

Title: The effect of risk warning content for contract for difference products

Authors: Timothy L. Mullett¹, Laura Smart² & Neil Stewart¹

Affiliations: ¹Warwick Business School, ²Financial Conduct Authority¹

Abstract

A behavioural study was performed using adult internet users in the UK. Subjects answered questions about Contract For Difference products that tested their understanding of the risks associated with these products, and also their personal perceptions of the products. Subjects answered these questions before and after seeing and rating a fictional CFD product. This CFD product was presented in the form of a social media style advert, followed by a web page. The risk warnings presented with the tweet and the web page were either representative of the existing risk warnings, or were new, proposed versions. It was found that on 2 out of 3 measures of risk understanding the proposed web page warning significantly improved individuals' accuracy, whilst on the third there was no difference between the effect of the existing and proposed risk warnings. For tweet risk warnings, there was no significant difference between the existing and proposed warnings on 2 out of 3 measures. On the third, the proposed warning increased accuracy, but the results suggest that it provides no benefit over only changing the webpage risk warning, with either the proposed tweet or proposed webpage warning being sufficient to provide increased understanding.

Acknowledgements

This work was supported by Economic and Social Research Council grants ES/K002201/1, ES/P008976/1, and ES/N018192/1 and Leverhulme Trust grant RP2012-V-022.

Introduction

It is required for financial advertisements in the UK to carry messages informing consumers of the risks associated with the product being offered. It is also required that all adverts be "standalone compliant", i.e. that any individual advert should convey these risk warnings regardless of media format or size and firms cannot rely on instead providing important risk information in subsequent promotions. Furthermore, beyond initial adverts, product information packs and web pages have more space and content, and must also convey the product's associated risks in a way that is clear, fair, and not misleading. However, there are many different ways to present information about the same product. These different presentations could have potentially large effects upon consumers' understanding of associated risks, and upon their perceptions of the product.

¹ The views expressed in this paper are those of the authors and not the Financial Conduct Authority. All errors and omissions are the authors' own.

It is important to understand the effectiveness of risk warnings, but there is little empirical evidence examining which properties of the risk warning can improve or reduce their effectiveness. This is partly because there is a virtually endless variety of possibilities in the way that risk warnings can be designed, and huge variation in the properties that may potentially have an effect on consumer understanding (either a positive or negative effect). Identifying the most appropriate risk warning for a specific situation is made more difficult by the wide range of different products, which bring unique variables and complications.

The purpose of this experiment was to focus upon one particular type of product, where it was believed that the current risk warnings could be improved: Contracts for Difference (CFDs). CFDs are a highly leveraged product, with a high degree of risk. The majority of investors lose money on these products, and as they are highly leveraged, it is possible to lose more than the initial investment. However, some consumers find these products attractive because they can potentially provide high returns on the initial investment.

Expertise from regulation and behavioural science was used to design improved risk warnings for both a short form advert (e.g. a social media advert) and a long form risk warning displayed on the product's website landing page. The effect of these adverts upon risk comprehension and product perception was then tested and compared with representative examples of risk warnings in the current marketplace. This was done using a short behavioural experiment with UK internet using adults.

In this study, UK adults answered a small number of questions about CFDs which tested their understanding of the associated risks, and also measured their general perceptions of the products. They answered these questions before and after seeing an advert and webpage for a fictional CFD product. The results show that if the product was shown with an updated version of the webpage risk warning then accuracy on understanding questions was significantly improved.

Methods

Subjects

A total of 264 subjects were recruited through the online platform Prolific Academic. Of these, 66.6% were female, the mean age was 36, and 91% reported having lived in the UK for at least the last 10 years.

Exclusions

Data from 32 subjects was not used in the analysis because they fulfilled at least one pre-defined exclusion criteria: subjects with the 5% most extreme mean reaction times were also excluded as were 14 who had non-unique ip-addresses within the sample, 3 who reported not currently living in the UK, and 5 who indicated they had not completed the task sensibly in an honesty question. .

Procedure

The overall structure of the experiment was that subjects initially answered general questions about CFDs, then they saw information on a CFD product and rated the product, then answered the same

general questions again (to test increase in knowledge), before seeing three more CFD products and rating them one by one. The design of the risk warning manipulation was 2 (tweet warning: current vs proposed) X 2 (webpage warning: current vs proposed). Each of the 4 CFD products was assigned to one of these 4 conditions, meaning each subject answered the general questions after having seen only one of these conditions, and then rated products from the other three conditions.

The general questions comprised of knowledge questions, and questions asking for the individual's personal attitudes towards CFDs. These questions are shown in table 1. For the three factual questions the correct answers are displayed in bold. The questions were all presented on a single web page, in the order shown in the table.

Table 1. The knowledge questions and self report questions identifying whether an individual is likely to invest in CFDs. Correct answers are shown in bold.

Questions	Multiple Choice Answers
Do you think CFDs are:	<ul style="list-style-type: none"> a) about as risky as a savings account b) about as risky as bonds c) about as risky as tracker funds d) safer than all of these e) riskier than all of these f) Don't know
Would you invest in these products?	<ul style="list-style-type: none"> a) Yes b) Probably c) Probably not d) No e) Don't know
Do you consider these products appropriate for you?	<ul style="list-style-type: none"> a) Yes b) Probably c) Probably not d) No e) Don't know
Which of the following statements do you think is most true of CFDs?	<ul style="list-style-type: none"> a) You can never end up with less money than you originally invested b) It is possible that you may lose some of your original investment but you are unlikely to lose all of it c) It is possible to lose all of your initial investment d) It is possible to lose more money than you invested
What proportion of investors do you think make and lose money on these investments?	<ul style="list-style-type: none"> a) All investors make money b) Most investors make money

	<ul style="list-style-type: none">c) About equal proportions of investors make and lose moneyd) Most investors lose moneye) All investors lose money
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For the portion of the study where subjects were viewing information about CFD products, they were told they would see a series of adverts for Contract For Difference products and that they would be asked to rate how good they thought the products were based upon the adverts. They were instructed that if they did not feel knowledgeable about the products they should respond as best they could given the information presented.

For each product, subjects saw the adverts in two stages. First they saw an advert in the style of a tweet on the social media platform *Twitter*, and rated how good they thought the product was. They then saw a full webpage, similar to a landing page displayed after a consumer has clicked through from a social media advert. They then provided another rating based upon all the information they had seen about the product. Both ratings were provided on a 6 point scale ranging from very bad to very good (figure1).

The stimuli were fictional adverts where the claims and information was representative of real world online adverts and websites of CFD products. A total of 6 products were created. For each of these 6 products there were two versions of the tweet advert, and two versions of the website, thus forming our 2X2 design. The two tweet warnings were the representative existing version: "Losses can exceed deposits", and a proposed new version: "Most investors lose money on these products". The two website warnings were the representative existing risk warning: "CFDs are leveraged products, your capital is at risk and losses can exceed deposit. Please ensure you fully understand the risks and take care to manage your exposure" and a proposed new risk warning with both risk warning text, and information about performance in the last quarter and last 4 quarters cumulatively (fig1b) where is explained that about 80% of people make a loss.

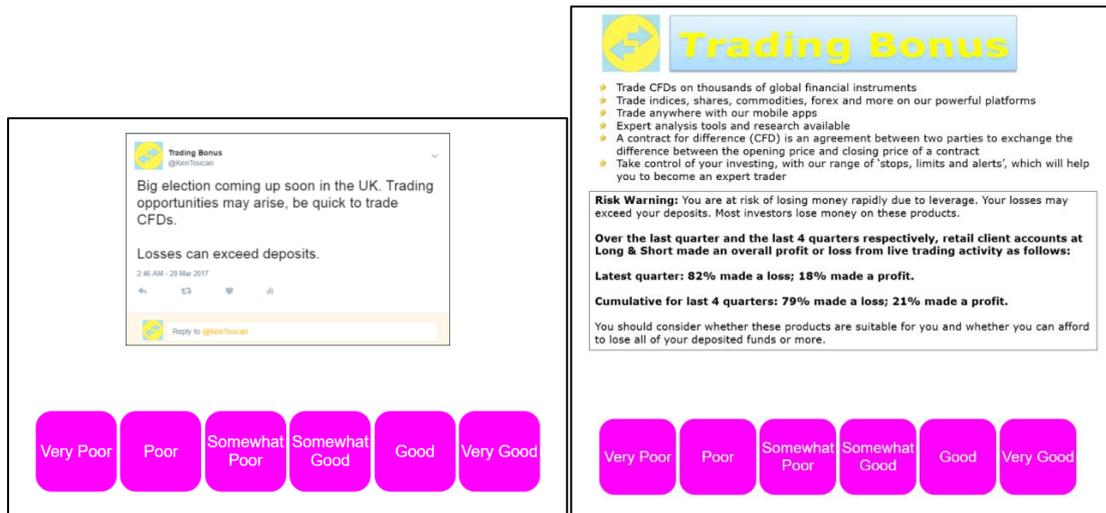


Figure 1. Example screens from the experiment task. In panel A (left) the tweet advert is shown with the existing risk warning. In panel B (right) the webpage advert is shown with the proposed risk warning

Results

Ratings

The mean ratings given to tweets was 2.57 (CI = [2.50, 2.64]), and the mean for final ratings after also viewing the web page was 3.00 (CI = [2.91, 3.08]), both on a six-point scale. Average final ratings were significantly higher than those given to tweets.

The effect of differing risk warnings was tested using mixed model regressions. The fixed effects of interest were three dummy variables: one indicating which tweet risk warning was presented, one indicating which web page risk warning was presented, and one interaction between the two. In both cases the existing risk warning was used as the baseline category, meaning the beta coefficients represent the change in ratings that result from changing to the new risk warnings. Additional controls were included as fixed effects. These were dummies indicating the effect of trial order to control for learning during the experiment, and dummies for the specific company presented. Random slopes and intercepts were estimated at the level of the subject for main effects of tweet warning and site warning, but not for other predictors as they had no within subject variance.

In the first regression analysis the outcome variable was the rating given after only seeing a tweet advert. The results in table 2 show that the proposed risk warning results in a statistically significant increase of 0.21 points. There is no effect of site warning (which subjects have not seen at the time the rating is given), or the interaction term. There is weak evidence that tweet ratings are higher on later trials, with ratings given on trial 3 being higher than the baseline of trial 1.

Table 2. Predicting the ratings given after seeing only the tweet advert

Coefficient	Value	p-value	95% confidence interval
Intercept	2.280***	<0.001	[2.079, 2.481]

Tweet_Warning	0.209**	0.007	[0.056, 0.361]
Site_Warning	0.016	0.821	[-0.119, 0.150]
Tweet * Site Warning	0.039	0.683	[-0.150, 0.229]
Trial2	0.056	0.443	[-0.087, 0.200]
Trial3	0.151*	0.039	[0.007, 0.294]
Trial4	0.126	0.085	[-0.017, 0.269]
Company2	0.136	0.147	[-0.048, 0.319]
Company3	-0.120	0.190	[-0.299, 0.059]
Company4	0.116	0.217	[-0.068, 0.300]
Company5	-0.016	0.861	[-0.191, 0.160]
Company6	0.243**	0.008	[0.064, 0.421]
BIC	2694		
LogLikelihood	-1279		

In the second regression analysis the outcome variable is the rating given after seeing both the tweet and the website. The results in table 3 show that there is a main effect of the site warning, with the proposed risk warning resulting in significantly lower ratings of 0.53 points on average. Despite the significant effect of the tweet warning message upon ratings of tweets (a rating which was given immediately prior to the more detailed site information being revealed), there is no main effect or interaction when predicting final ratings. Furthermore, there is no evidence that final ratings become significantly better or worse in later trials.

Table 3. Predicting the ratings given after seeing both the tweet and the site information

Coefficient	Value	p-value	95% confidence interval
Intercept	3.307***	<0.001	[3.090, 3.525]
Tweet_Warning	0.048	0.480	[-0.086, 0.182]
Site_Warning	-0.531***	<0.001	[-0.696, -0.366]
Tweet * Site Warning	-0.006	0.948	[-0.194, 0.181]

Trial2	-0.138	0.063	[-0.283, 0.007]
Trial3	-0.024	0.748	[-0.171, 0.123]
Trial4	0.030	0.693	[-0.118, 0.177]
Company2	0.078	0.410	[-0.108, 0.265]
Company3	-0.125	0.180	[-0.307, 0.058]
Company4	-0.176	0.070	[-0.366, 0.014]
Company5	-0.202*	0.029	[-0.384, -0.021]
Company6	0.013	0.893	[-0.171, 0.196]
BIC	2881		
LogLikelihood	-1372		

CFD Knowledge Questions

The next set of analyses focus upon the knowledge questions that subjects answered before and after the first trial. This allows us to see whether different risk warnings improve subjects' ability to correctly answer factual questions about the products and provide explicit ratings of how appropriate they think the products would be for them. Three of the questions were factual questions and thus had correct answers. Responses to these questions were analysed with a logistic regression predicting correct vs incorrect responses. The predictors were main effects of tweet warning and site warning, and the interaction between them. In order to control for subjects' existing knowledge predictors were included to represent their response to the same question before they had seen any trials. This was encoded as dummies representing each of the possible incorrect answers.

The first question asked subjects to identify how risky CFDs are compared to other investment products (the correct answer was "riskier than all of these"). The overall accuracy rate was 66.6%. The results show that subjects who saw the proposed site risk warning were significantly more likely to answer this correctly compared to those who saw the existing risk warning (table 4). However, there was no significant difference between those who saw the proposed and existing tweet warnings. The size of the effect for the site warning was both statistically significant and had a meaningfully large effect size. Taking the baseline of an individual who gave the modal response to the question before any product adverts had been seen (that CFDs were roughly equal to savings accounts in terms of risk), there was a 75.6% chance of respondent answering correctly after seeing the existing website risk warning and a 90.2% chance of responding correctly after seeing the proposed website risk warning. For an individual who gave the second most common response on

the first round of questions (that CFDs were roughly equal to tracker funds), the effect of the updated site risk warning was to increase accuracy from 50.1% to 75.4%.

Table 4. Coefficients from a logistic regression predicting correct answers in relative risk CFD knowledge question

Intercept	1.133***	<0.001	[0.452, 1.813]
Site Warning	1.082**	0.006	[0.306, 1.859]
Tweet Warning	0.629	0.100	[-0.119, 1.377]
Tweet * Site Warning	-1.060	0.063	[-2.177, 0.056]
Prior A Answer	-1.101*	0.042	[-2.162, -0.04]
Prior B Answer	-1.355**	0.002	[-2.194, -0.515]
Prior C Answer	-1.589***	<0.001	[-2.339, -0.839]
Prior D Answer	-1.097*	0.035	[-2.114, -0.08]

The next question asked subjects to identify what was the maximum possible loss associated with a CFD product (the correct answer was “it is possible to lose more money than you invested”). Overall accuracy was 50%. The results show that neither the updated tweet risk warning nor the updated site warning resulted in significantly different accuracy on this question (table 5).

Table 5. Predicting correct answers in maximum loss CFD knowledge question

Intercept	1.235***	<0.001	[0.478, 1.992]
Site Warning	-0.030	0.935	[-0.749, 0.689]
Tweet Warning	-0.524	0.159	[-1.254, 0.206]
Tweet * Site Warning	0.423	0.429	[-0.624, 1.469]
Prior A Answer	-2.231***	<0.001	[-3.394, -1.069]
Prior B Answer	-1.710***	<0.001	[-2.423, -0.996]
Prior C Answer	-0.773	0.038	[-1.504, -0.043]

The third question asked subjects to identify what proportion of investors made a profit or loss on CFD products (the correct answer was “most investors lose money”). Overall accuracy was 54%. The results show that both the proposed site warning and proposed tweet warning resulted in more

accurate responses to this question (table 6). However, the interaction effect is negative and the effect size is comparable to that of both main effects. This suggests that either one of the proposed warnings is sufficient to improve subjects' understanding of this aspect of risk. Using the baseline of an individual who gave the modal incorrect response the first time the question was seen (that equal proportions of investors gain and lose money), the existing risk warnings result in a 6.7% chance of answering accurately. The updated website warning results in a 55.9% chance of responding accurately, whilst the updated tweet warning results in a 33.8% chance. When both updated warnings are used together the resulting probability of responding accurately is 46.7%. For an individual who gave the second most common incorrect answer (that all investors make money) the respective probabilities of responding correctly the second time they saw the questions were 38.0% with existing warnings, 91.5% after updating only the website risk warning, 81.4% after updating only the tweet warning, and 88.2% with both warnings updated.

Table 6. Predicting correct answers in likelihood of gains and losses CFD knowledge question

Intercept	-0.489	0.269	[-1.357, 0.379]
Site Warning	2.871***	<0.001	[1.974, 3.768]
Tweet Warning	1.962***	<0.001	[1.108, 2.817]
Tweet * Site Warning	-2.334***	<0.001	[-3.504, -1.163]
Prior A Answer	-2.045*	0.021	[-3.775, -0.314]
Prior B Answer	-2.144***	<0.001	[-3.167, -1.122]
Prior C Answer	-1.200**	0.007	[-2.079, -0.320]

The remaining questions asked about subjects' own judgements and thus did not have an objectively correct answer. Therefore a multinomial regression was used to predict the likelihood of each of the possible responses. Both of these questions had 5 possible answers. The predictors were the same as those used to predict responses in the logistic regression analyses above.

The first of these questions asks whether subjects would be likely to invest in these products. The second asks whether subjects believe the products are appropriate for people like them. The results show that the proposed changes to risk warnings do not significantly predict any changes in the likelihood of selecting any of the available options (compared to the "don't know" response which is used as the baseline, reference category; tables 7 & 8).

Table 7. Results from multinomial regression predicting willingness to invest in CFDs

Intercept	-11.085	-0.795	1.644*	1.710*

Site Warning	-12.471	-24.494	0.482	1.727
Tweet Warning	-13.691	-1.920	-0.181	-0.107
Tweet * Site Warning	13.994	26.027	0.101	-0.520
Prior A Answer	37.491	27.955	-1.866	10.498
Prior B Answer	12.964	3.083*	-0.219	-1.400
Prior C Answer	23.782	13.138	12.979	13.232
Prior D Answer	-0.453	1.400	-0.617	1.549

Table 8. Results from multinomial regression predicting judged appropriateness of CFDs for people like them

Intercept	-6.922	-0.703	1.684*	2.090**
Site Warning	-12.695	-1.811	0.898	1.822
Tweet Warning	-6.892	-1.377	-0.342	-0.272
Tweet * Site Warning	-1.760	0.618	-1.344	-1.166
Prior A Answer	30.805	12.751	8.118	-3.153
Prior B Answer	0.933	2.259	-0.556	-2.128*
Prior C Answer	15.656	9.545	8.707	8.376
Prior D Answer	7.952	1.475	-0.175	1.361

Discussion

The results show that the proposed change in website risk warning significantly improved individuals' accuracy on two out of three questions testing their understanding of associated risks. On the remaining question, there was no difference in accuracy. They also show that there was no difference in accuracy as a result of the proposed vs existing risk warning on tweets. For the remaining question, the effect of the proposed tweet warning was positive, but there was an interaction between the proposed site warning and tweet warning, indicating that there were rapidly diminishing returns from both changing, and suggesting that either updated message would be sufficient to cause a similar magnitude increase in accuracy on this measure of understanding.

There were also significant effects upon ratings given immediately after a particular risk warning was seen. Product ratings given immediately after seeing the updated tweet warning were higher than after seeing the existing tweet warning. However, there was no differential effect of tweet risk warning upon the ratings given after seeing the full web page information. For these ratings there was instead a significant effect of the web page risk warning, with subjects giving higher product ratings after seeing the existing webpage risk warning compared to seeing the proposed web page risk warning.

CFD Appendix A – Initial Instructions

You will be shown information about a series of financial products called Contracts for Difference (CFDs) and you will be asked to rate them.

For each product you will initially be shown an advert from social media. You should first rate how good you think the product is based on that advert. You will be asked to rate each on a six point scale from very poor to very good.

You will then be shown a page containing the summary information about the product and you will be asked to rate the product again, now that you know all of the information about it.

It is possible that you may not have heard of these types of products. If so, please respond as best you can using the information in the advert and summary information, and the first impression you get from it.

Note that these specific products and companies are entirely fictitious. Any similarity to real world products is entirely coincidental.

It is important to remember that there is no right or wrong answer. We are simply asking for your honest opinion of what you personally think.