Methodology

Methodology

Start with expert survey, then expert interviews (because so many questions from literature review).

Group	Task
Experts (Finance)	Short Survey
Experts (Design)	Short Survey
Experts (Sustainability)	Short Survey
Target Audience (College Students)	Long Survey

College Student Willingness to pay (WTP)

Factorial Surveys

- Li et al. (2022): "Factorial surveys is a research method that combines classical experiments with survey methodologies. Factorial surveys use short narratives, called vignettes, to represent various levels of independent variables that are too complex or unethical to create and manipulate in real-world or lab situations"
- Use K-Means clustering for survey data
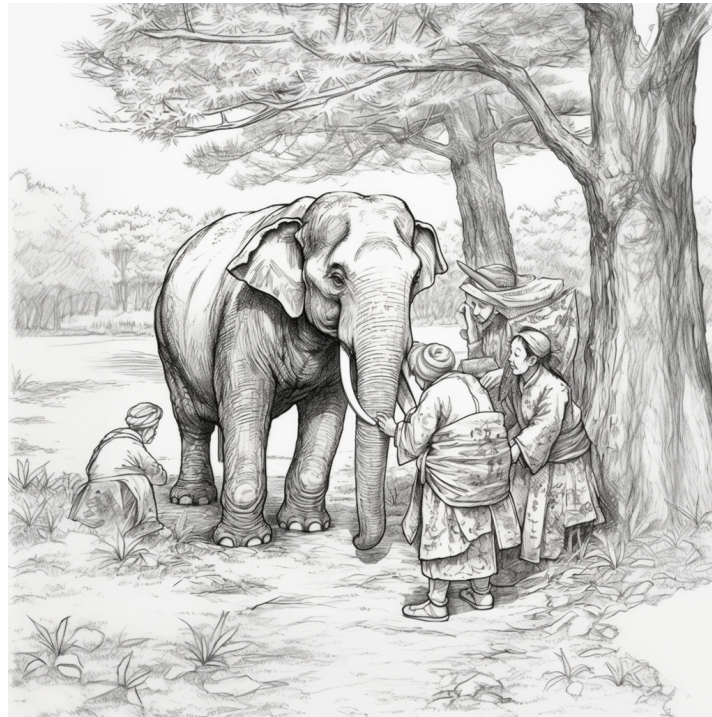
What is Research?

Figure 1: Illustration of the Jainist parable Anekāntavāda also known as "Blind Men and an Elephant". Generated by Midjourney on August 17, 2023. Prompt: "A simple pencil-drawn illustration of the the story"Blind men and an elephant. The man touching the elephant's trunk is a research scientist. Ohara Donshu, Itcho Hanabusa, Japanese woodcut Edo style"

Research Through Design

- Design research books
- Koskinen (2011)
- Ries (2011)
- Design Studies Journal

Research through design is a method for interaction design research in Human-Computer Interaction (HCI).

- Zimmerman, Forlizzi and Evenson (2007)

- Salovaara (2020) defining a research question

- Nunnally and Farkas (2016)

interview people at google who made the green filter options

- Design artefacts
- "design's nature as a 'problem-solving' science" Oulasvirta and Hornbæk (2016)
- my contribution is the design artefact, "HCI researchers also make constructive contributions by developing new technologies and design"
- Affairs (2013) Card sorting
- Anon. (n.d.a)
- Behavirour kit:

Take the metrics from the several frameworks and display them on the product and company level? People can choose their own framework and see product data through that lens and vocabularies.

Col1	Col2	Col3
Donut Economy	Unrolled Donut	
Regenerative Capitalism	8 Principles	
Blue Economy		
ESG		
B Corp		

- "research for design". design research is about expanding opportunities and exploration
- RanYwayZ (2016)
- Mehmet Aydın Baytaş (2020)
- Anon. (n.d.b)
- Anon. (n.d.c)
- Anon. (n.d.d)
- Anon. (n.d.e)
- Anon. (n.d.f)
- Erika Hall (n.d.)
- Contact Kalle Lasn, Culture Jam
- online/offline ethnographic participant observation At this stage in the research, the central concept being studied is defined generally as user expectations for a sustainable investment app.
- What are my hypotheses?

- User experiments

- Financial statistics

- Analyzing existing apps and user pain-points

- List of topics gleaned from literature review for discussion with the experts:

- Transparency and sources of ESG and similar data

- I will test the prototype with potential users using an online choice experiment survey.

- Research Process In terms of literature review, academic inquiry in social sciences largely follows phenomena, while the issues and technologies discussed here are emergent. Not many studies exist yet (they might in a few years), which is why some of my references are to company press releases and news stories, or for public companies, their advisory for investors.

- Target potential retail investors aged 20-29, all genders, in countries with highly developed financial markets and active social campaigns demanding sustainability (Sweden). And Taiwan. In general, the Taiwanese culture is savings oriented: I'm in a good location for financial user experience research.

- Set your target goals

- Access to health care

- Access to education

- Climate action

Research Design

- Christian Rohrer (2022): Research methods

The research design of this study consists of 3 steps.

- Qualitative research targeted at financial and interaction design experts, leading to a *wish list* of features.
- Survey potential users' preferences, including a choice experiment of the proposed features.
- Design a prototype of the personal sustainable finance AI assistant, tested using qualitative methods in a focus group.
- This mixed-method research design is divided into three stages (fig. 11).

- My purpose for the first qualitative stage is to explore the general themes arising from the literature review related to the design of AI advisors for investing. I will identify specific user experience factors, through interviewing experts in financial technology and user experience design and reviewing existing applications on the marketplace. At this stage in the research, the central concept being studied is defined generally as expectations towards a sustainable investment AI advisor.
- I will then proceed to the second, quantitative stage, informed by the previously identified factors, and prepare a survey, including a Likert scale, and a choice experiment, focusing on the preferences of the potential users aged 18-35, living in Sweden and Taiwan (see fig. 12 on next page), exploring the relationship between independent variables: - "Interest in Sustainability" - "Interest in Investing" - "Preferred Features" - and the dependent variable "User Sign-ups".
- In the third stage, I will return to the qualitative methods, by building a prototype of the sustainable investing AI companion, taking into account insights gathered in the previous stage. I will use a focus group to discuss the prototype, and conduct a thematic analysis of the discussions' recordings, leading to further validation of previously gathered data and possible changes in the prototype. The gained insights, accompanied by the app prototype, which embodies my findings, will be the final outcome of my research.

Conceptual Framework

- The conceptual framework map (fig. 13) presents the key concepts arising from the literature review thus far in the research process. I'm using these concepts when developing interview strategies for phase one of the research, developing the survey questionnaire for phase two, as well as for building the Personal Sustainable AI Financial Advisor (PSAA) for young adults at the final stage of the process. However, I expect the conceptual framework to further evolve with additional findings while conducting my research.

Research Methods

Phase One - Qualitative Research

The qualitative research methods employed in the first stage of the research design enables me to explore concepts arising for literature review further, using a more open approach, without limiting the conversation only to pre-ascribed notions. The strength of the qualitative approach in the first stage is to encourage the discovery of new ideas, not yet common in literature and potential user experience factors related to sustainable investing and user experience.

Sampling

My qualitative sampling structure uses non-probability snowball sampling, with the following criteria: financial industry, fintech, and design experts everywhere, including in Taiwan and Sweden, but also Estonia, Portugal, and elsewhere.

Method: Semi-Structured Interviews

I will conduct exploratory research in English using semi-structured interviews recorded online and offline.

Phase Two - Quantitative Research

The strength of quantitative research is to enable me to access a larger sample of potential users in two countries, using online survey methods, and to validate some of the qualitative findings from stage one.

Sampling My quantitative sampling structure uses a judgmental criterion: age 18-35, located in Sweden or Taiwan, surveyed using an English-language online survey.

Method: Likert The survey includes a Likert scale between 1 to 7 to validate key findings from the first stage of the research by assessing responses to statements regarding the app's design, features, and other criteria that may still emerge.

Method: Choice Experiment The survey includes a choice experiment between different sets of potential features available when communicating with the sustainable finance AI companion.

Phase Three - Qualitative Research

In the last phase, I will return to the qualitative methods to further validate the quantitative findings from stage two. Here my focus will be on operationalizing the gathered insights into a prototype that users can experiment with and discuss with their peers in a focus group setting. Sampling

The phase three sampling structure uses a judgmental criterion: - age 18-35 - located in Taiwan - Using the English language for discussion

A focus group of 6 to 10 people will be gathered in Tainan. Because in-person presence is required in this stage, the prototype will only be tested by potential users physically present in Taiwan. To avoid convenience sampling, I will post online ads in English to invite people who I don't know personally, to participate in a "financial AI application testing group" (wording may change).

Method: Focus Group The strength of a focus group is the ability to observe potential users in a social setting, where knowledge can be exchanged between the participants. The whole experience, including emerging conversations, will be recorded and transcribed.

Method: Thematic Analysis Finally, I will perform a thematic analysis of the focus group transcriptions in order to validate previous findings, and open avenues for future research.