INTRODUCTION

The marketing research industry has long been concerned about declining response rates to surveys (Goyder, McKenzie Leiper 1985, Malhotra 1999, Bednall, Shaw 2003, Hardie, Kotsomitis 2005, Groves 2006), about respondents not answering all questions in self-completion surveys, and by respondents “flat-lining” their answers to scale questions (Reynolds, Anderson and Sharp 2009).

Flat-lining is the term used when answer patterns to matrix questions suggest respondents merely moved down a column of statements selecting the same answer to each statement, without thinking afresh about each new statement. While such answers may reflect respondents’ views, if such answers were unconsidered movements through the questionnaire, those answers would raise concerns about the usefulness of the data captured. Better designed surveys have been posited as solutions to these concerns.

The question then is what make surveys better designed? In particular, given the primacy of online surveys in Australian marketing research (ESOMAR 2009, AMSRS/AMSRO 2010), what elements make better designed online surveys?

The online survey design element reviewed for this paper was the presentation of ranking or rating scales. These are often presented in a matrix, with questions in descending rows and the answers at the top of each column, as Figure 1 shows.

If scale questions could be better designed, the potential problem of flat-lining could be overcome, more questions would be fully answered, and online surveys would provide more effective data.

Scale type advantages and uses have been extensively discussed in marketing research literature and are key elements in textbooks (Boyd,
Some have recommended use of verbal scale formats (Malhotra et al. 2006) and others note use of smiley face and thermometer scale presentations without recommendation (Aaker et al. 2007) or with recommendation as best for use with children (Malhotra 1999, following Alwin 1997).

Visual scale presentations were proposed as good representations of multivariate data (Chernoff 1973) and visual stimuli were seen to be more effective in eliciting correct answers than direct questioning in some situations (Boyd, Westfall, Stasch 1977). Medical researchers have found the Chernoff faces to be the least preferred scale presentations for elderly people and reported graphic analogue scales were effective (Castle, Engberg 2004 and example in Figure 2), while others note graphic analogue scales findings could differ from those obtained by categorical scales (Funke, Reips 2006). Visual analogue scale presentations resulted in longer survey times and higher rates of missing data (Couper, Tourangeau, Conrad, Singer 2006).

Visual languages provide limited expressive value (Chrystal 2008) and the cultural specificity of at least some visual scale presentations can affect interpretation by respondents and researchers (Cape 2009). Hence, the effectiveness of visual scale presentations in marketing research was not clear, though the popular beliefs are that pictures are worth a thousand words (Barnard 1921) and that people find it easier to read pictures as these help convert data into food for the mind (Reichmann 1964).

My interest in examining this issue was piqued by a number of unsolicited comments received from online surveys, over some years. Some unsolicited comments about the emoticon visual scale presentations, which motivated this study, are overleaf.

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Figure 1: Matrix question example.
“Great survey - I love the scales and happy faces - one of the best that I have completed! (sic).” “The clouds/glass/people are a cute touch :)” “Picture Scales are new Clever” “I prefer the picture scales - they make the survey fun!” “They are really good! Never seen them before, I've done lots of surveys and they are quite interesting!!!” “novel approach, good to see some innovation, and animated gifs” “I was hoping you will ask! Both of them very easy and pleasant to use. Also great that it is big and spaced out, it helps so much.” “Absolutely love the pictures on the scales.” “very cute and also clearly conveys the thought/emotion across.” “nice to see something different and pleasant for a change in a survey, it makes all the difference”.

Source: Derham Marketing Research’s online surveys, 2003 to 2009.

The particular scale presentation formats examined are word, number and visual image/slider scale presentations. The visual/slider scale presentations are generally called emoticons.

A possible (and so tested) advantage of the emoticons is that statements that are run one after another in matrix questions in word or number scale presentations must be asked as individual questions (Figure 10). In contrast, word and number scale presentations can be asked in long lists (Figures 8 and 9), and these lists of questions can be susceptible to flat-lining.

**Emoticon images**

Emoticon images are representations of scales and have been developed for use in online surveys. They are mostly used in scale questions and have been suggested as online survey design improvements. Online survey respondents are shown a question with an emoticon as the answer device and are asked to change the emoticon image to the one that best reflects their answer, using a slider next to the image to make the change.

The emoticon scale presentations were provided as a standard part of an online survey package and with an implicit, if un-evidenced, assumption that their use would improve online surveys. It seemed appropriate to test emoticon scale presentation impact on question answers and so on survey design.

Emoticons can be constructed from a range of images and the three used in the 2009 and 2010 surveys are shown in Figure 3. Each is shown at the midpoint neutral position, the position first seen by respondents. When respondents move the slider, the visible image changes. Only one image is visible at any one time, and the image visible depends entirely on the position of the slider.

**Figure 3: Emoticon images used, shown at the neutral position.**
In this study, each set of question and emoticon image answers was accompanied by written instructions asking respondents to move the slider to make the image the one which best represented their answer to the question. The images in Figures 4 to 6 show the range in each emoticon scale tested.

**Figure 4: Face and word emoticon image range.**

, or

**Figure 5: Glass full to empty emoticon image range.**

 or

**Figure 6: Sunny to stormy emoticon image range.**

The survey program recorded whether the respondents used the slider. If the respondent did not use the slider, the program recorded a “no answer” to the scale question when the respondent answered another, later question.

If the respondent wished to record a neutral answer, they had to move the slider and change the image to a positive or negative image and then return the slider to the neutral position, changing the image back to the neutral image. In contrast, when selecting a neutral answer in the word or number scales, respondents select the neutral answer box directly, without needing to first select a positive or a negative answer.

**METHOD**

The five surveys reported in this paper were undertaken by online survey. All were about banking but all were designed to identify whether scale presentation differences influenced question answer rates. Each survey was designed to have the same look, size and screen layout. Figure 7 shows that style with a question that was common to all surveys.

**Figure 7: Example of a screen style common to all surveys.**

The sample for each survey was drawn from the same source and all surveys were about banking. Every effort was made to ensure the email invitations and surveys themselves were the same, scale presentations excepted, and this comparability of survey enabled comparisons to be made.

The surveys used the electronic equivalent of the “tick-a-box” answer method for closed-ended questions, except when the emoticon format scale presentation was used. That format required respondents to touch and move the slider, to record answers.

All surveys included open-ended questions that allowed respondents to add in comments. By design, respondents did not have to answer a question to advance through their survey.

Examples of the four scale presentations used are shown in Figures 8 to 12. It was not necessary to read each question in these scale presentations as the discussion is about the presentation styles, not the questions.
The 2009 survey used the scale presentation example Formats 1 (words), 2 (numbers) and 3 (emoticons). In 2010, the questions in one survey were in the Format 1 (words) style. Questions in the second survey were in the Format 2 (numbers) style, the third survey questions were in the Format 3 (emoticons) style, and questions in the fourth survey tested the words, numbers and emoticons formats with a “can’t say” interval added to each scale presentation.

Formats 1, 2 and 3 had the answer rows and emoticon slider in horizontal positions. The horizontal slider position was deliberately adopted to match the horizontal style of the Format 1 and 2 word and number answers. Format 4’s emoticon slider was positioned to the right of the image and required a vertical up and down movement to change the image (as this up and down movement reflects more common cultural practice than the horizontal slider - Casasanto, Dijkstra 2010).

Each potential respondent received one email invitation to participate in their survey and each was invited to participate in just one survey.

Each survey asked about financial institution use, and about the importance of, satisfaction with and likelihood of use of specified account types.

The 2009 survey was of 90 questions and included three sets of scale presentation Formats 1, 2 and 3. In the 2009 survey, participants were asked to assess scale presentations on a range of attributes and the formats for these attribute questions are shown in Figures 13 and 14. At the end of the 2009 survey, respondents answered questions about their self-perceptions, their demographics, whether they had enjoyed the survey and how likely they were to complete a similar survey in the future.

Each of the four 2010 surveys were about banking, and each was of 33 questions. The questions in each survey were the same and differed only in presentation of the scales formats. Each of the four 2010 surveys collected demographic details and, as in 2009, concluded by asking participants how they enjoyed the survey and how likely they were to complete similar surveys in the future.
Figure 11: Format 4: Word scales with the six points format, shown first in the Format 4, sequence. This presentation was followed by the emoticon scales with six points format, with the image shown in the initial neutral position (shown in Figure 12).

Figure 12: Format 4: Emoticon scales with the six points format, shown last in the Format 4, sequence.

Figure 13: Example scale presentation preference question.

Figure 14: Example scale presentation preference question.
RESULTS
Section 1 looks at question answer rates, Section 2 looks at respondents’ perceptions of different scale presentations, Section 3 looks at enjoyment from completing the survey and the impact of that on future survey intentions and Section 4 looks at the willingness to provide contact details.

SECTION 1 - QUESTION ANSWER RATES

Section 1a - Answer Rates For Individual Questions
The criterion used here for assessing scale presentation effectiveness is the proportions of questions left unanswered (the “no answer” level for closed ended questions). The no answers to the questions in the different scale formats are shown in Table 1 and the results to note follow.

Table 1: Questions not answered, 2009.

<table>
<thead>
<tr>
<th>Format 1 (words)</th>
<th>Format 2 (numbers)</th>
<th>Format 3 (emoticons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4%</td>
<td>3%</td>
<td>24%</td>
</tr>
</tbody>
</table>

1. In 2009, as Table 1 shows, the no answer rate from the emoticon scale presentations was 24% while in contrast 4% of word scale presentations and 3% of number scale presentations were not answered. These are statistically significant differences (d. f. 2, \( \chi^2 = 888.2, p < 0.01 \) and show the way the scale is presented has an effect on the no answer levels obtained.

2. Furthermore, the no answer rates for Format 2 (number scale presentations) is significantly lower than for Format 1 (word scale presentations) (3% cf 4%, \( z = 4.53, p <0.001 \)). This analysis is based on the number of questions, not on the number of people completing the survey, hence the difference between the 3% to 4% is statistically significant.

3. The no answer rates for questions other than the scale questions in 2009 was 4%. The result for Format 3 (emoticons scale presentations) is significantly higher (24%) and the Format 2 (numbers at 3%) is significantly lower.

In the 2009 survey, the financial products asked about in the scale presentations were not the same, and so it was surmised the difference in no answer rates may have been related to the financial products enquired about, rather than to the scale presentations used. Accordingly, in 2010, this possible effect was eliminated. Each format tested the same financial products, in the same order, differing only by scale presentation.

Section 1b - No Answer Rate In The 2010 Surveys
Table 2 shows the 2010 surveys’ no answer responses by Format.

Table 2: 2010 No answers to questions by scale type.

Each Format is a separate survey and is independent of the others and so the findings of each can also be analysed independently.

The higher no answer rates are still associated with the emoticon scale presentation Formats 3 and 4. In each case, the Formats that included the emoticons had significantly higher recorded no answer levels.

In addition, the no answer rate to the Format 2 numbers presentation is lower than the no answer rate to the Format 1 words scale presentation. This difference is statistically significant, and indicates number scale presentation formats perform better than word scale presentation formats in collecting answers and minimising no answer levels.

Tests:
1: % Format 1 is significantly less than % Format 2 (2% cf 3%, \( z = 5.57, p < 0.001 \)).
2: Format 3 words and emoticons has significantly worse no answers to questions than Format 2 numbers. (7% cf 2%, \( z = 84, p < 0.001 \)). We can conclude that Format 3 words and emoticons has worse no answer rates than Format 1.
3: Format 3 words only with Format 3 emoticons only. (2% cf 12%, \( z = 23.05, p <0.001 \)).
4: Format 3 words and Format 4 words and emoticons. Format 3 has a significantly less no answer rate than Format 4. (7% cf 10%, \( z = 8.98, p <0.001 \)).
Section 1c - Emoticons And The Way No Answers Are Registered In The 2010 Surveys

As noted earlier, the emoticon scale image first seen by a respondent appears as a neutral image.

To ensure respondents did not just leave the slider in that neutral position, instructions in the questions told the respondents to move the slider to ensure that an answer is recorded, even if they wished to choose the neutral position. Failing to move the slider would result in no answer being recorded.

After reviewing the data in Table 2, it was hypothesised that respondents who wanted to report a neutral answer may have left the emoticon image unchanged (despite instructions to move it, because open ended comments explaining why the emoticon scale format was quickest to use included statements such as “If a neutral response was required, no movement of the bar was necessary”). The data in Table 3 shows the recorded neutral answers and also the combined totals of the neutral and no answer responses.

The data in Table 3 shows fewer respondents shown the Formats 3 or 4 emoticons scale presentations recorded a neutral answer than respondents shown Formats 1 or 2 word or number scale presentations. Table 3’s data indicates that Formats 3 and 4 emoticon scale presentations under-report the proportion of respondents who would have recorded a neutral answer if they had been presented with word or number scale presentations.

The combined totals for the neutral and no answer shown in Table 3 suggests that the hypothesis, that respondents shown the emoticons scale presentations who wanted to record a neutral answer just left the slider untouched, is plausible.

The data was examined further and the recorded no answers were combined with the answers that were expressly recorded as neutral. The no answer and the expressly chosen neutral responses in the emoticon scale presentations Formats 3 and 4 were similar to those of Formats 1 and 2 though the no answer levels differed.

As the combined no answer and expressly neutral proportions were much the same, regardless of scale presentation, it could appear that, for analytical purposes, it might be appropriate to combine the no answer and the expressly neutral responses from Formats 3 and 4, if emoticons as presented, are used in future. However, the need to combine answers to get close to the “right” proportions seems, at best, methodologically awkward as it allows for reporting of neutral levels that are knowingly under-represented and so would seem a most inappropriate practice. The need for analytical purposes to combine the no answer and expressly neutral answers to get answer levels similar to those achieved by using word or number scale presentations questions the value of using the Formats 3 and 4 emoticon scale presentations.

Table 3 shows one other scale presentation finding. The additional scale interval of “can’t say” in Format 4 increased the proportion of neither positively or negatively engaged respondents by 15%, to 41%, and so the inclusion or omission of a “can’t say” option in scales merits future review.

Table 3: Neutral and no answer responses, 2009 and 2010 surveys.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral answers</td>
<td>27%</td>
<td>31%</td>
<td>26%</td>
<td>29%</td>
<td>13%</td>
<td>19%</td>
<td>14%</td>
</tr>
<tr>
<td>Neutral and “no answer” combined</td>
<td>31%</td>
<td>34%</td>
<td>29%</td>
<td>34%</td>
<td>37%</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>Neutral, “no answer” &amp; can’t say combined</td>
<td>A can’t say option was not offered with these Formats, so the responses in the row above apply.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>41%</td>
</tr>
</tbody>
</table>
SECTION 2 - RESPONDENTS’ OPINIONS ABOUT SCALE PRESENTATIONS

In the 2009 survey only, respondents were asked to express their opinions about the scale Formats tested (Formats 1, 2, and 3, shown in Figures 8, 9 and 10). Section 2a looks at preferences for specific aspects of scale presentations and Section 2b looks at individual comments made by respondents when given the opportunity to answer by more than just ticking a box.

2a - Preferences For Specific Aspects Of Scale Presentations

Table 4 shows the questions and summarises the responses respondents gave to the three formats used in the 2009 survey.

The data in Table 4, when analysed, revealed significant differences in responses depending on whether scale presentation Format 1 words, Format 2 numbers or Format 3 emoticons were used for ratings 1 to 6 ($\chi^2 = 13.77$, d. of f. 2, p < 0.01). These differences are summarised below.

- Respondents preferred Format 1 word scale presentations. The averages for all seven statements showed that 38% of respondents rated Format 1 words most highly, 31% rated Format 3 emoticons most highly, and only 22% rated Format 2 numbers most highly.

- One statement “Made you think most about each question before answering” could, on balance, be seen as a positive or as a negative statement. The open ended comments in the surveys, and Couper, Tourangeau, Conrad, Singer 2006, indicate this possibility. Accordingly, the summary rating was recalculated with that statement omitted. The results then showed 40% of respondents rated Format 1 word scales presentation most highly, 21% rated Format 2 number scale presentation most highly, and 30% rated the Format 3 emoticon scale presentation most highly. Essentially, the recalibration had generated little change from the initial summation.

- The analysis of individual statements showed that more respondents reported that the Format 1 word scale presentation was better, while, in contrast, on each scale attribute statement, the Format 2 numbers scale presentations had the lowest proportion of respondents agreeing with the statement in each scale attribute statement.

- The Format 3 emoticons scale presentation was marginally more preferred on the “appealing to use” measure (39%) and also caused more respondents to think most about each question before answering (36%, compared with 27% for the word and 25% for the number scale presentations).

Table 4: Attributes of scales presentation formats, 2009.

<table>
<thead>
<tr>
<th>Attribute measured: Scale method that was:</th>
<th>Preferred:</th>
<th>None of these</th>
<th>No answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribute measured: Scale method that was:</td>
<td>Format 1 words</td>
<td>Format 2 numbers</td>
<td>Format 3 emoticons</td>
</tr>
<tr>
<td>1 Most preferred for use</td>
<td>43%</td>
<td>23%</td>
<td>30%</td>
</tr>
<tr>
<td>2 Easiest to use</td>
<td>40%</td>
<td>21%</td>
<td>29%</td>
</tr>
<tr>
<td>3 Quickest to use</td>
<td>37%</td>
<td>23%</td>
<td>31%</td>
</tr>
<tr>
<td>4 Most appealing to use</td>
<td>35%</td>
<td>18%</td>
<td>39%</td>
</tr>
<tr>
<td>5 Best expressed your feelings about the question</td>
<td>40%</td>
<td>20%</td>
<td>29%</td>
</tr>
<tr>
<td>6 One which gave the truest indication of your answers</td>
<td>45%</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Average ratings 1 to 6</td>
<td>40%</td>
<td>21%</td>
<td>30%</td>
</tr>
<tr>
<td>7 Made you think most about each question before answering</td>
<td>27%</td>
<td>25%</td>
<td>36%</td>
</tr>
<tr>
<td>Average all 7 ratings</td>
<td>38%</td>
<td>22%</td>
<td>31%</td>
</tr>
</tbody>
</table>
• On average, 9% of respondents did not answer questions about the scale presentation formats or specified “none of these”, but only 3% did not answer or said “none of these” when asked their scale presentation preference. The low “no answer” or “none of these” answer level suggests respondents had very clear views of the scale presentations they preferred to use.

• Tests relating demographics and self-perceptions to the Format preferences were undertaken but no statistically significant differences between respondent characteristics and scale presentation Formats were found. These results can be obtained on application to the author.

In sum, Table 4’s data shows that respondents’ scale preference is mostly for Format 1 word scale presentations. Accordingly, it would appear to indicate the scale presentation style researchers would be advised to use. However, the data from Table 2 indicates that there is a significantly better level of questions answered when number scale presentations are used.

The conclusion from this is that preference and more effective completion may not be the same. The question researchers thus have to address is whether it is better to use emoticon scales because people find surveys containing them more appealing to complete; or to use word scales, which people prefer; or to use number scales, which are more effective in minimising no answer levels.

2b - Open Responses About The 2009 Scales Formats 1, 2 And 3
At the end of the scale attribute section, respondents were asked if they wished to make any comments about the scales they had used.

Most made no comment (73%). The coded answers were:
• 6% reported they liked the survey and its variety of scale presentations (“It was good to have a variety of scales, it made it more interesting”);
• 6% expressly liked the emoticons (“I just loved the picture ones, keep using them!” “Only that I really enjoyed using the picture scale, it was very innovative and so much fun to use for a change to the usual ones”);
• 6% noted expressly that Format 3 emoticon scales made them think more; and
• 4% noted Formats 1 or 2 scale presentations made them think more; though
• In contrast, 3% expressly did not like the emoticons or the sliders (“Don’t like them because it doesn’t convey your exact answer”, “The picture one could use more work. It was very limited in expressing opinions, and the scale was too short.”); and
• 6% noted problems with the sliders (“The scales were a little difficult to position correctly.”, and “slider was time consuming and hard to interpret exactly how I felt.”);
• 6% of respondents noted scale presentation Formats 1, 2 and 3 were all difficult to use;
• A further 5% suggested survey improvements, including a not applicable or can’t say option to the scales (“I’d like a not relevant or not applicable option.”).
• One insightful respondent noted “very intelligently done”.

SECTION 3 - SURVEY ENJOYMENT AND FUTURE SURVEY INTENTIONS
Making a survey enjoyable is useful if it encourages more complete answers or encourages respondents to do surveys in the future. The five surveys each concluded by asking if the respondent had enjoyed the survey, and then how likely they were to do similar surveys in the future (after Sargeant, 2006). Table 5 reports those findings.

Test: Enjoyment for Formats 1 and 2 (average) is less than enjoyment for Formats 3 and 4 (with emoticons, average) is significantly lower. (73.46% cf 89.5%, z = 8.9, p < 0.001)

While more 2010 Format 3 and 4 scale presentation survey respondents said they enjoyed their survey than did respondents to Format 1 or 2 surveys (Table 5), the Formats 3 and 4 surveys had the highest “no answer” levels (Table 3), indicating enjoyment did not ensure more complete answers.

The scale presentation formats shown to respondents in the 2010 surveys had the same levels of “intention to do similar surveys in the future” indicating scale presentation formats used do not influence future intention, merely make the current survey more or less enjoyable.

The slightly lower level of intention to undertake surveys in the future, reported in 2009, may have been influenced more by that survey’s greater length (90 questions) than by the scales it contained.
In summary, while significantly higher proportions of respondents who enjoyed the survey were drawn from those shown the Formats 3 and 4 emoticon scale presentations, this did not translate into any greater belief that they were more likely to do similar surveys in the future.

SECTION 4 - WILLINGNESS TO PROVIDE RE-CONTACT DETAILS

As more Format 3 and 4 respondents enjoyed their survey than the Format 1 and 2 respondents, it was hypothesised that enjoyment would lead higher levels of provision of email addresses for entry to the “thank you” competitions. The evidence (shown in Table 6) did not support this hypothesis.

DISCUSSION

1 KEY FINDINGS
The research program was undertaken to strengthen online survey design by identifying the impact of three different scale presentation formats (words, numbers and emoticons). The key findings from the research were that:

1. Survey respondents markedly preferred word scale presentations to number or emoticon scale presentations.

2. Emoticon scale presentations were generally seen as “cute” and surveys containing emoticon scale presentations were enjoyed by more respondents than surveys containing word or number scale presentations, but

3. This enjoyment was self-contained and did not lead to increased intentions to do similar surveys in the future, and

4. The emoticon scale presentations were significantly associated with increased no answer levels and lesser quality scale question data (lower levels of neutral answer than other scale presentations and higher no answer levels).

5. The negative impact of emoticon scale presentations on scale question data was self-contained to those scale questions and did not influence the answer levels of non-scale questions in the same survey.

6. Number scales, while least preferred by respondents, were the more effective in generating low no answer levels.

7. Almost all respondents will answer closed ended questions when they can.

8. The inclusion of a “can’t say” option in scale presentations seems an improvement that allows respondents who do not have an opinion to answer accordingly.

9. The visual appeal of the emoticon scale presentations was offset by respondent difficulty in answer, as the respondents had to give more thought to emoticon scale answers and the answers the emoticons offered may not reflect the answers respondents wanted to give.

Different conclusions can be drawn from these studies for respondents and for researchers.
2 CONCLUSIONS FOR RESPONDENTS

For respondents, the studies indicate that word scale presentations are preferred to number scale formats particularly and to emoticons scale formats. The appeal of emoticon scale presentations appears to be more with the visual element than the answering facility. This in turn suggests a respondent preference for surveys that are visually engaging as well as data collecting, but that this enjoyment is contained to the survey itself.

Respondents also appear unaware of the impact of different scale presentations on their answer levels to scale questions and answered number scale questions more fully than word scale questions but still expressed a preference for word scale presentations.

An additional and positive result of respondents’ unawareness of the impact of scales on their answers is that scale presentation formats found to be ineffective for data collection do not effect the quality of answers to other closed ended questions in the same survey (a benefit for researchers as well).

3 CONCLUSIONS FOR RESEARCHERS

The first conclusion for researchers is that choice of scale presentation format will influence the quality of the data collected.

When choosing a scale presentation format, researchers can expect word scales will be providing more respondents with the scale presentations they prefer, though use of number scales will increase the level of data collected.

Emoticon scales as detailed are inappropriate for online survey use, because of the difficulty respondents have in answering such scales, and because the lower levels of answers obtained would provide lower quality data.

Scale presentation format weaknesses or advantages appear limited to the data collected for those specific scale questions and appear not to influence the answer quality of other closed ended questions in the same survey.

Emoticon scale presentations are not a solution to the problem of flat-lining because they create other data collection problems. Other design solutions to resolve that problem should be sought.

There appears a need to add a “can’t say” option to scales to reflect the answer needs of respondents who, for whatever reason, cannot answer the question and so, in the absence of the “can’t say” option, are pushed to give an answer they really do not mean.

Respondent enjoyment with one survey appears not to influence future survey intention but it may be a selling point in online survey invitations to be able to say that more respondents have enjoyed similar such surveys.

The conclusions are that researchers may be better served overall by using word scale formats than number scale formats, and should definitely avoid using emoticon scale formats (as presented).

4 OTHER ISSUES FOR FUTURE RESEARCH

The research process and the data obtained from that indicate some areas for future research. These include the use of pictures and other visuals in online surveys to make them more appealing, the use of a slider without the emoticon images, and using a word or number scale with emoticon images instead of the slider, and the impact of adding a “can’t say” answer interval on scale presentations.

Some may wish to test emoticon images if shown as the scale intervals with “tick-the-box” answer formats, and some may wish to test emoticon format scale presentations which show all image options at once, or have the start positions other than neutral. It may be worth testing the use of images of real human faces showing different expressions in place of the cartoon characters used.

The findings from this research may encourage testing in other sectors than finance and suggest the need to review other online survey engagement techniques (such as ranking pre-set answers, moving boxes to different spots to record answers, box slider scales with number answers shown at the side, etc.) to determine the impact of those on the data collected.
For brevity, the examples that follow show the emoticon scale presentation format that did not include the “Can’t say” option, as they were exactly the same in presentation, except for the inclusion of the “can’t say” option, shown above.

Moderately and very positive emoticons, as seen as the slider is moved

Negative and very negative emoticons, as seen as the slider is moved
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