

# How consumers evaluate costs in complex services: the case of mutual fund fees

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## Abstract

**Purpose** – In modern societies, consumer well-being is dependent on choices regarding complex services, such as investments, health care, insurance and lending. However, evaluating costs of such services is often difficult for consumers due to a combination of limited cognitive resources and complexity of the service. The purpose of this study is to empirically examine to what extent three specific consequences of complexity influence consumer tendencies to make mistakes when evaluating the costs (or price) of complex services.

**Design/methodology/approach** – Three studies were conducted (survey:  $n = 153$ , experiment:  $n = 332$  and conjoint analysis:  $n = 225$ ), all focusing on how consumers evaluate costs in the complex mutual fund setting.

**Findings** – The authors find that consumers struggle with estimating and using cost information in decision-making in the complex services setting. Consumers of complex services frequently underestimate the costs over the long-term, may see costs as a signal of service quality and are susceptible to influence from presentation formats when evaluating costs.

**Research limitations/implications** – The study investigates mutual funds, which is one example of a complex service. In order to get a full picture of how consumers deal with costs in complex setting, future research needs to expand this focus to other types of complex services.

**Practical implications** – The results have implications for both marketers of complex services and policymakers. For marketers, this paper highlights that competing with a low-cost strategy may be difficult in the complex services setting as consumers may lack the ability to actually evaluate what they pay over the long term. For policymakers, increased simplification of prices may be an attractive option. However, it is important that this simplification is done in a way that increases the possibility to compare prices.

**Originality/value** – As complexity influences several aspects of decision-making, an understanding of how consumers evaluate costs in complex settings is dependent on taking a multidimensional research approach. This paper makes a novel contribution to the literature on pricing by showing that consumers struggle with multiple aspects when evaluating costs in complex contexts. Understanding these effects is important to policy, as well as to research on the cognitive value of simplicity that is currently gaining traction in marketing research.

**Keywords** Complex services, Costs, Investment fees, Value of simplicity, Trust

**Paper type** Research paper



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## Introduction

As a result of the level of specialization in today's society, individuals' needs regarding education, health care and financial security are increasingly met by complex services or complex services networks (Verleye *et al.*, 2017). Complex services may be defined in terms of level of complexity and difficulty and may thus be connected to both the surrounding environment (complicatedness) and cognitive resources used by the customer (difficulty) (Benedettini and Neely, 2015). Complex services may further be characterized by an often extensive and tailored interaction between service provider and service customer (Keeling *et al.*, 2021; Zyung *et al.*, 2020). Uncertainty and credence attributes are also common characteristics of such services, as well as extended service delivery periods, where the interaction between consumer and provider spans over a long period of time (Peters *et al.*, 2015). This paper explores the ability of consumers to make informed decisions in the context of complex services.

From the consumer's perspective, the prevalence of complex services in the marketplace poses a number of challenges to their decision-making. One such challenge is the information processing task of evaluating the costs involved with the complex service offerings (e.g. Gruner and Soutar, 2021). As stated, complex services often involve extensive and long-lasting interactions (Peters *et al.*, 2015), where costs are not paid upfront or at one particular time. Instead, complex services like mortgages and loans, medical insurance and investments, to name a few, collect payments throughout the service delivery process. This means that consumers have to estimate costs under considerable uncertainty, where prices and premiums can be changed throughout the process. Prices are often also presented in many different formats, such as in percent or in dollars, with varying degrees of complexity (González *et al.*, 2016; Homburg *et al.*, 2014). In the absence of concrete attributes that can be used to compare the quality of complex services such as legal advice and health care, consumers may also grasp price as a quality cue despite this often leading to suboptimal outcomes.

In all, consumers who make decisions regarding complex services encounter substantial difficulties in evaluating costs. However, while research demonstrate how consumers evaluate prices and costs in general (e.g. Lurie and Srivastava, 2005; Barone *et al.*, 2022), as well as some limited research exploring consumers' (negative) reactions to complex pricing schemes (Homburg *et al.*, 2014; Layer *et al.*, 2017), little research in marketing focus specifically on mapping the mistakes that consumers can make when evaluating costs in complex services settings. Given, as stated by Gruner and Soutar (2021), that "consumers' often unpredictable behaviour can be partially attributed to the complexity of their information environments" (p. 278) as well as the importance for consumer well-being of many complex services, this is concerning.

Against this background, the purpose of this study is to empirically examine to what extent three specific consequences of complexity influence the consumer's tendencies to make mistakes when evaluating the costs (or price) of complex services. We empirically focus on one specific case, fees in mutual fund investing and approach the topic from three different angles, all relevant to the decision-making process: the abilities of the individual, how consumers choose to evaluate the offering, as well as the characteristics of the presentation of cost information. In doing this, we contribute to the literature on pricing of complex services by empirically identifying and validating sources of mistakes that consumers make when evaluating costs of complex services, relevant to services such as investments, health care, legal advice, lending and insurance. We also provide practical insights for policymakers on how to provide consumers with a better opportunity to make good decisions in complex service settings.

## Literature review

### *Definitions and characteristics of complex services*

Complex services have been of interest for researchers for some time; partly due to the increased incorporation of service contents into various offerings, i.e. the servitization of manufacturing and partly due to the impact of level of complexity on reward and challenges associated with a servitization strategy (Benedettini and Neely, 2015). The definition of complexity in services is traditionally associated with the service having several interacting components and marked downstream consequences (Amaral and Uzzi, 2007). In line with this, Benedettini and Neely (2015) further argue that the level of complexity may be divided into the level of complicatedness, as in number of components and level of interaction and level of difficulty, defined as magnitude of resources used by the customer to achieve an outcome, along with the level of uncertainty.

Contemporary complex services may also be characterized by a combination of technology-oriented services and person-oriented, often knowledge-intensive services (Peters *et al.*, 2015). This practically implies that the provision of value for the consumer often stems from several stakeholders or service providers, acting in an explicit or implicit service value network (*ibid.*). Complex services further often span over long periods of time. It is, hence, not a single transaction that is of interest, but rather a prolonged service delivery period spanning over weeks, months – yes, even decades of continuous interactions.

### *Evaluation of costs in complex services*

The consumer of complex services is often required to contribute various resources of both cognitive and emotional character to coproduce the service, frequently over an extensive period of time (Peters *et al.*, 2015; Temerak *et al.*, 2018). Specifically, costs associated with complex prices have been shown to cause a high cognitive burden, forcing customers to invest cognitive effort (Homburg *et al.*, 2014). One primary starting point when aiming to understand consumers' handling of costs associated with complex services is, hence, consumers' cognitive resources and their ability to make the necessary assessments to comprehend the long-term implications of these costs within the service duration.

In line with individuals' limited capacity to process information (Simon, 1955), the reaction from the consumer of complex services has frequently been to reduce the mental effort necessary to process information (Gruner and Soutar, 2021), often implying an increased reliance on accessible and "simple" choice criteria (Gabbott and Hogg, 1994). As noted by Devlin (2007), consumers of complex services usually put less weight on intrinsic factors, among them price (Devlin, 2007). Further, the specific influence of price tags, or even the direction of the price signal on consumers' perception is far from straightforward when it comes to complex services (Estelami, 2008). While a high price generally (for both goods and services) is associated with a lower consumer demand, certain contextual factors, among them the characteristics of complex services, may lead to higher prices instead of increasing the demand from consumers (*ibid.*). In all, we note that the consumer evaluation process and the use of prices as an input constitutes a second starting point for exploring consumers' handling of costs of complex services.

Finally, factors such as the size of the price plan presented, the heterogeneity of numbers used and the heterogeneity of calculations inherent in the price plan, have proven to drive consumer perception of price complexity (Homburg *et al.*, 2014). A conceivable perspective to focus upon would hence be the presentation format, possibly exercising an impact on consumer behavior regarding complex service (e.g. Johnson *et al.*, 2023).

Summing up, the complex services setting offers a number of mechanisms that may cause poor evaluations and decision-making regarding costs. These may relate to the

abilities of the individual, how consumers choose to evaluate the offering, as well as the characteristics of the presentation of cost information. Building on these three theoretical root causes of cost-related mistakes, we formulate three separate research questions below, each one with a separate theoretical platform.

*Characteristics of the individual in complex services: numeracy and knowledge.* One cause of cost processing mistakes in complex services may stem from consumers' application of cognitive resources. A perception of a higher price complexity, implying a higher cognitive burden, results in a perception of "higher thinking costs," i.e. a more marked cognitive effort on behalf of the consumer. Specifically, individuals' basic understanding of numbers and problem-solving, often referred to as numeracy (Garofalo and Lester, 1985), which is associated with problem-solving, judgment and decision-making where quantitatively oriented consumer information processing is required (Cokely et al., 2012), will define the outcome of the price evaluation.

Consumers have been shown to experience particular difficulties in understanding exponential relationships between variables. There is considerable evidence of exponential growth bias (Königsheim et al., 2018; Levy and Tasoff, 2017), implying an inclination among consumers to intuitively linearize functions containing exponential terms. This cognitive shortcoming has further been shown to resist attempts by heuristics to "correct" the outcome, especially when decisions are abstract and infrequent (Stanovich and West, 2003).

For complex services, such as investments and insurance, costs often also span over long periods of time and are often expressed in terms of monthly or yearly premiums. Even seemingly small differences may thus make up large differences in the end. However, little is known about how consumers evaluate the long-term effects of costs, especially when the pricing is complex. Thus, our first research question is:

*RQ1.* To what extent do consumers of complex services understand the detrimental effects costs over a long-time horizon?

*Characteristics of evaluation of complex services: cues.* A second conceivable cause underlying cost processing mistakes in complex services may be that consumers use prices as a signal of quality. In the marketing domain, cue-utilization theory (Olson, 1972) is widely used to understand decision-making in complex situations, describing consumers as exposed to signals and helping them evaluate the quality of a certain offering. These signals may be viewed as easily activated associations between environmental factors and task-related objects retained in long-term memory (Brunswick, 1955). Further, the use and importance of cues rests on consumers' intention to limit cognitive effort as discussed above: relying on signals inherent in a choice leads to a lower perceived cognitive load (Brouwers et al., 2016). The extraction of which cue to rely upon has received ample focus; a complex environment with a magnitude of available information and potential cues implies that the difficulty of cue extraction will increase substantially (Su et al., 2018). Consumers' choice of a cue, or cues, ultimately depends on several factors, including diagnosticity (i.e. the degree to which cue information facilitates decision-making) (Purohit and Srivastava, 2001), the saving of cognitive effort and the links between cues and previous experiences (Su et al., 2018).

While much research has focused on the price-quality cue, the nature of this relationship is still unclear in the complex services settings. For instance, while it may seem that services, due to the lack of search qualities, should be a conducive environment for this type of cue, Völckner and Hoffmann (2007) find that the cue is less strong in the general services setting than in the fast-moving consumer goods category. Moreover, Kirchler et al. (2010) found that

consumers believed the price-quality cue to function better for complex products but did not include services in the study. Within specific complex services, such as health care, research has found that price is not always related to objective quality or perceived quality (Fitzgerald and Yencha, 2019; Prinsloo *et al.*, 2022). As such, how consumers react to the price-cue in highly complex contexts is still largely unclear. Therefore, we ask:

*RQ2.* To what extent do consumers of complex services see high costs as signaling quality?

*Characteristics of presentation of complex services: salience of cost.* Finally, a third conceivable cause of cost processing mistakes in complex services may be that costs are not presented in a way that makes them salient to the consumer. For policymakers looking to improve decision-making concerning complex services, one issue hence becomes how to make costs and the consequences of high costs, more salient in the consumer decision-making process. The importance of salience builds on the notion of individuals' limited attention span (Kahneman, 2011) and may be seen as an underlying mechanism that enables individuals to direct their cognitive resources to certain subsets of available information (Dertwinkel-Kalt *et al.*, 2017). As a consequence, visible or salient features of a decision are emphasized in the decision process of individuals and nonsalient features are similarly downplayed (Taylor and Fiske, 1978; Tversky and Kahneman, 1973).

One specific salient feature is whether the cost is presented in percent or in dollars (Gonzalez *et al.*, 2016; DelVecchio *et al.*, 2007). The vast majority of these studies, however, are focused on price promotions or price reductions, and not on understanding or using the price attribute; something that would be the relevant factor in many complex service settings. Regarding complex services, some studies focus on health insurance (Loewenstein *et al.*, 2013), highlighting the difficulty consumers face regarding this type of service. Likewise, some studies on investments indicate that part of the negative effects can be remedied with presentation of costs (Newall and Parker, 2019). Yet, these studies have often only explored effects of turning percentages into dollars, but not other salience features, such as, e.g. presenting percentages of fees in relation to another absolute number. Against this background, we ask:

*RQ3.* To what extent would costs become more important in consumer evaluation of complex services if the long-term effects of costs were communicated in a salient manner?

### **The empirical studies: the case of investment services**

One complex service where it is of high importance how consumers deal with information is the growing area of investment services. Commonly pursued goals, such as sending children to college or dreams of golden years as a retiree, have turned many people into long-term investors. Practically, the need for financial security after retirement may be seen as a bundle of activities including for instance setting aside a sum of money, deciding on how much risk to take on and finally choosing what to invest in (mutual funds, directly owned equities, etc). Investment services, hence, rank high on the level of complicatedness inherent in the definition of complex services proposed by Benedettini and Neely (2015). As regards difficulty, investment services probably rank even higher: deciding on how to invest is frequently associated with the employment of both cognitive (Capon *et al.*, 1996) and motivational (Aldlaigan and Buttle, 2001) resources. All in all, investment services fulfill several, if not all, of the criteria stipulated for complex services

The cost of mutual funds, the so-called fund management fee, is usually presented as a small yearly percentage and is continuously deducted from invested capital. Further, the level of fund fees affects capital substantially. With expected returns at, for instance, 6%, paying 1.5% in fund fees amounts to 25% of expected earnings. Even more crucial for the consumer is the detrimental effect that fees have on long-term financial returns, in that they reduce the capital that would otherwise compound and grow over time. Overall, this implies that reducing fees ever so little may account for a large gain for the consumer at the end of the investment period.

Consumer awareness of the detrimental nature of fund fees has increased in recent years, as indicated by the reduced fees paid and the popularity of cheap index products (i.e. low fee funds that narrowly follow a set benchmark; [Boldin and Cici, 2010](#)). However, despite this positive trend, research has also documented that many consumers continue to choose mutual funds that charge high prices ([Pontari et al., 2009](#)). This is the case even when there is no apparent potential for higher returns from doing so, such as for index funds ([Boldin and Cici, 2010](#); [Choi et al., 2010](#)). As such, understanding the underlying consumer information processing regarding the costs of investment services is an important task for consumer researchers. Furthermore, using this understanding to aid consumers and policymakers in making appropriate decisions may have a real and nonnegligible impact on people's lives and the likelihood of achieving set goals and dreams.

Below, we present three studies on how consumers deal with costs in this context, each focusing on one of the three questions presented above.

*Study 1: To what extent do consumers understand the long-term detrimental role of costs?*

The general tendency to linearize functions containing an exponential element, commonly referred to as exponential growth bias (e.g. [Königsheim et al., 2018](#)), is operative in several areas of personal finance, such as the systematic underestimation of the size of short-term interest payments and the benefits of long-term savings ([Stango and Zinman, 2009](#)). We similarly propose that one cause of investing in high-cost funds could be a lack of ability to correctly assess the long-term financial consequences of such a choice. At least two aspects of mutual fund fees make this task less straightforward than other investment decisions. First, fees are expressed as a percentage continuously deducted from existing capital, making it difficult to determine what is paid to the fund company. This feature of investment fees directly corresponds to the long-lasting characteristic of complex services in general. Second, deducted fees early in the investment period represent considerable foregone future financial returns ([Sharpe, 2013](#)), something that corresponds well to the difficulty inherent in complex services. People generally, through insufficient cognitive resources, tend to underestimate the power of compounding and thus tend not to see the benefits of long-term savings, giving rise to an exponential growth bias (e.g. [Königsheim et al., 2018](#); [Levy and Tasoff, 2017](#); [McKenzie and Liersch, 2011](#)), something that could potentially be one mechanism leading to the choice of higher priced funds.

One aspect that may impact consumers' ability to correctly estimate compound costs is the level of knowledge of financial matters or financial literacy. A variety of studies ([Lusardi and Mitchell, 2014](#)) assert that financial literacy is important for appropriate financial behavior. Thus, it is plausible that literate consumers would be better at estimating the detrimental effect of costs on investment returns than less financially savvy ones. The magnitude of the exponential growth bias present has also proven to be negatively correlated with measures of financial literacy, thus motivating the inclusion of financial literacy when addressing the exponential growth bias ([Almenberg and Gerdes, 2012](#)).

*Aim and design.* The aim of Study 1 was to address the first research question, detailing the extent to which consumers understand the detrimental effects of compound costs and the potential role that financial literacy may play.

Based on the research presented in the literature review, we formulated two hypotheses:

*H1a.* Consumers underestimate the detrimental effect of fund fees in the long term.

*H1b.* Level of financial literacy correlates positively with the ability to correctly estimate the negative effects of fees.

To investigate *H1a*, we designed a short survey, starting with a brief scenario asking respondents to imagine that they had received an inheritance of SEK 100,000 (SEK: Swedish Krona, approximately equaling US\$12,000) that they wanted to save for their retirement, which was described to be 40 years away (a procedure similar to [McKenzie and Liersch, 2011](#)). The participants were told that a financial adviser suggested that the money be invested in a mutual fund yielding 6% annually with a 1.4% yearly fee. This scenario was followed by a question that asked the respondents to estimate how much the fees had cost them in total, including the loss of future return implied by a fee deduction after 10, 20, 30 and 40 years. Moreover, to address the influence of cognitive shortcomings because of lack of financial knowledge, as stipulated in *H1b*, we included a measure of financial literacy [[Fernandes et al., 2014](#), barring the question involving 401(k) and IRA-plans, which was judged to be less relevant for Swedish respondents].

*Prestudy.* A prestudy was conducted before the main study to check the feasibility of the study. In the prestudy, we used the same setup as described above, with the exception that we asked how much the participants thought that they had paid in fees (not including lost return) and we did not include financial literacy. The survey was conducted using participants from a Web panel of Swedish consumers and was answered by 74 randomly selected members. The participants received instructions to give their best estimation of the fees accumulated at different time points, but were not to use any calculators. The Wilcoxon signed-rank test showed a significant Z-score, with the medians for each period deviating significantly from the true score. This indicates that the participants drastically underestimated how much they had paid to the mutual fund as a consequence of the 1.4% management fee. For example, the median participant estimated that they would pay SEK 56,000 in fees after 40 years when the correct answer was SEK 150,000. The underestimation of fees paid was largely because of respondents estimating fees linearly, ignoring the compounding effect of fees. The median values at the four measurement points (10, 20, 30 and 40 years old) were almost perfectly linear.

*Sample and procedure.* After running the prestudy, we continued with the main study. The survey was distributed to 153 students at two Swedish public universities. The questions were read aloud and displayed on a monitor, and the respondents were asked not to use a calculator during the exercise. A total of 69% of the participants were female, and the average age of the sample was 24 years. Using student samples may generally constitute a drawback. However, in this particular situation, using a Web panel was not an option because it was necessary to monitor the respondents during the process of filling out the survey to prevent cheating.

*Results and discussion.* To test *H1a*, we performed a Wilcoxon signed-rank test to estimate significant differences at each point in time (10, 20, 30 and 40 years) between the estimated amounts and the true score, that is, the same procedure as for the pretest. As shown in [Table 1](#), all tests were significant, indicating that the median observed value for each period deviated significantly from the true score. (e.g. after 10 years, the median

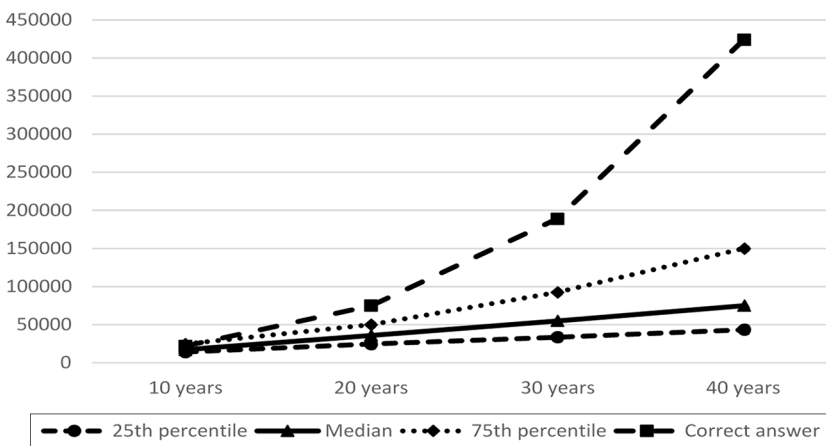
	Estimation of cost after			
	10 years	20 years	30 years	40 years
5 <sup>th</sup> percentile	1,000	2,000	3,350	4,350
25 <sup>th</sup> percentile	14,000	24,500	33,500	43,500
Median	17,000	36,000	55,000	75,000
75 <sup>th</sup> percentile	24,500	50,000	92,500	150,000
95 <sup>th</sup> percentile	157,753	259,000	335,070	551,929
Correct answer <sup>1</sup>	22,000	75,000	189,000	424,000
<i>Wilcoxon signed rank test</i>				
Z-score ( <i>p</i> -value)	2.59 (0.01)	6.04 (<0.001)	8.22 (<0.001)	9.60 (<0.001)
Effect size	0.21	0.49	0.66	0.78

**Table 1.**  
Estimated costs of initial 100.000 investment that grow by 6% annually with a 1.4% fee (Study 1)

**Note:** <sup>1</sup>Calculated using annual compounding of returns and fees  
**Source:** Authors' own work

estimated value was SEK 17,000 and the associated *p*-value is 0.01). As can be seen in Figure 1, the results indicated that, as in the prestudy, respondents drastically underestimated the negative impact of fees, supporting *H1a*. In their estimates, our participants largely used a linear method of calculation, with almost perfectly linear median values, ignoring the compounding nature of investment fees.

As mentioned above, to address *H1b*, we used the Fernandes *et al.* literacy scale with 12 questions. The percentage of correct answers ranged from 10% to 77%, with a mean of 6.4 (SD = 2.44). To evaluate the impact of financial literacy on the ability to estimate costs, a correlation analysis between financial literacy (measured as the number of correct answers) and the difference between the estimated and correct costs was used. Since the data indicated violations of normality because of heavy skew and kurtosis, we performed a Z-score transformation to proceed with a bivariate correlation. For the same purpose, median and interquartile ranges are presented. As illustrated in Table 1, no significant correlation between financial literacy (measured as the number of correct answers for the



**Source:** Authors' own work

**Figure 1.**  
Estimation of costs as a consequence of paying fees to mutual fund (Study 1)

Variables	<i>b</i>	<i>T</i>	<i>SE</i>	<i>p</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$
<i>Step 1</i>					0.03	
Fee level (low/high)	0.003	0.03	0.11	0.979		
Trust (continuous)	0.17	3.27	0.11	0.001		
Style (active/passive)	0.09	0.81	0.05	0.415		
<i>Step 2</i>					0.18	0.15
Fee level (low/high)	0.02	0.20	0.10	0.840		
Trust (continuous)	0.18	3.78	0.48	0.000		
Style (active/passive)	0.06	0.59	0.10	0.557		
Fee × trust	0.46	4.77	0.10	0.000		
Fee × style	-0.13	-0.67	0.20	0.503		
Style × trust	-0.25	-0.26	0.10	0.011		
Fee × trust style	-0.93	-4.81	0.19	0.000		

**Table 2.**  
Results of Study 2

**Notes:** *n* = 332; Dependent variable = perceived potential for future financial return  
**Source:** Authors' own work

respective individual) and the ability to accurately estimate costs was found at any point in time, implying rejection of *H1b*.

The participants in our study failed to estimate how much they would have paid in fund fees over a longer time horizon, similar to the return-focused study of [McKenzie and Liersch \(2011\)](#). As the participants did not account for the future compounding of fees, the difference at 40 years was quite large. Practically, this implies that incentives to invest in low-cost funds may be lost to many consumers simply because they cannot foresee the detrimental effects of high fees. The difficulties of cost compounding did not seem to subside with the higher levels of financial literacy. Therefore, financial education would be assumed to have a limited effect on the ability to accurately estimate the negative effect of management fees over time.

#### *Study 2: To what extent do consumers perceive signaling quality at high costs?*

In our focus on consumers' choice of high-priced funds, one signal (or cue) is the price charged for a product or service, with high prices typically signaling high quality ([Rao and Monroe, 1989](#); [Völckner and Hoffmann, 2007](#)). However, using this "you get what you pay for" decision-making is often not a good strategy in the investment context. Not only has research found that fees reduce potential returns (e.g. [Sharpe, 2013](#)), but studies on the ex post relationship between fee levels and financial returns of mutual funds have also revealed a negative correlation ([Gil-Bazo and Ruiz-Verdú, 2009](#)). From the perspective of potential investors in mutual funds, fees can thus be evaluated in two ways. On the one hand, a high fee may be seen as something that decreases financial quality as it reduces returns over the long run. On the other hand, a high price may be seen as a sign of good underlying financial quality, sending a positive signal to consumers. This reaction may be understood in the light of the high level of difficulty inherent in all complex services generally and investment services specifically: when faced with a seemingly unsurmountable task of assessing quality of an investment offering, the cue used may be a visible, simple cue that the consumer is able to understand.

Consumers often present a heterogeneous response to price cues ([Lim et al., 2005](#)). One variable that may explain consumers' reactions to price cues is trust in the financial provider. Trust is a key component in the intangible and complex context of investments

(Hansen, 2014). Since the credit crunch of 2008, trust in financial service companies has been markedly depleted (Estelami, 2015). While some of this can be attributed to the misbehavior of financial services companies, some can also be attributed to customers' limitations (Estelami, 2015). Regardless of the cause, trust can significantly affect consumer investment decisions. For instance, a consumer with low levels of trust may assume that a high price charged by a financial provider is just another way to take advantage of consumers, hence responding negatively to a high fee. Then again, trusting consumers are more likely to rely on an exchange partner and connect high fees to competence and professionalism.

A third variable that may impact how consumers relate to the price-quality inference is the impact of managerial decisions on fund performance, for example, whether the mutual fund applies an active or passive management style (Elton *et al.*, 2019). Generally, active management implies that the fund has a manager who actively uses her knowledge to pick stocks that will perform well, while passive (or index) management implies that the fund is designed to track an underlying stock market index, usually through standardized computer algorithms (Bogle, 2014). Given this divided fund market, it is likely that trust plays a smaller role in passive management situations where standardized processes and computer algorithms are key components, than in actively managed situations where faith in a specific manager is of utmost importance. Again, we may link the impact of management style on the choice of funds to the documented impact of contextual factors inherent in cue-utilization theory (Kukar-Kinney and Xia, 2017).

*Aim and design.* The aim of Study 2 was to address the question of the extent to which consumers see a signaling quality in high fees and whether trust and type of fund impact this relationship.

Based on our review of cue-based decision-making, we propose three hypotheses:

- H2a.* Consumers evaluate a mutual fund with a high cost as having greater potential for a higher future financial return than a mutual fund with a low cost.
- H2b.* Consumers with high trust in the financial system will associate a high cost with high financial returns to a greater extent than consumers with low trust.
- H2c.* The moderating influence of trust on the price-quality inference is stronger in mutual funds with active management than in those with passive (index) management.

A Web-based experiment was designed to address *H2a–H2c*. The experiment was structured along a  $2 \times 2$  mixed-design (manipulated experimental treatments: *Fee*: low/high and *Management style*: active/passive; *Trust*: measured variable), with perceived financial return as the dependent variable.

*Prestudy.* Before conducting Study 2, we ran a smaller prestudy to check manipulations and to review the results in an exploratory manner. As in the planned main study, we used a between-group mixed-design experiment (manipulated experimental treatment, fee: low/high, trust: measured variable). We designed realistic information about a fictitious mutual fund (containing an ad and a fund fact sheet, both based on existing fund materials in the Swedish market). The fund, named Financial Funds Global, was described as a successful fund that had recently become available to Swedish consumers, and the fund fact sheet described it as a global equity fund, geographically well-diversified, listed in Swedish currency, with a medium level of risk. Previous returns are presented as percentages, ranging from a span of 10 years.

Since we aimed to experimentally assess the importance of fees on consumers' assessment of quality, the manipulations contained one low fee condition (at 0.6% annual

fee) and one high fee condition (at 1.0% p.a.). Effort was put into making the chosen fee levels correspond well to the prevailing range of fees in the Swedish fund market (see e.g. [AMF, 2015](#)). To make the manipulation salient, respondents of each group received a picture with a relative fee comparison that highlighted the price of Financial Funds Global as being either 0.2% below the industry average (which based on the fee structure of the market was set at 0.8%; [AMF, 2015](#)) or 0.2% above the industry average.

The experiment was performed using a Web survey, in which participants were recruited from the student population of a large public Swedish university. Manipulation checks indicated that the manipulations were effective ( $p < 0.05$ ). As for the results, there was no significant impact of fee level on the perceived potential for future returns, but both trust in the financial sector and the interaction term between trust and fee level had a significant impact on the perception of the future financial return of the fund. Thus, the prestudy indicated that trusting consumers may ascribe a positive link between price and financial performance, while distrusting consumers are likely to assume that, all else being equal, a high fee is likely to harm your chances of receiving a good financial return.

*Experimental setup and materials.* As the prestudy worked well (including significant manipulation checks), we used the same material in the main study (ad and fund fact sheet about the fictional mutual fund Financial Funds Global). However, in the main study, additional manipulations were created. To mimic the range of funds available on the market, with certain funds reflecting the decisions of fund managers and, hence, possibly more tightly associated with the level of trust held in fund management, we also included a management-style manipulation (active/passive). The core characteristics of actively and passively managed funds were used to design manipulations. In the passive condition, the algorithm-based mechanisms behind a passive (index) management style were depicted, while the actively managed condition portrayed the fundamentals of active management with an analysis team of professionals and described the potential for large deviations from the index.

For the fee level, the basic setup, as in the prestudy, was used but with minor amendments. As in the prestudy, the low-fee (high-fee) condition described the mutual funds as having a lower (higher) than average price (0.2% annually below [above] the average). However, as passively managed funds are considerably cheaper than actively managed funds, prices in the passive situation were set lower (low: 0.2%; average: 0.4%; high: 0.6%) than in the active situation (low: 1.0%; average: 1.2%; high: 1.4%). Thus, we ensured that the fee levels were realistic, see the overview of the Swedish market presented in the [AMF guide \(2015\)](#). The price comparison and descriptions of the management styles are provided in the [Appendix](#). As in the prestudy, respondents received a relative fee comparison, highlighting the presented price as either below or above the industry average to increase salience.

*Dependent and measured variables.* As in the prestudy, the dependent variable was the perceived potential for future financial return. This was measured after presenting the investment scenario containing the variation in fund fee levels through a three-item five-point scale anchored with good/bad returns and low/high attractiveness of return ( $\alpha = 0.92$ ). Further, as in the prestudy, we measured broad scope trust using a three-item scale adapted from [Grayson et al. \(2008\)](#) with good reliability ( $\alpha = 0.92$ ). The reason for measuring broad scope trust (as compared to narrow scope trust) was that broad scope is considered more of a personal trait, in line with our second research question, and hence, less context-dependent.

*Sample and procedure.* The experiment was performed using participants from a Web panel of Swedish consumers ( $n = 332$ , average age 41 years, 48% female). During the Web

survey, participants were randomly assigned to one of four versions of the fictitious mutual fund.

The manipulation check regarding price manipulations (designed as a response to the sentence “I believe that Financia Fund has a fee that relative to the market is high/low”) indicated that the participants perceived the situation as expected, with the high fee condition ( $M = 3.55$ , South Dakota = 0.93) being perceived as significantly higher than the low fee condition ( $M = 2.72$ , South Dakota = 1.01,  $p < 0.05$ ,  $\eta^2 = 0.97$ ). A manipulation check regarding management style (“To what extent do you believe that the managers of Financia Fund choose the stocks to invest in themselves?”) was added. Again, we found a significant difference between active funds ( $M = 3.62$ , South Dakota = 0.96) and passive funds ( $M = 3.04$ , South Dakota = 1.05,  $p < 0.05$ ,  $\eta^2 = 0.57$ ).

*Results and discussion.* Two subsequent multiple ordinary least square regression analyses were run to predict the perceived potential for the financial return of the fund based on the fee level, management style and trust (see Table 2). By performing this stepwise analysis, we were able to assess the increment in  $R^2$  because of the interaction terms alone (Dawson, 2014).

Hence, the first regression model dealt only with the direct effects of the three independent variables [ $F(3, 328) = 2.841$ , Cohen’s  $f^2 = 0.03$ ]. The model showed no significant direct effect on fee level ( $b = 0.003$ ,  $p > 0.05$ ), leading us to reject  $H2a$ . Further, the results showed that management style had a significant direct effect on perceived return potential ( $b = 0.09$ ,  $p > 0.05$ ). However, the trust had a significant impact on expected returns ( $b = 0.17$ ,  $p = 0.01$ ).

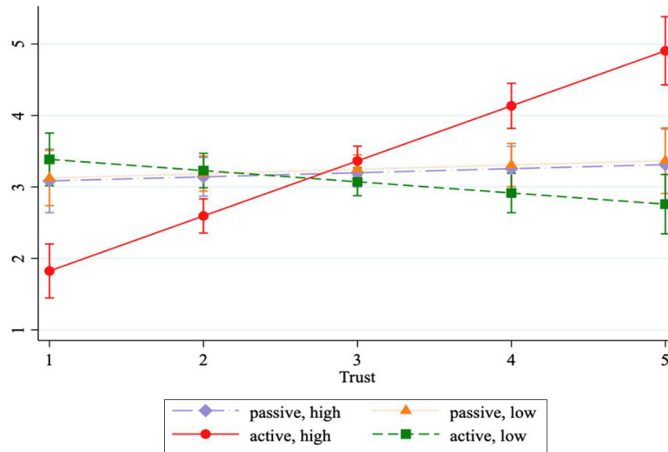
In the second step, both two-way and three-way interactions were included in the model, with an increase in  $R^2$  of 0.15 [ $F(7, 324) = 9.93$ , Cohen’s  $f^2 = 0.13$ ]. Regarding two-way interactions, the interaction terms for both trusts and fees ( $b = 0.46$ ,  $p < 0.05$ ) and management style and fees ( $b = -0.25$ ,  $p < 0.05$ ) were significant. This implies that the presence of an actively managed fund and a high level of trust, independent of each other, implies a stronger connection between fee level and perceived future financial return. This supports  $H2b$  (trust) and  $H2c$  (type of fund). Finally, a significant three-way interaction between fee level, trust and management style was revealed ( $b = -0.93$ ,  $p < 0.05$ ).

The three-way interaction between fee, trust and management style is plotted in Figure 2, showing that, in the actively managed condition, the connection between fee level and perceived return potential varied considerably with trust. This observation is in stark contrast to the passively managed condition, in which the presence of computer algorithms limited the influence of trust as a moderator.

In all, Study 2 presented patterns similar to those in our prestudy on the nexus between fee level, trust and quality perceptions. While price cues have no direct impact on the perception of future returns, trust moderates this relationship. Highly trusting consumers were likely to see a high fee as a good thing, while consumers with low trust in the financial sector perceived it to hurt their chances of a good financial return on investment. However, the results of Study 2 also indicate that the moderating role of trust varies with management type. Trust interaction was strong in actively managed situations but did not appear for passively managed investments. In many ways, this makes sense; trust is of much less importance in situations where mathematical algorithms control fund performance than in situations where managerial skills and stock-picking are central.

The conclusions drawn from the experiment are that trusting consumers tend to make incorrect assumptions about the positive signaling value of a high mutual fund fee. One reason why some consumers keep investing in high-cost mutual funds may be that highly trusting individuals receive a positive quality signal from a higher fee. It should also be

**Figure 2.**  
Predicted values of  
perceived potential  
return with 95% CI at  
each scale point of  
trust



Source: Authors' own work

noted that, for distrusting customers in a passive setting, price cues have the opposite effect, hence function as a reverse-quality signal.

### *Study 3: Is it possible to make costs more salient through communication?*

Given the limited ability of individuals to process (financial) information, retail fund consumers are likely to fail to estimate the negative consequences of mutual fund fees. Specifically, previous studies have shown that financial consumers often have low levels of knowledge (Capon *et al.*, 1996) and lack awareness (Alexander *et al.*, 1998), factors that, together with a high level of complexity inherent in the financial offer at hand, lead to difficulties in consumer evaluation. In line with our reasoning regarding the use of visible, easy-to-understand cues above, the framing of the financial information displayed to the customer in a concrete, salient way will have significant effects on consumer evaluation.

Historical returns are an example of a central attribute when making financial choices; the mental representation of a stock has been described as a distribution of its past returns (Barberis *et al.*, 2016). Applying the effects of the salience of attributes, it has been suggested that investors' beliefs about future returns comprise an extrapolation of salience-weighted past returns (Cosemans and Frehen, 2021). Applied to the impact of fund fees, this implies that making the fee more concrete by presenting it in a format that is easier to interpret (i.e. increased salience) may make individuals use fees to a higher extent in their investment choices (Newall and Parker, 2019).

As suggested by Cosemans and Frehen (2021), we experimentally altered the salience level for fund prices. Specifically, we address the consequences of complementing the regular way to communicate investment fees (i.e. as an annual fee in percent of invested capital) with information that may increase the salience of fund fees: the compounding costs incurred because of the fees over a longer time horizon. While previous studies have focused solely on converting fees into dollar amounts (Newall and Parker, 2019; Fisch and Wilkinson-Ryan, 2014), we vary the additional information that consumers receive in terms of both dollar amounts and a percentage of the total potential return paid in fees.

*Aim and design.* The aim of Study 3 was to explore the relationship between the presentation of fund management fees and the importance of fees in mutual fund decision-

making. To address this aim, we used a choice-based conjoint analysis (CBC) approach (Voleti *et al.*, 2017), where participants pick one out of several different options with various levels of attributes. This choice is then used to delve into the decision weight of these attributes to assess their influence on preference (Grebitus and Roosen, 2018). While CBC-based studies have been used previously on decision-making in mutual funds, they are usually conducted in the same way for all participants (Pontari *et al.*, 2009). In this study, we conducted three separate CBC studies and varied the information that participants received between them to determine if the importance of the fund fee would change depending on how the information was presented.

*Experimental setup and material.* The setup of the three CBC tasks was all done identically. Four attributes were judged appropriate for modeling the decision: previous financial return, fee, rating and level of risk. To come up with appropriate levels of financial return of Swedish mutual funds, we surveyed past performance of the entire universe of Swedish funds available to retail investors and picked three levels of financial return over the past five years (69.5%, 78% or 86.5%) and fee (yearly fee of 0.6%, 1.0% or 1.4%; see AMF (2015) and two levels of ratings (external ranking on a five-point scale of 3 or 5 stars) and risk level (on a risk scale of 1–7, a value of 5 or 6) were specified.

A balanced incomplete design, including a limited number of profiles, was presented to the participants. The number of profiles used is to some extent arbitrary, but we chose the implementation of finding a D-optimal design in XL Stat (ver. 2019.2) using ten profiles. Each respondent made 12 different choices between the two presented mutual funds (profiles). This design was kept identical in each group, except for the way the cost information was presented. In the first condition (control), participants completed the CBC task with mutual fund fees presented in the standard manner (annual percentage of capital). The second condition (aggregated dollar) included an estimation of how much the fee would compound in Swedish Krona over 40 years, given an initial investment of SEK 100,000 and a 6% annual return. The third and final condition (aggregated % of return) included the same parameters but now expressed the compound fee in terms of a percentage of total fund return.

*Sample and procedure.* The three CBC choice tasks were performed using a Web survey in which participants were recruited from the student population of a large public Swedish university ( $n = 225$ ; average age = 30, 60% female). The participants were randomly assigned to one of the three CBC tasks and received a scenario similar to Study 1, asking them to invest an inheritance of SEK 100,000 in retirement. They were then asked to go through the tasks and, with each pair of mutual funds, choose the one they would prefer.

The utility function of each model was estimated using a conditional logit model (Hauber *et al.*, 2016) using the CBC module in XL Stat. The conditional logit model is based on the work of McFadden (1974) and involves a logistic regression model with dependent data relating to the characteristics of the alternatives presented as predictors (compared to individual characteristics for an ordinary logistic regression). The conditional model generates utility estimates (cf. regression weights) derived from the attributes and attribute levels presented to the participants, regressed on the dichotomous outcome variable of choosing one over the other (e.g. Hauber *et al.*, 2016).

*Results and discussion.* The results of the CBC analyses are presented in Table 3, complete with the goodness-of-fit statistics for each model (Fabozzi *et al.*, 2014). We observe a few differences between the conditions regarding the relative importance of fees and previous returns when deciding what mutual funds to invest in. Expectedly, the importance of fees increased under conditions in which aggregated long-term costs were shown. Fees accounted for 27.3% in the control condition, whereas they accounted for 33.6% and 35.7%

**Table 3.**  
Utilities and  
importance of each  
attribute in each  
condition (Study 3)

	Control condition		Aggregated dollar condition		Aggregated % of return condition	
	Utilities	Aggregated importance of attribute	Utilities	Aggregated importance of attribute	Utilities	Aggregated importance of attribute
Return 69.5%	-1.740		-1.156		-1.441	
Return 76%	-0.044	39.9%	0.000	37.2%	0.000	34.8%
Return 86.5%	1.784		1.156		1.441	
Fee 0.6%	1.131		1.055		1.295	
Fee 1.0%	0.144		-0.023		0.368	
Fee 1.4%	-1.275	27.3%	-1.031	33.6%	-1.663	35.7%
Rating 3	-0.847		-0.559		-0.684	
Rating 5	0.847	19.2%	0.559	18.0%	0.684	16.5%
Risk 5	0.599		0.349		0.535	
Risk 6	-0.599	13.6%	-0.349	11.2%	-0.535	12.9%
Goodness of fit statistics	-2LL: 743.82 $R^2$ (McFadden): 0.40 AIC: 755.82 BIC: 784.64		-2LL: 912.23 $R^2$ (McFadden): 0.27 AIC: 924.23 BIC: 953.04		-2LL: 799.70 $R^2$ (McFadden): 0.36 AIC: 811.70 BIC: 849.52	

**Source:** Authors' own work

of the aggregated importance in the long-term cost conditions. It is important to bear in mind that, for both fees and all other attributes the relative importance of the fee attribute depends on the attribute levels included in the analysis.

Similarly, the importance of previous financial returns decreased from almost 40% in the control condition to 34.8% in the aggregated percentage of return condition. For fees, the utilities in the aggregated percentage of return condition speak the same language. Particularly, the high-fee condition utility (-1.663) points out that explicitly showing high fees in this format decreases the likelihood of preferring the fund described.

Study 3 was performed to evaluate the role of fees in the decision-making for mutual funds, with the specific aim of understanding how additional cost information influences consumers' investment decisions. A similar picture to that of previous research has emerged: consumers largely look to previous returns when making their investment decisions (Choi *et al.*, 2010; Pontari *et al.*, 2009). However, the results also indicate that this dependency on previous financial returns decreased when new information on the compounded and aggregated consequences that fees have over the long term was presented, in line with the assumptions of the importance of the salience of attributes (Taylor and Fiske, 1978; Tversky and Kahneman, 1973).

### General discussion and contributions

Prices and costs represent a key aspect of the decision-making processes of consumers. Understanding how consumers evaluate prices, therefore, remain one of the primary research questions in consumer research (e.g. Barone *et al.*, 2022). Yet, our understanding of how consumers deal with costs in the decision-making process is far from complete, particularly when it comes to more complex situations (Gruner and Soutar, 2021).

In this paper, we focused on three angles on how consumers evaluate costs in complex service settings and use the case of mutual fund investment to empirically explore potential mistakes consumers make.

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*Discussion and theoretical implications*

Complexity exerts a marked influence on several parts of the decision-making process of individuals. First, the level of complicatedness, defined as number of components and level of interaction, creates an intricate environment. This increases the level of perceived difficulty, defined as magnitude of resources used by the customer to achieve an outcome (Benedettini and Neely, 2015). Second, given the limited cognitive resources on behalf of the consumer (Simon, 1955), a likely outcome of the heightened level of both complicatedness and difficulty within complex services is an increase in the cognitive burden placed upon consumers, possibly manifesting itself in cognitive strain (Gruner and Soutar, 2021). Finally, the extended service delivery periods often surrounding complex services imply that consumer evaluation is not possible when the decision to purchase is made, consequently emphasizing the importance of credence, i.e. trusting the service counterpart (Peters *et al.*, 2015).

Given the fact that complexity potentially influences several aspects of the evaluations consumers make, an understanding of how consumers evaluate costs in complex settings is dependent on evaluating several potential influences that complexity can have. In this paper, we do this by, in turn, focusing on the individual, endowed with bounded cognitive resources, the evaluation of the offering at hand, taking place in a complex environment and the presentation format, i.e. in which format information is captured by the consumer.

*The individual: numeracy and cognitive strain.* Focusing first on the high levels of complicatedness inherent in complex services, leading to subsequent high perceived difficulty, a consequence is that consumer cognitive processes become a central component (Huang *et al.*, 2022; Gruner and Soutar, 2021). Amount of basic understanding of numbers and problem-solving would, based on the definitions of complex services, be more decisive in shaping consumer behavior situations with a high level of difficulty.

Our results indicated that consumers encountered substantial difficulty when faced with the task to correctly estimate future effects of a long-term recurring cost elements. As suggested by Königsheim *et al.* (2018), consumers tend to simplify functions that encompass exponential elements by treating them as linear functions; something that is in line with our results. Our first study contributes to the literature by highlighting that this relationship, often found in studies focusing on future financial returns of investments and savings (e.g. McKenzie and Liersch, 2011), also holds for evaluation of the costs in the complex setting.

However, perhaps the most important contribution of our study was highlighting that the difficulties consumers experience are not remedied with increased financial knowledge. People high in numeracy and knowledge are often found to be performing better on difficult tasks involving numbers (e.g. Souza-Monteiro *et al.*, 2022). However, in our study, the task of nonlinear cost estimation did not get significantly easier for consumers with a higher level of knowledge. This implies that certain inherent characteristics of the service, such as cost being paid over an extended time period, simply seem problematic for consumers to fully understand, regardless of level of knowledge. Indeed, the combination of service characteristics and cognitive shortcomings is a feasible reason for consumers failing to correctly take costs into account, hence making costly mistakes when purchasing complex services.

*The evaluation: the influence of pricing cues in complex services.* Given our results pointing at consumers, invariant of level of knowledge, having difficulty evaluating the cost component of the complex service, we investigate possible ways for the consumer to overcome this seemingly too demanding task at hand. One possibility is that the consumer instead of scrutinizing the often multifaceted complex service environment uses simpler and available signals to evaluate the service (Brouwers *et al.*, 2016). Previous research has

hinted, somewhat contradictory for complex services; complexity may lead to a greater focus on price as a quality cue (e.g. [Kirchler et al., 2010](#)), while services may lead to a reduced reliance of price as a quality cue (e.g. [Völckner and Hoffmann, 2007](#)).

Our results point at costs, under certain circumstances, being used to infer quality for mutual funds. More specifically, we find that in a trusted environment, fees are used as a positive signal of good quality. However, we also find, somewhat unexpectedly, that for people with low trust, this relationship is reversed. Consumers with a low level of trust in the service provider, interpret high costs as something likely to hurt their chances of a good outcome.

These results should be seen against previous results within and outside complex services (e.g. [Völckner and Hoffmann, 2007](#)). Unlike research that indicates that complexity may lead to greater focus on price as a quality cue (e.g. [Kirchler et al., 2010](#)), our research find that there is no “general” quality cue effect. Instead, in line with recent work on price and quality within the complex health-care industry, we find that the level of price quality inference is determined by customer characteristics. For instance, [Prinsloo et al. \(2022\)](#) find that “high-coverage” and “low-coverage” consumers perceive different relationships between price and quality, much like our results highlighting that consumers with high and low in trust find different price – quality relationships. In finding that certain characteristics can also reverse the cue, it provides more detail to the knowledge about the relationship between the two variables.

In all, while there has been ample research on price-quality cues, little has been done on the influence of complexity. We contribute to this literature by empirically documenting the nature of this relationship in one complex setting. In general, the research supports and extends the notion from other complex contexts such as the health-care research, that the general connection is small (or absent), but that consumers with certain characteristics, such as a high level of trust, may influence how it is used. Thus, taken together with previous research, our results regarding cue utilization and trust point at a possible source of consumers’ costly mistakes may stem from the evaluation of services performed, but only under certain conditions.

*The presentation: the influence of price salience.* Finally, the complicatedness and difficulty inherent in complex services imply a cognitive strain on individuals ([Gruner and Soutar, 2021](#)), possibly leading consumers to aim for a reduction of this cognitive tension. Use of presentation format would be one way to achieve this: with prices presented in a manner that is salient and readily processable for the consumer, the necessity to apply cognitive resources decrease ([Tversky and Kahneman, 1973](#)). In the same fashion, a lack of salience regarding price information would hence be a third possibility for consumers to make mistakes as regards choice of complex services.

We found in our study that level of salience as regards price matters: presenting price or costs in a visible and salient way will make the consumer rely more on this attribute. Our results thereby contribute to the literature on how consumers evaluate prices presented in different formats and the influences of framing on consumers’ perceptions of price ([González et al., 2016](#); [Liu and Chou, 2015](#)), and highlight that presenting costs in dollars over time may generate a better understanding of costs in a complex setting. While much of the previous research on different formats, such as percentages or dollars) has focused on relatively simple services/goods, this contributes to the literature on how costs are evaluated in complex settings ([Homburg et al., 2014](#); [McElvaney et al., 2018](#)).

*Overall contributions and theoretical implications.* In light of the increasing significance of complex services in contemporary daily life, with examples such as financial security and health-care services representing critical decisions that consumers are compelled to make,

the imperative to comprehensively understand consumer reactions to these types of services is more pivotal than ever. Yet, with a few exceptions (e.g. [Homburg et al., 2014](#); [Layer et al., 2017](#)), there is a surprisingly scarce amount of research on how consumers react to prices in complex settings.

We advance the knowledge in this area by identifying, and validating, three potential causes for mistakes in this area. Our results specifically contribute to the pricing literature in each of the three strands of research as discussed above. We show that consumers are simply not able to make informed decisions for complex costs, making them vulnerable to various marketing practices. However, on a general level, our studies also contribute to the burgeoning literature on the value of simplicity ([Gruner and Soutar, 2021](#)). Consumers these days are expected to make decisions regarding a large number of services of a high complexity, and as displayed in our three empirical studies, make several mistakes in this process. Complexity often tilts the power balance in favor of the firm, at the expense of the consumer (e.g. [Carlin, 2009](#)). This fact, as well as many other observations, highlight that there is significant value for consumers by simplifying information environments. In fact, some research has even noted that consumers are willing to pay extra for simplicity ([Homburg et al., 2014](#)), or forgo certain features in the offering to increase simplicity ([Burke, 2013](#)). The reduction of the cognitive cost in all aspects of the offering, is thus likely appreciated by customers (e.g. [Ketron et al., 2016](#); [Ha and McCann, 2008](#); [Orth and Wirtz, 2014](#)). As for costs/prices, this may mean that firms use round numbers instead of just below amounts (e.g. [Wieseke et al., 2016](#)), or as in our study three, use dollar amounts instead of percentages or simplified long-term estimates.

Our studies highlight that consumers may not only get cognitive value out of simplicity. Should simplicity be developed in a good way, this may also yield monetary value, through lower costs. Simplicity may, of course, also have negative consequences for consumers. Consider for instance, the “one-click” payment from Amazon that makes it simple to buy. While this simplification may generate perceived value, it may also increase impulse purchasing. Likewise, having simplified environments for gambling services or “buy now pay later” schemes, may also have negative consequences. The key aspect for theorization regarding value in simplicity, when it comes to costs, thus includes “how” simplification should be done to both increase cognitive value of simple environments, while at the same time make sure to simplify the environment in a way that is in the customers’ best interest.

#### *Implications for policy*

The literature in this study provides several useful insights for policymakers interested in improving consumers’ decisions within a complex service environment. Based on the results, at least two policy measures seem to be relevant: education/information and providing simplified input for improved decision-making.

The results from our first study point to the estimation of the impact of costs being difficult for consumers, even when highly knowledgeable. However, this (probably) does not imply that people are unaware that costs normatively should be minimized – but rather that many individuals cannot take the abstract cost and extrapolate just how detrimental it will be. The objective for policymakers then becomes giving the right decision-making input to consumers and provide a transparent indication of the influence of costs. We tested one such simplifying initiative in Study 3, in which the effects of the format of fee information were examined. The results indicate that the information format, that is, bluntly stating the future economic consequences of a certain fee, indeed has a small but noticeable effect on actual choice. This could be directly incorporated into standards regarding both the educational efforts of policymakers and the requirements for information in general.

All these insights gained could equally well be applied to policy-making within a different corner of the complex service universe. Take the disappointing results discussed above, with consumers having difficulty estimating the impact of a fee. Given the emerging market for private health insurance in many Western societies, imposing some kind of regulation as regards the price that can be charged for such complex services and hence safeguarding the customer from ending up paying an unexpected large sum of money makes sense. Also, our second result discussed above, the computation and stating of consequences of fees over time, could be transferred to less complex services. Take the emerging subscription services, where e.g. glasses or online services such as Spotify, are subscribed to and generate a stream of smaller monthly payments over time. The obligation for the provider to reveal the total cost for such a subscription over a set period of time to the consumer again makes perfect sense, given the results of our study.

#### *Implications for marketers*

Our study has specific implications for marketers of complex services, such as (but not limited to) investments, health care, insurance and legal advice. On a general note, our studies emphasize the difficulty with which consumers evaluate and assess price differences. Thus, competing with low prices may be problematic, simply because consumers cannot assess just how detrimental a high price tag may be or what they would gain by opting for a low price alternative. If low-cost strategies are pursued, they will likely need to be combined with educational efforts to actually be able to communicate what the upside will be for the consumer. Second, our results clearly underline the importance of trust for this particular type of services. There is an inherent temptation for managers of complex services in that our results indicate that a high level of trust may lead to favorable price cue estimations among customers. As stated by [Devlin \(2011\)](#), trust in financial actors is, however, not a static variable, but may give in to opportunistic behavior (e.g. by keeping prices of active funds at high levels), which may backfire into subsequent mistrust among customers.

#### *Limitations and future research*

This study has a few limitations. First of all, we aim to contribute to the literature on complex services. We define complex services, and also use that definition to discuss implications for marketing and implications for policy. Basing the empirical studies on one specific part of the complex services universe, which is an inevitable part of the contextualization of a study, practically implies that several characteristics of complex services are at the test simultaneously. In our case, our choice of financial security as an example of a complex service brings along a type of service with annual payments presented in percentage terms together with a prolonged relationship between the service provider and the customer. In other words, we are simultaneously testing the impact of the service interactions at hand and the time frame prevailing. Second, all the studies were conducted in one country. While Sweden is one of the more developed countries when it comes to mutual fund investing ([Khorana et al., 2005](#)), and is similar to other developed countries in terms of market fundamentals ([Morningstar, 2017](#)), there may be cultural differences that could influence consumers.

There is a great need for more research on how consumers deal with costs and prices in complex settings. As consumers increasingly are expected to interact with a multitude of complex services, understanding the fundamental mechanisms at work is important. For instance, future research could focus on expanding the scope to other complex contexts, such as health care and education. It is also important to understand the processes

underlying perceived complexity in different sectors. While some aspects of financial services, such as type of management, may underlie complexity here, understanding and exploring why various service characteristics impact perceived complexity and consumer evaluations are important. Another avenue of research may be to manipulate complexity and explicitly evaluate the value of simplicity.

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### Further reading

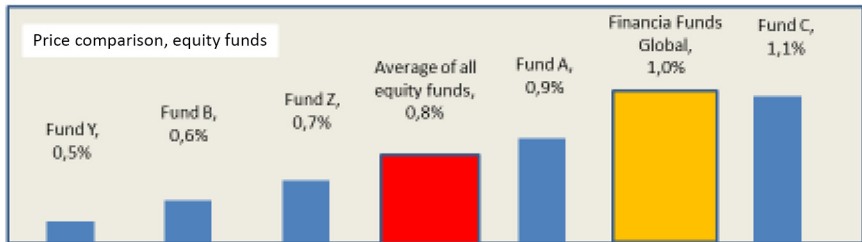
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# Pricetags in the fund industry

*A leading business journal presents a comparison of pricetags in the fund industry and also comments the price of Financia Funds Global:*

*"Generally, the price of an equity fund is around 0,8% per year.*

*Financia Funds Global costs [1,0%/0,6%] per year – a price tag that is [higher/lower] than the average of equity funds. The comparison below illustrates the price tag for Financia Funds Global."*



**Figure A1.**  
Fee comparison,  
Study 2

**Source:** Appendix are authors own work

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