Towards an Ecosystem of Social Fintech Support: An HCI Researcher's Reflection

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Financial technology (fintech), including online banking and digital payments, can facilitate or hinder participation in financial activities. To envision fintech support for age-related cognitive diversity, my recent work engaged older adults, family members, and domain experts in co-creating personas, fintech scenarios, and design concepts. It uncovered interrelated social factors and financial management collaborations across inner and outer circles, proposing design avenues for layered fintech support networks across close and distant others and situated meta-design for mutual fintech support. Reflecting on my past research, I discuss potential design space for HCI communities to collectively develop holistic approaches to a social fintech ecosystem for aging and accessibility.

Additional Key Words and Phrases: Financial technology (fintech), online banking, digital payment, financial management, financial literacy, older adult, accessibility

1 Introduction

With increasing online banking, digital payments, and declining cash use, financial technology (fintech) has grown ubiquitous in recent years and can facilitate or hinder participation in financial activities. Everyday fintech practices involve multi-layered digital financial literacy: digital literacy, financial literacy, decision-making, and self-protection, requiring knowledge and skills, awareness, and practical know-how [9]. Current fintech support for older adults, notably delegation to close others, inadequately accommodates their cognitive strengths and life transitions [8]. In this position paper, I reflect on my current fintech research for/with older adults [3, 4] and my co-organizing and participation in the ASSETS'24 accessFinTech workshop [2], contrasting with my past social computing work in the dementia community [5, 6]. I hope to spur interest and discussion among HCI communities to collectively develop holistic approaches to a social fintech ecosystem for aging, accessibility, and broader user groups needing fintech support.

2 Envisioning fintech support for older adults through cognitive and life transitions

Our recent fintech work, published at CHI'25 [3], engaged older adults, family members, and domain experts (living in cities across Canada) in co-creating and critiquing personas, fintech scenarios, and design concepts for cognitive diversity. Our findings (illustrated in Figure 1) reveal insights into future fintech support in the context of aging and evolving cognitive needs, nuancing the tension between autonomy and dependence with potentially precarious financial consequences. Older adults navigate complex financial management situations and transitions under varying social pressures, requiring diversified formal and informal support. Their social and collaborative needs in fintech encompass a broad space across families and social networks, extending to the less explored community fintech support,
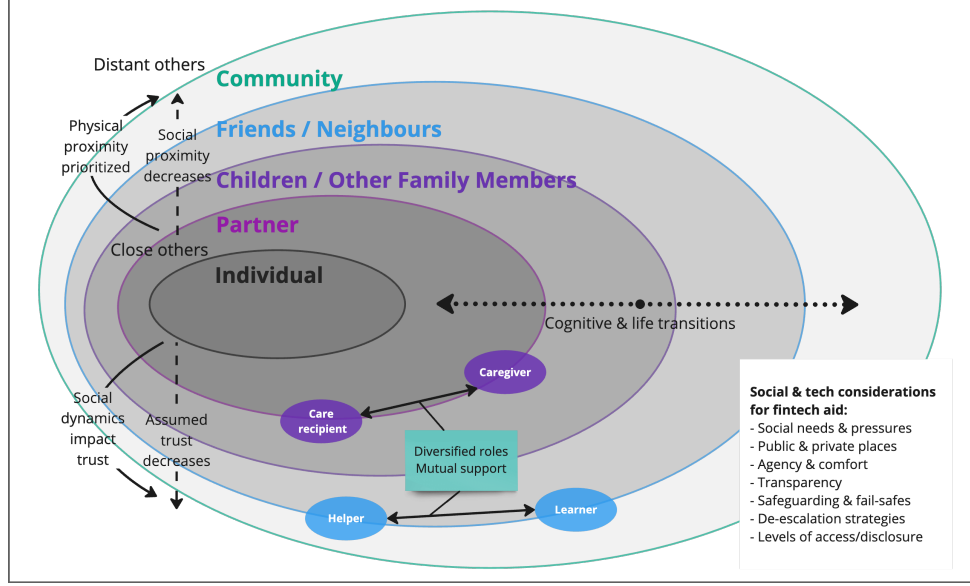
Fig. 1. Fintech support across inner and outer social circles for older adults' cognitive and life transitions [3].

with short-term to long-term autonomy and safety implications. From close others to distant others, social proximity decreases, but physical proximity may be prioritized; assumed trust might decrease, but social dynamics could impact older adults' trust with fintech help. The support network includes diversified roles, fluid between a helper and a learner, a care recipient and a caregiver, setting the stage for mutual support.

In a sensitive use case such as fintech, support strategies for older adults could risk full delegation or avoidance, while arbitrary prioritization of autonomy and privacy could result in immediate and lasting financial consequences. Delving into social needs and pressures in collaborative fintech practices, we surface community as a new support layer of distant others in addition to close others. To diversify fintech support toolboxes for older adults with cognitive diversity, we call for envisioning collaborative fintech aid through layered support networks, enriching fintech mutual support through situated meta-design, and enhancing fintech support with personalized immediacy.

3   Enriching accessible fintech co-design space

This recent work [3] adopt the approach of co-creating personas [1, 10] to better engage participants and ground the discussions in concrete fintech scenarios. The co-creation approach enabled all participants, regardless of their roles and backgrounds, to generate ideas and share critiques. We engaged 17 older adults (aged 66–82) with a range of cognitive experiences, five family members (aged 28–70), and five professionals (aged 27–57) with expertise across senior/dementia care, fintech, AI, and accessibility, in three sequential components:

- Step 1 – Dyadic interviews: co-creating personas and scenarios.
- Step 2 – Expert focus group and interviews: refining scenarios and design concepts.
- Step 3 – Dyadic/group design sessions: applying the personas and scenarios to design critiques.

Table 1. Three sets of personas, fintech scenarios, challenges, and design concepts [3]

Personas	Scenarios	Challenges	Design concepts
Ming experiences normal aging, living with his wife (**Mei**) in a large city.	Ming receives a questionable text alert for a transaction and is worried about being scammed.	Prioritizing autonomy, Ming is willing to take some financial risks rather than having his transactions checked by Mei or his daughters. He feels more comfortable asking for help from his social contacts, like the local senior centre staff.	Ming's banking app reports *the severity level of an alert* based on the source, the message, and his spending patterns. Ming customizes the app's *support channel to include his trusted network*, consisting of pre-authorized friends or community members.
Beth experiences fluctuating cognitive problems, living with her husband (**Ben**) and son in a large city.	Beth manages household and business bills through paper statements. She's in charge of budgeting and advises Ben on which bills need paying by which dates from which accounts.	With her long COVID conditions, Beth has to go through a month's bills on a good day, and often it takes multiple sittings.	A *voice assistant*, as the chief secretary, *helps manage banking* and prints out every bill and statement. It informs Beth of the likely upcoming incomes and payments based on their transaction patterns, maintaining a shared financial calendar for Beth and Ben with record-keeping.
Samuel experiences undiagnosed cognitive decline, living alone in a small town and supported by a close friend (**Sarah**).	At a busy grocery store checkout, Samuel's card did not allow tap to pay but required a PIN. No cash in his pocket, he panicked and couldn't remember his PIN.	Samuel starts to carry cash again but wants *a fail-safe* for mobile payments, helping him to be independent for as long as possible.	Sarah *customizes all the components* of a banking app on Samuel's smartphone. The app learns from Samuel's usage and challenges over time, *offloading difficult tasks to Sarah and simplifying the interface gradually.*

The co-creation process led to three sets of personas, scenarios, and design concepts (see Table 1) that touched on a range of cognitive and fintech needs, including online banking, digital payments, and financial management with/without family support. These personas, scenarios, and design concepts evolved and functioned as probes to provoke discussion and reflection across all study sessions.

Looking forward, I envision more diversified co-design methods to nuance the interactions between a wide range of social fintech factors. How can co-design activities solidify relevant factors from stakeholder backgrounds, economic status, cognitive capacities, relevant literacies, and support networks? How can co-design processes sketch varied tradeoffs in collaborative financial interventions, especially for life transitions including but not limited to retirement?

Related to complex fintech stakeholder landscapes, the recent accessFinTech workshop at ASSETS'24 [2] discussed potential bad actors such as "finfluencers—influencers who are focused on finance."[1] Connecting my past fieldwork in community-based social sharing for people with dementia and their caregivers [5, 6], my research positioned older adults with cognitive challenges as valued members of the community with unique contributions. This stance has been echoed in my fintech work, including a participant testimony: "*I think I might be more financially astute than my own kids.*" Weaving these threads together, future fintech work can explore intergenerational mutual fintech support mechanisms

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[1]Canadian Investment Regulatory Organization: Finfluencers in Investing. https://www.ciro.ca/office-investor/avoiding-fraud-and-protecting-your-investments/finfluencers-investing

for older and younger adults. Such support can leverage strengths like older adults' rich financial knowledge and experience and younger adults' technical know-how while mitigating risks like older adults' digital/AI knowledge gaps and younger adults' vulnerability to finfluencers. How can co-design methods bring out the strengths in perceived "vulnerable" user groups and create mutually beneficial collaboration between learners and helpers?

4 Further reflections and conclusion

In my fintech research journey since 2022 [4], I keep reflecting on my researcher positionality in broader social and fintech contexts. I live in Canada and occasionally help my parents in mainland China with online banking. Both sensitive research topics, fintech differs from my previous community-based research with older adults with/without dementia: casual social sharing bears minimum risk while fintech could have financial consequences, not to mention fintech landscapes vary substantially across borders. As my other work with AAC users and their families shows communication efforts increase with the severity of topics [7], fintech would require and deserve substantial communication efforts.

I look forward to discussing leveraging new data sources and co-design methods in this research space, especially in a forward-thinking mindset for LLM-powered applications in social financial collaborations. I envision that broader user groups (e.g., neurodivergent and under-banked populations) and financial scenarios (e.g., human-AI collaboration) can be better supported. A social fintech ecosystem can accommodate and appreciate cognitive diversity, evolve with the rapidly changing financial and technological landscape, integrate delegation and collaborations, and account for the tensions around trust, privacy, and safety. Further discussion on situated fintech characteristics and levels of support is needed to guide holistic approaches to such an ecosystem in aging, accessibility, and broader contexts.

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