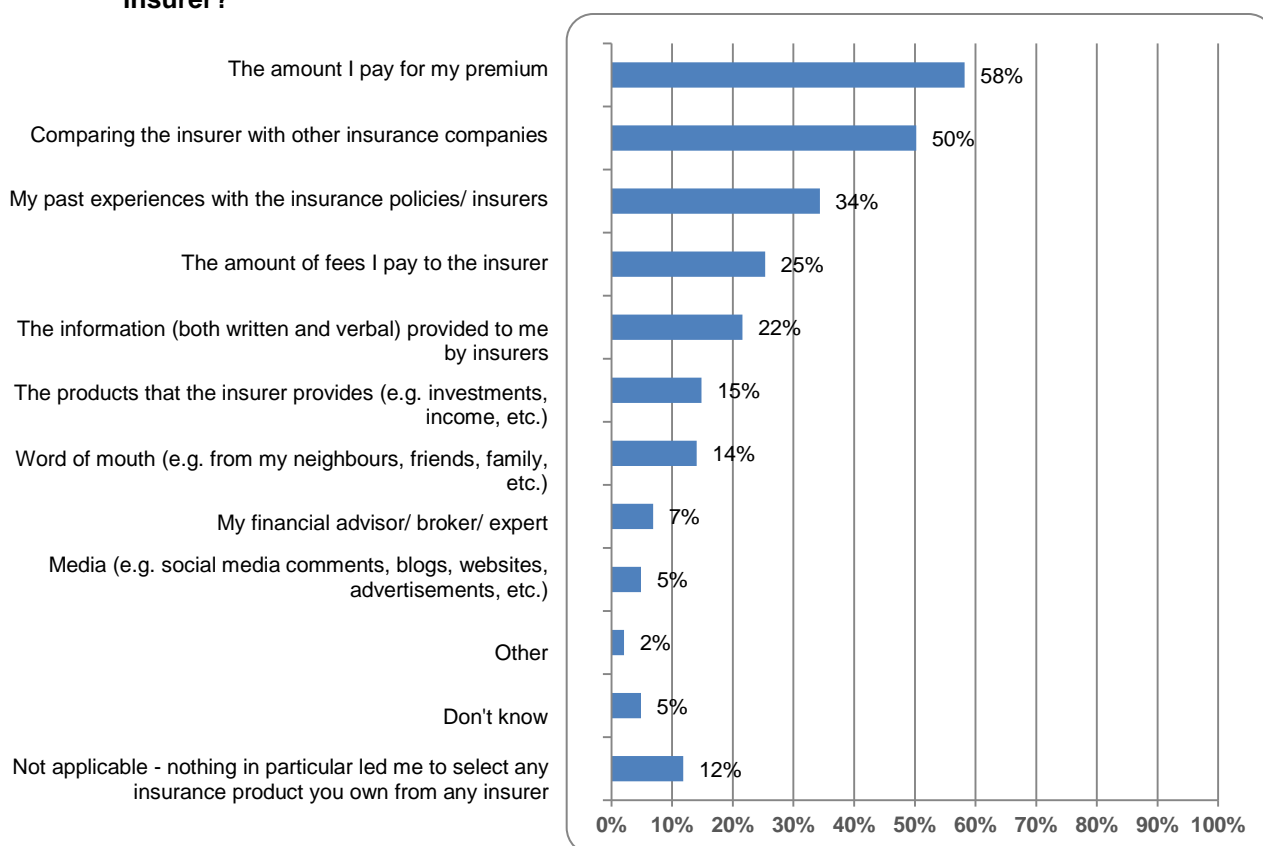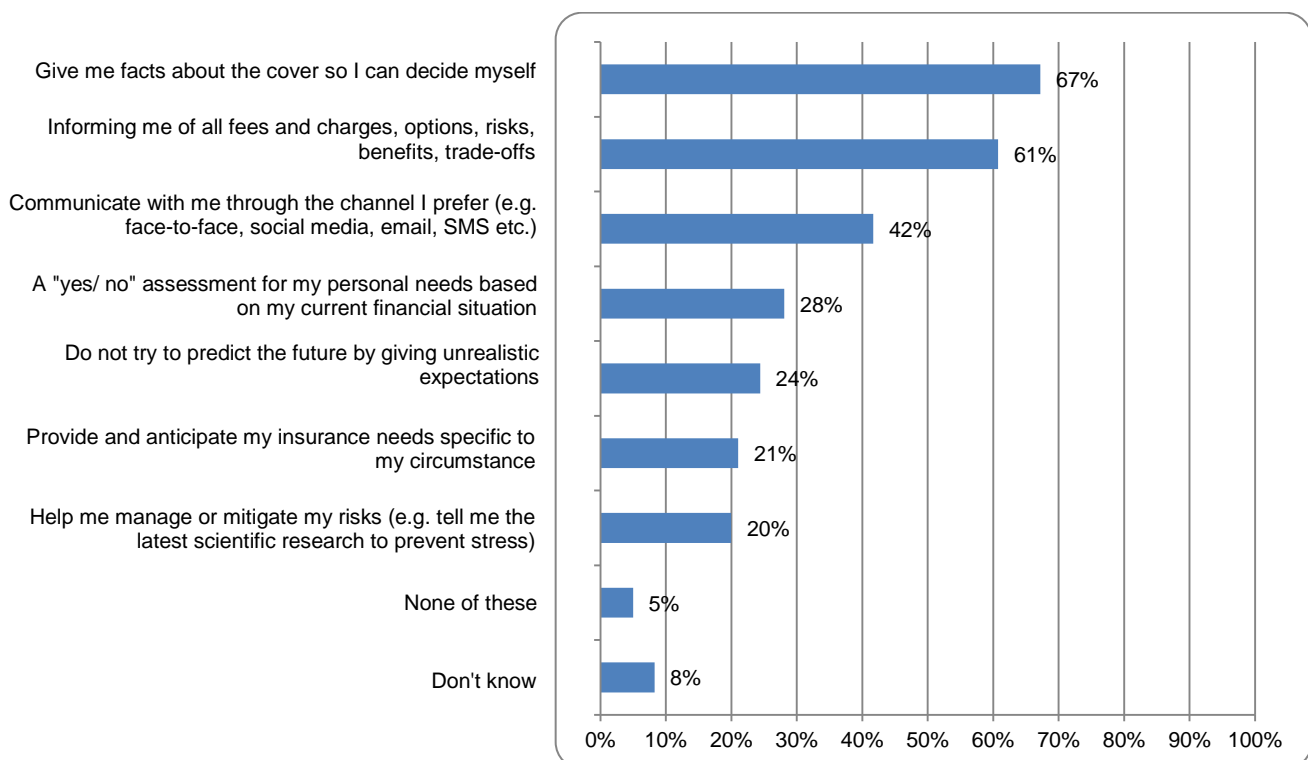

Table 12 Factors which influence product choice from insurers (Source: YouGov Survey 2017)

Unweighted base: All GB adults who have an insurance policy (3,393)

1. 3 of the top 4 top influencers to a policyholder are money related. Price affordability (59%), price relativity (50%) and fees and charges (25%) are key factors to the decision making of an insurance consumer. Furthermore, price sensitivity increases as age increases.
2. Half of the respondents say they will compare and check user/independent reviews before buying or making a decision on their insurance matters. Aggregators and comparison sites such as Money Super Market (MSM) and others as indicated in Question 6 play a significant role here. This is observed as not too dissimilar to consumer experience in other industries such as news sites, retail and the music industry, where aggregators are increasingly playing a major role as consumers respond and trust them more than the direct providers.
3. Media and insurance advisors/broker do not play a significant in the decision making of consumers. This could be a contributing factor to the advice gap that results in 66% of respondents appear to not fully understand the insurance cover(s) they hold. The root causes could arise from the prohibitive cost of financial/insurance advice, the limited confidence in engaging advisors with financial issues and the lack of trust following past instances of misselling in the country. (Media 5%, Advisors/Brokers 7%)

5. Results for question 5: In general, which, if any, of the following would you find useful for an insurer to provide to you?

Table 13Useful indicators from insurers to consumers (Source: YouGov survey 2017)

Unweighted base: All GB adults who have an insurance policy (3,393)

- Customers like to make decisions for themselves if they are given facts by the insurers (67%). A similar number of policyholders (61%) also rated highly the need to understand all of the fees, charges and options within their contracts. Having information allows the customers to make informed decisions.
- Lower preference was given to insurers trying to anticipate customer needs (21%) and providing information to policyholders on e.g. scentific developments.

6. **Results for question 6: For the following question, please think about your insurance policies/ insurers with regards to "risk management" (i.e. avoiding any potential loss)... In which, if any, of the following styles would you like insurers to express risk in a way that is easy for you to understand?**
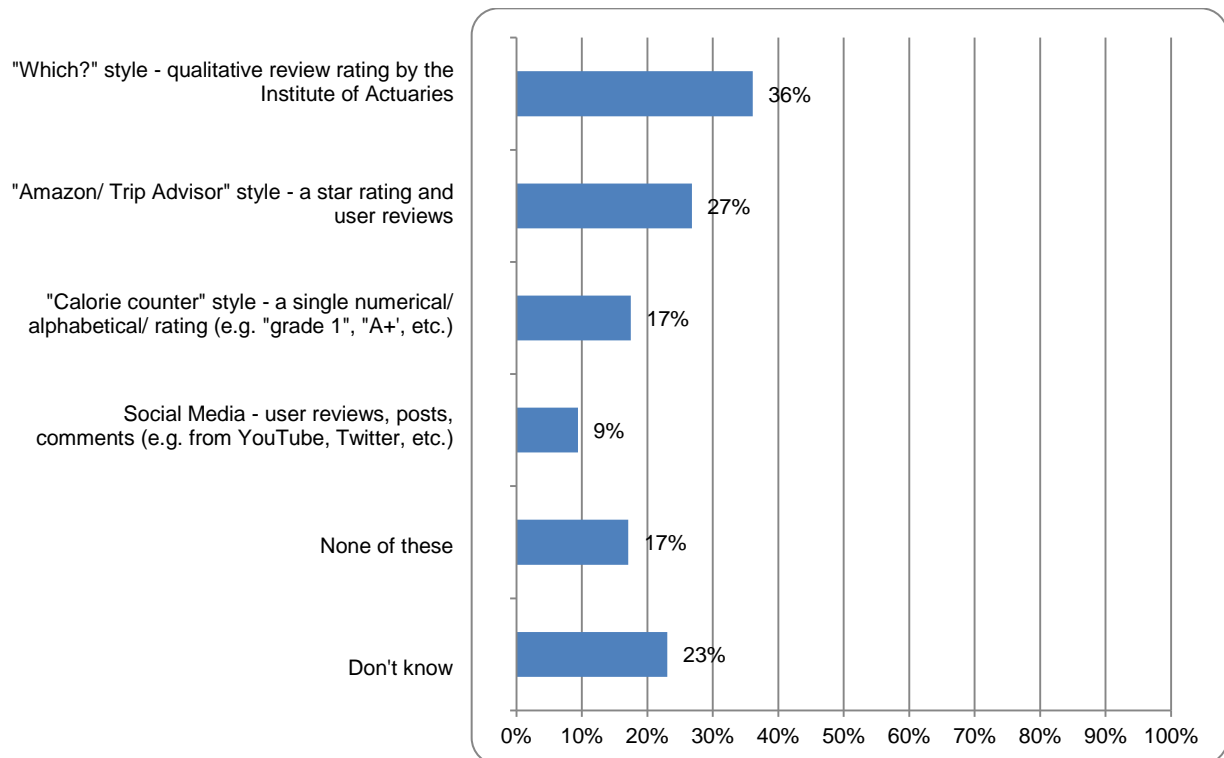

Table 14 Consumer preference for the expression of risk from their insurer (Source: YouGov survey 2017)

Unweighted base: All GB adults who have an insurance policy (3,393)

4. Insurance consumers are most receptive when information/reviews are coming from other users (27%) and independent bodies such as Which, an independent consumer research group or the Actuarial profession (36%).
5. Social media is not yet fully embraced by the larger group of insurance consumers; though for the younger segment of the population and those in the socio-economic grouping of C2 and below are more receptive to this channel of communication. (9%)
6. The simple form communication in the form of a counter or a rating also does not prove to be effective to British insurance consumers. (17%)

Appendix 5 – YouGov Survey methodology controls and limitations

The Working Party reviewed the controls within the survey methodology:

- **Anti-selection controls and targeted approach** – Through the preliminary scanning questions for eligibility of respondents, the survey focuses on the responses from insurance consumers only. This control helps mitigate potential anti-selection of respondents to allow all insurance consumers to participate in the survey and not limit it to only insurance influencers or insurance aware who are more likely to choose to complete the survey. The response rate is also calibrated to ensure that it reflects the British population distribution at the time of survey. The questions allow the ability to statistically identify each of the respondents in the survey to provide a level of granularity and a degree precision in the survey results.
- **Bias controls** – The survey is consciously structured by YouGov under clear instructions, to randomise survey answer options to avoid any lead on effect to our hypotheses on the various survey issues. There is also no third party to influence the results, as it is an online self-completion survey approach. Though, we believe there is room for improvement including getting respondents to rank their options by priority to enrich the results further.
- **Population study** – The YouGov population survey methodology aims to mirror the population socio demographic spread in the UK, and ensures statistically sampling size is large enough for the British population (2017: N: 4000 for a typical UK population survey). This reduces the risk, of result variance and undependable results problem as the sample size is being targeted to a statistically sample relevant size that would fit the population being surveyed.
- **Consistency** – the survey questions were structured to allow certain correlation and cross checking to ensure a good degree of consistency in the issues being studied. (Questions 1 -3 on consumer demands and concerns, Questions 4-6 on style of communication).
- **Validation** – the survey high response rate showed some degree of correlation with the responses from a similar survey conducted by the Financial Services Market Authority (FSMA) in recent years, in particular in relation to advisor and accessibility issues for insurance consumers. This gives some assurance of the integrity of the results from the survey though there are other outcomes from the results, which appear surprising and could not be validated, as it seems to be not one that had been explored by the regulators nor publicly available survey studies in the UK to date.
- **Efficiency** – the survey was conducted efficiently by YouGov over the course of 2 weeks and within a reasonable cost level. The data was easy to collate and the homogeneous structure enable quick and easy analysis.

Although the Working Party is reasonably comfortable with the survey methodology there are a number of reservations. These limitations need to be highlighted to ensure that the usage of the results is taken with full consideration. The limitations, typical of many such population surveys, are as follows:

- **Data Integrity** –The cleansing of the sample set including the removal of blank responses of all or some survey questions or the suspicious responses due to time spent on completion of the survey had resulted to the underlying distribution of respondents being skewed more towards the older population and working/retirees. The survey results do not represent all demographic segment of the population in Britain.
- **Online survey respondents** – YouGov has assured the IFoA that the methodology of surveying online respondents is statistically sufficient to reflect the general consumer population of Britain. The Working Party has some reservation on this assumption and was

unable to obtain further assurance and supporting documentation from YouGov to verify this point.

- **Depth of explanations** – the survey results do not provide any depth and explanation of the respondent views nor understanding of how a respondent would interpret the question and answer options. Many of the results in the survey would require a further deep dive to clarity and understanding of context for the response provided.
- **British Only** - This is a British insurance customer survey, and may not reflect the behaviour of insurance consumers in other populations.
- **Comparison to population (Census 2011)**. The Working Party compared characteristics of the survey data with the population data in the 2011 census; this revealed:
  - The survey data is regionally representative of the wider population data and is somewhat representative of the overall split by working pattern (e.g. full time, student), but there are more workers and fewer retirees compared to the census.
  - The ages of the members are not entirely representative of the 2011 census population as there are a significantly larger proportion of survey respondents in the 45 to 74 age range. So they are more clustered around the mean age than in the census. Some of this will be due to the relatively small size of the survey (compared to the census) meaning that extreme ages will not appear as often. Furthermore the census and survey mean ages are different and fail tests to check if they are the same (given a level of random variation). The table below illustrates the differences, negative means that the survey has a higher proportion than the census.
  - The socio economic sample population diverges between those in the survey compared to those in the census data. In particular there are a considerably higher proportion of members in the A and B social grade, which corresponds to those from a more affluent social grade than the general population. This does not seem surprising given the topics being surveyed likely to result in more educated/employed members participating in the survey.
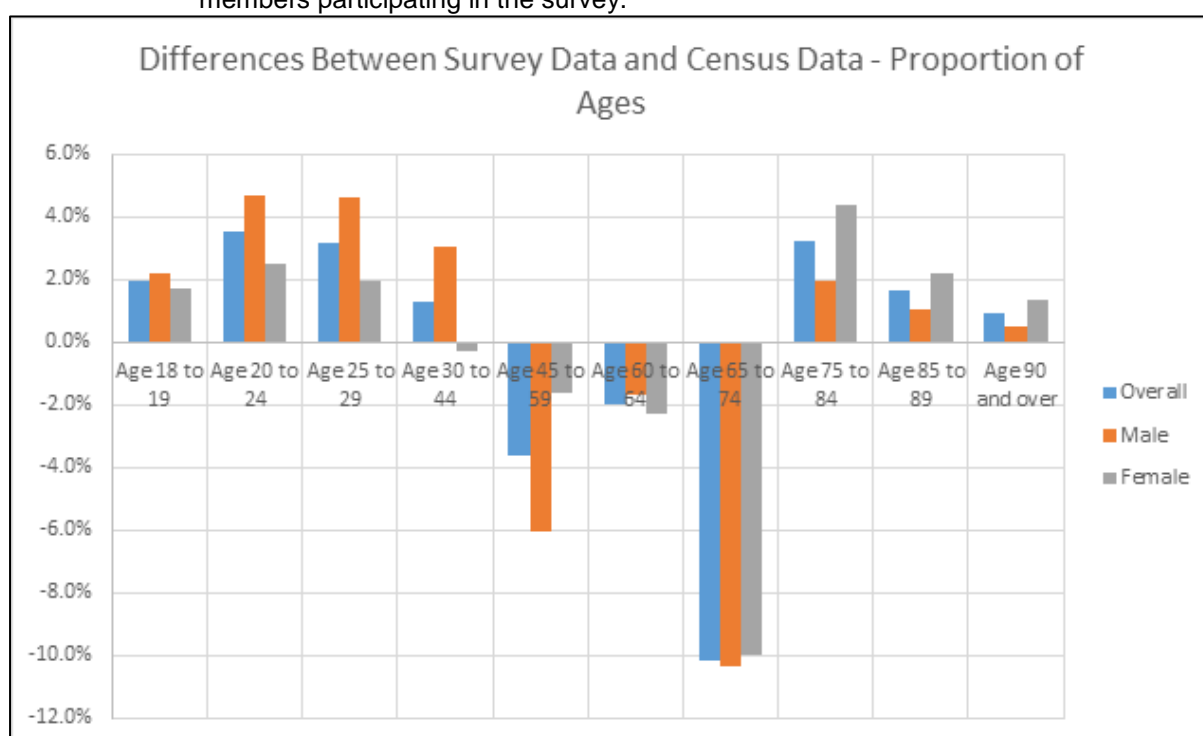
Table 15 Comparison of YouGov survey population with the 2011 census (Source: Consumer Risk Metrics IFOA Working Party 2018)

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