

COMPETITIVE MARKETS AND CONSUMER WELFARE

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CONSUMERS BENEFIT FROM A STANDARDISED FRONT PAGE TO LOAN OFFERS

Consumer inactivity in the mortgage market reduces consumer welfare and providers' incentive to innovate and compete.

This has led The Danish Competition Council to recommend an introduction of a simple front-page to mortgage loan offers based on an experimental study using behavioural insights.

The article outlines the results from this study, which was designed to understand how consumers respond to current mandatory information requirements.

The study provides insights into how consumer protection policies may create problems for consumers, despite the good intentions that underlie them. The study provides a series of recommendations to increase the effects of mandatory disclosure of information on consumer behaviour in complex markets.

[Read the full article →](#)

The mortgage market is complex and mortgage loan providers are subject to a vast array of mandatory information disclosure requirements.

On behalf of The Danish Competition Council, The Danish Competition and Consumer Authority (DCCA) ran an experimental study to test solutions that could increase consumers' understanding of mortgage loan offers and their ability to compare loans across providers.

A preferred solution was a front page consisting of few central financial attributes that enable consumers to better compare loan offers in the market, cf. illustration 1. This front page help to improve transparency and imply that consumers become more active and price sensitive which also may help to improve competition between providers. Consumers' ability to assess the implications of taking up mortgages before signing a credit agreement also improves.

consumers should pay to mortgage institutions besides the market interest rate related to the funding of the loan (the "contribution price"). These key attribute were highlighted as important for the choice of loans when participants were asked during the recruiting process.

Figure 1
The share of respondents that identify the loan with the lowest monthly instalments out of three loan offers.

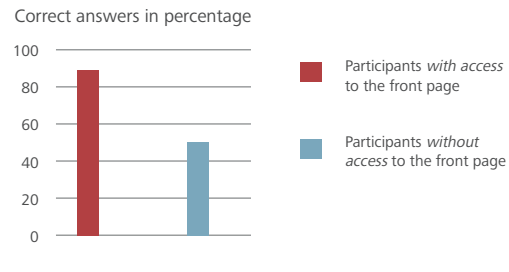


Illustration 1

Recommended front page for mortgage loan offers to be implemented

THE BANK

Date 31st of March 2017

Loan offer: 30-year mortgage loan with a fixed 2.00 pct. interest rate
This is an overview of what you will pay for the loan you're about to sign up for. When you flip this page you will find how the numbers have been calculated.

| | | |
|--|-----------|-----------|
| Loan needed to purchase the property | DKK | 2,000,000 |
| A) Your monthly instalments for the first 12 months, before taxes | DKK/month | 8,941 |
| B) To set up the loan, the bank and mortgage institute will initially charge you | DKK | 10,511 |
| C) The mortgage institution's contribution rate the first 12 months | DKK | 15,164 |
| D) At the current bond market rate of 97.51 plus fees, you will pay in total | DKK | 3,013,461 |
| E) At a loan rate of 2.08 pct. and including all fees/expenses, the APRC is | pct. | 2.50 |

■ Risk classification, Green – The loan has a fixed interest rate for the entire duration of the loan.

→

THE BANK

Please read every bullet below in order to understand how the numbers on the previous page has been calculated.

A) Your monthly instalments for the first 12 months, before taxes DKK/month 8,941
The fee covers your monthly expenses related to the loan before taxes and is the fee that will be charged on your account. A part of this fee is interest rate and contribution rate that you can deduct in taxes.

B) To set up the loan, the bank and mortgage institute will initially charge you DKK 10,511
Your bank and mortgage institute will charge you an administrative fee for to setup your loan. On top of this there is an additional fee for the institute to trade the bond when you take a mortgage loan.
- Fee for the bank and mortgage institute DKK 3,500
- Fee for the mortgage institute for trading the bond DKK 7,011

C) The mortgage institution's contribution rate the first 12 months DKK 15,164
The annual contribution rate of 0.7375 pct. is a percentage of what you owe for your loan that the mortgage institute charge you in order to cover risks and administrative costs.

D) To loan DKK 2,000,000 for your property you will need to pay back DKK 3,013,461
For you to loan the money that mortgage institute needs to sell equivalent bonds. This has a market rate that can vary depending on what the bond investor is willing to pay for them. Additionally, you will have to add the setup fee, governmental registration fee and running costs. Below you can see what this figure consists of:

| Loan and setup fees | |
|---|---------------|
| - Loan to be paid out | kr. 1,999,388 |
| - Losses at a bond market rate of 97.51 | kr. 44,663 |
| - Governmental registration fee | kr. 17,760 |
| - Fees for the bank and mortgage institute (see B) | kr. 10,511 |
| Total running costs over 30 years | |
| - Interest rate of 2.00 pct. to the bond investor (fixed interest rate) | kr. 683,038 |
| - Contribution rate of 0.7375 pct. to the mortgage institute (see C) | kr. 254,260 |

E) Your Annual Percentage Rate of Charge (APRC) is pct. 2.50
The APRC allows you to compare the same type of loans across lenders. The APRC includes costs related to the interest rate, running costs and fees plus various charges and initial fees for the loan. Please be aware that even a minor difference in APRC between lenders can result in major difference in DKK.

If you decide to fix the current bond market rate for the next 90 days, you will pay DKK 15,595
You can decide to fix the current bond market rate for your loan so you know the rate for which you take up your loan. The price for fixing the rate will depend on the timing of when you decide to do so. The closer you are to the day you need to get the loan, the cheaper it is to fix the rate. The charge here is therefore a guidance for what this manoeuvre will cost you for 90 days in advance.

| | |
|---|------------|
| - Fee for fixing the rate | kr. 500 |
| - Fixing the bond market rate for 90 days will cost you | kr. 15,095 |

The experiment shows that only 50 pct. of the respondents could identify the loan offer - out of three - which had the lowest monthly instalments. Adding a standardised front page to the loan documents presenting key loan attributes to the consumer, helped to increase this rate to 95 pct., see figure 1.

Furthermore, respondents with access to the standardised front page experienced significantly less frustration (measured with face recognition software) and spent less time searching for key financial attributes, such as monthly instalments and the price for the loan that

Understanding the problem using behavioural insights

Insights from behavioural sciences argue that consumers may experience information overload when reading through complex information such as a loan offer. This affects consumer decision-making and their ability to compare products from different providers.

Taking up a mortgage to purchase a home is often the single largest economic decision a consumer will face. Therefore, the market is bound to a mandatory disclosure of information regulation (MDoI) in order to sufficiently inform the consumer. Thus, MDoI serves to support active decision-

making that reflects the consumer's needs and preferences.

Today, this regulation aims to ensure fully informed consumers. Hence the market is obligated to ensure that all relevant information is available. The MDol-regulation within the mortgage market is therefore today quite comprehensive. The majority of these MDol's derives from the European Mortgage Credit Directive 2014/17/EU, cf. box 1.

Box 1.

Mandatory Disclosure of Information requirements in the Mortgage Credit Directive 2014/17/EU

The majority of mandatory disclosure of information requirements (MDol) is deriving from the Mortgage Credit Directive 2014/17/EU.

Article 14 (2) of the directive implements the European Standardised Information Scheme (ESIS), which has a purpose to enable consumers to compare and reflect on the characteristics of credit products.

Article 14 (8) of the Mortgage Credit Directive explicitly allows Member States to require the provision of additional information.

Article 44 of the directive introduces a review clause due 21st of March 2019.

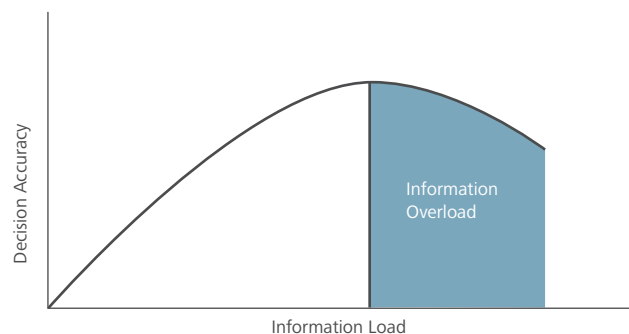
Article 44 (a) specifically states:

"The review shall consider the effectiveness and appropriateness of the provisions on consumers and the internal market. The review shall include.../an assessment of the use and consumer understanding of and satisfaction with the ESIS."

Behavioural insights argue that, even under the assumption of unlimited time and an appropriate amount of product-specific knowledge to assess information, consumers seem to make suboptimal decisions when faced with copious amounts of technical information. This phenomenon is often referred to as information overload. As illustrated in figure 2, decision accuracy improves with added information but only to a certain level.

Figure 2

Decision accuracy increases with the information load – but only to a certain point. (from Eppler & Mengis, 2004)¹



Information overload can lead to status-quo biases: It can make consumers passive and unwilling to engage with specific information to begin with. This prompts consumers to *just go-along* with the default offer - in this case, the loan offer consumers receive from their current bank provider. Additionally, information overload reduces consumers' ability to understand key product attributes and risks.

Design to make it easier

To demonstrate the potential effects of simplified and targeted financial information in the market for mortgages the DCCA designed an experiment, where some consumers had access to a standardised front-page, in addition to the loan information provided by three banks, whereas others only had the latter.

Consumers were asked to compare products from three different providers, and report both their preferences as well as objective characteristics of the three loans – see box 3 for more information on the experimental design.

The DCCA used a behavioural design to reduce the experienced information overload. The design ensured that the front page was simple and that information on monthly instalment was saliently placed. Information was presented in chunks and the informative backside of the front page included a checklist (illustration 1).

This method has been inspired by the EAST framework by the Behavioural Insights Team, UK².

¹ Eppler, M.J., & Mengis J. "The concept of information overload: A review of literature from organization science, accounting, marketing, MIS, and related disciplines." *The information society* 20.5 (2004): 325-344.

² EAST stands for Easy, Attractive, Social and Timely; and is a framework developed to assist busy policymakers to make use of behavioural insights. The insights that EAST are based upon mainly derive from the scientific literature, though not claiming to cover all aspects there is to know about behavioural science. Service, O. et al. (2014). EAST: Four simple ways to apply behavioural insights. London: *The Behavioural Insights Team*.

By simplifying and chunking up the complex information within the loan offer, consumers could better comprehend the material and thus make better decisions.

As people like ticking off boxes, the added checklist on the backside of the front page helps ordering the information. By using a pre-checked box in the beginning of the checklist, the reader is given a, psychological, head start of reading the material.

A salient presentation of the fee to the mortgage provider and monthly instalments was introduced as these features represent some of the most important information for consumers when it comes to choosing a mortgage loan.

Design of the experiment

The study was conducted in collaboration with an independent financial advisor, who identified key parameters, which consumers should take into account, before signing up for a mortgage. The advisor also provided three loan offers from three different banks for the test setup. These were anonymised into: red bank, green bank and blue bank. All three loans were 30 year loans at a 2 pct. interest rate, hence representing a similar risk profile. Further detail is presented in box 2.

Box 2.

Example of included attachments for a mortgage loan offer

The loan offers pages (without the attached front page) consisted of red bank: 7 pages (red bank), 12 pages (green bank) and 16 pages (blue bank).

As an example, blue bank consisted of the following attachments:

- Mortgage loan agreement – This document sets the terms of the contract between the consumer (the lender) and credit provider. The consumer will sign this document to make the contract legally binding. Digital signature is possible.
- ESIS-Scheme.
- Terms regarding cancellation.
- Regarding payment to partners – according to guidelines on good practise the bank is obliged to inform on payments to partners regarding distribution and sales.
- Possible tax deductions – information on what type of costs that is tax deductible.
- Guide to types of loans – guide to the types of loans that the credit providers provides.

Consumers were asked to state what they considered important for making a decision regarding mortgage loans prior to the experiment. The five highest ranking attributes were:

1. Low monthly instalments.
2. Counsel from their financial advisor.
3. Simple and intelligible information.
4. Low contribution rate.
5. High mortgage bond price

The front page was designed to reflect these preferences and consisted of key financial information on (see illustration 1):

- Monthly instalments.
- Loan establishment costs.
- Contribution rates for the first 12 months³.
- Total costs of the loan.
- The annual percentage rate (APR).

The front page was tested in two configurations, using a lab-based experimental study with 120 participants.

The first configuration tested the front page in combination with the loan material from the three banks, as it is currently presented to consumers in Denmark.

The loan documents from the banks in this first test appear quite different, and also incorporate the European Standardised Information Scheme (ESIS) in different ways. To assess ESIS more directly a second configuration was applied. In this – second – test of the front page, the loan documents only contained the mortgage loan agreement and the European Standardised Information Scheme (ESIS). For a more detailed description of the test, see box 3.

The study had three types of outcome measures.

1. Self-reported subjective outcomes, such as how well the participants felt they understood the information.
2. Objective measures, such as time and correct answers in a questionnaire.
3. The study utilised biometric outcome measures such as eye-tracking and emotional tracking via facial expression analysis allowing for a more advanced understanding of the respondent's engagement with the test material.

For a description of the biometric methods employed see box 4.

³ Contribution rates are a unique element in the Danish mortgage industry. Essentially, the term denotes a percentage based fee, which the consumer pays annually to the bank who commissioned the loan on behalf of a mortgage lender.

Box 3. Study design

First test setup was conducted in 2016 and had 20 respondents to randomly start with a loan document without the front page or a loan document with the front page. The crossover design meant that the 20 respondents returned to the test facility after a ten days wash-out period, to receive the reversed exposure, allowing a within-individual analysis.

Second test setup had 40 respondents randomly allocated to either loan documents without the front page (control group) or loan documents with the front page (experimental group). Respondents had to read and understand a loan offer and fill out a questionnaire. After this respondents received three loan offers from three banks followed by a questionnaire focussing on comparing the three loans.

Third test setup was conducted in 2017 with 60 respondents, replicating the second test setup. The loan offers were adjusted to contain the same information and made more coherent across providers. This was done by limiting the documents to the mortgage loan agreement and the European Standardised Information Scheme (ESIS). All tests were run by iMotions A/S at their test facilities. An external recruitment agency was assigned to recruit representative respondents of the median Dane (educational level). The agency was given the following exclusion criteria:

- Glasses or neurological illness
- Working in the financial sector

Respondents were allowed to search through the loan documents while attending the questionnaire. Respondents received a gift certificate for their participation.

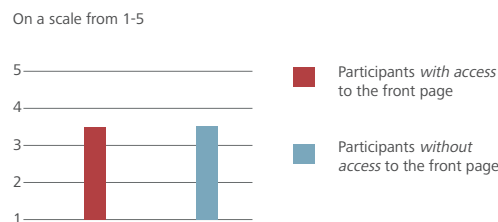
Box 4. Biometry data

The experiment utilises biometry data such as eye-tracking and facial expression. Eye-tracking provides data on how participants engage with the material and offers valuable insights into how much of the information participants actually see. Facial-recognition software provides a detailed understanding of the emotional response of participants during various tasks throughout the experiment, particularly levels of frustration over time associated with particular tasks and assignments (see picture 2). Levels of frustration provide an understanding of how user friendly participants experience the design of specific information within the experiment. Finally, the biometry data allow us to gauge how much time participants spend on each task.

Three types of outcomes

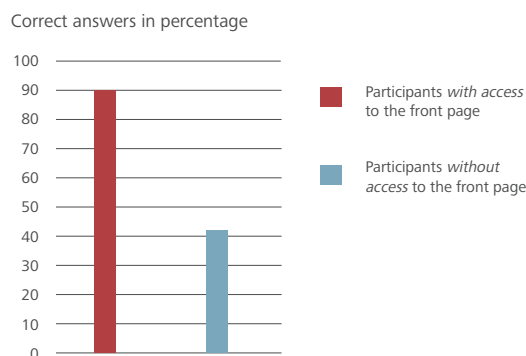
The study found a divergence between subjective measures and objective measures. Respondents generally rated their own understanding and overview of the loan equally well with or without the front page, see figure 3.

Figure 3
Self-reported understanding of the loan offer.



However, respondents were asked to identify certain cost-specific attributes of a specific loan or in a comparison of loans. Results suggest that respondents with access to the front page were significantly better to provide the correct answer. As an example, 90 pct. of the respondents could correctly identify the loan which had the lowest establishment costs when they had access to the front page, compared to only 45 pct. of respondents that did not have access to the front page⁴, as shown in figure 4

Figure 4
The share of respondents that identify the loan with the lowest establishment costs out of three loan offers.



This divergence between the subjective experiences and objective results highlights the risks associated with basing policy initiatives solely on self-reported survey data.

⁴ For this task respondents were allocated unlimited time to search and identify which loan offer had the lowest establishment costs. The survey had a multiple choice answering scheme providing options: red, blue or green bank, or 'I don't know'.

Results from the eye tracking data show that respondents with access to the front page in general paid attention to the saliently placed information within the document, i.e. illustration 3. It also shows that respondents focused more on the numbers than the text provided. This is in line with expectations that consumers align their reading pattern to fit a mental model related to budgeting when interacting with finances, i.e. reading from left to right and with the main focus on the topic headline on the left hand side, and the corresponding numeric information on the right

The facial expression analysis found that respondents with access to the standardised front page experienced less frustration than respondents without the front page⁵, despite the fact that the group of respondents with access to the front page had two additional pages of information to attend.

Illustration 2

Screenshot from the test setup picturing a heat map of visual attention to the tested front page.



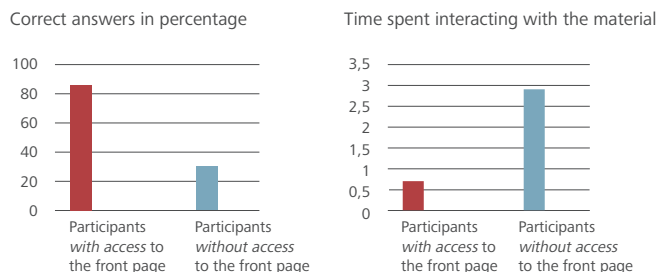
Screenshot from the test setup picturing a heat map of visual attention to the tested front page. Red illustrates more visual activity.

In the second configuration where only the loan offer and the ESIS were part of the test, respondents still had a better understanding of the loan offers, and chose more in line with a lower monthly installment when having access to the front page, compared to having only the loan offer and ESIS. Although the intention of ESIS is to improve understanding and comparability between loans, the results suggested that the intended effect of ESIS was not achieved if the front page was not given as well. For example, when respondents in the two groups were asked to identify which of the three loan offers had the lowest establishment costs, respondents with the front page had more correct answers and they also spend less time finding the information, cf. figure 5.

⁵ Certain tasks in the study did not show a statistical significant advantages or disadvantages of the front page on measured frustration. Please see the full report for all results accessible through www.kfst.dk (in Danish).

Figur 5

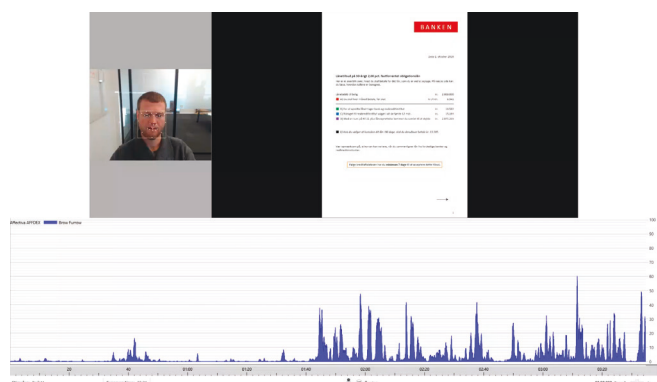
The share of respondents that identify the loan with the lowest establishment costs out of three loan offers and time spend with the material



It was clear from observations made during the test, that participants made use of the front page when asked to compare the three loans and to find specific financial attributes in the loan documents. The test facilitator did not prompt the respondents to do this. These observations suggest that the front page work as intended.

Illustration 3

Screenshot from the test setup picturing a respondent reading the front page.



Left side of the screenshot shows the respondent including the various measuring points used for the biometrics analysis. To the right a screenshot of what the respondent is looking at. Below the measured brow f urrow, which is a proxy for experienced frustration.