

## Supplement A – Nudge Designs

Below are the designs for the 11 nudges that we included in the high-fidelity online banking prototype for the study. Each has a brief description of when the nudge would be encountered, as well as the various nudging mechanisms (as categorized by Caraban et al.) that they leveraged [1].

### Add Close Other

When the participants first logged in they were presented with the following prompt that encouraged them to start the process of adding a close other. This was a way for us to explore the idea of multiple proxies with the participants.

**Add Close Other**

Welcome Anon! We've noticed that you're the only one who has proxy access to Maggie's accounts.

Having multiple people performing banking tasks on behalf of an older adults can reduce the burden put on you and help foster trust within your friends and family. This can also help provide accountability and transparency to give Maggie better peace of mind.

Would you consider starting the process of adding another proxy user to Maggie's accounts before you bank today? (Maggie will need to approve any additional accounts before they take effect.)

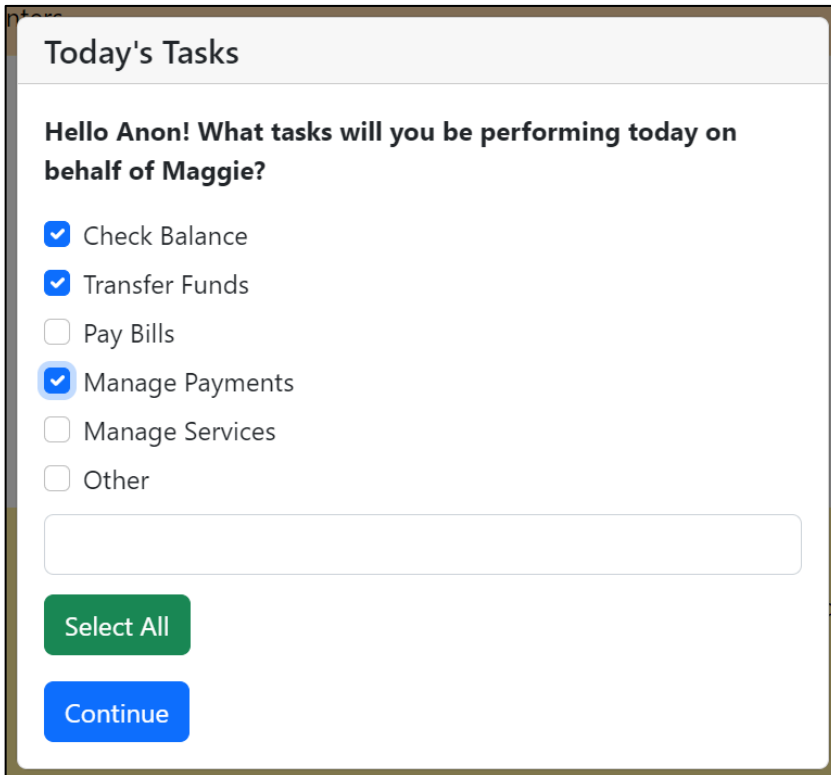
**No Thanks** **Ask Later** **Continue**

Renter's Insurance RRSPs

[1] Ana Caraban, Evangelos Karapanos, Daniel Gonçalves, and Pedro Campos. 2019. 23 Ways to Nudge: A Review of Technology-Mediated Nudging in Human-Computer Interaction. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (Glasgow, Scotland Uk) (CHI '19). Association for Computing Machinery, New York, NY, USA, 1–15. <https://doi.org/10.1145/3290605.3300733>

## Task Selection

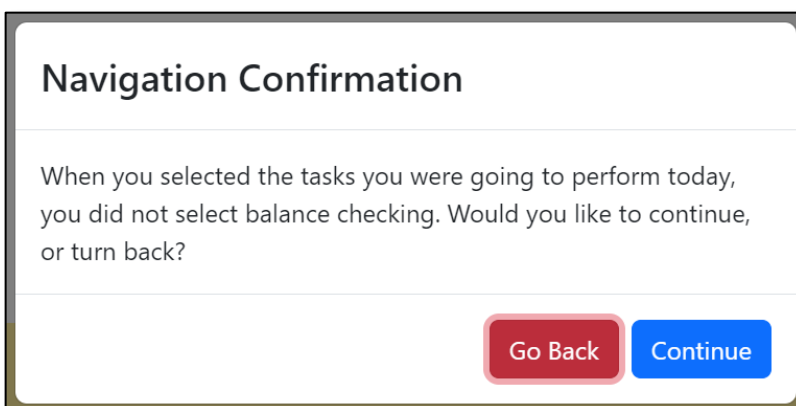
The second time the participants logged in to the prototype, they were prompted to identify the various tasks that they were going to be doing during that banking session. This nudge loosely leverages public commitment, although it never specifies whether the older adult will be notified of their selection.



The screenshot shows a mobile app interface titled "Today's Tasks". Below the title is a greeting: "Hello Anon! What tasks will you be performing today on behalf of Maggie?". There is a list of tasks with checkboxes: "Check Balance" (checked), "Transfer Funds" (checked), "Pay Bills" (unchecked), "Manage Payments" (checked), "Manage Services" (unchecked), and "Other" (unchecked). Below the list is an empty text input field. At the bottom are two buttons: a green "Select All" button and a blue "Continue" button.

## Task Selection: Page Navigation Confirmation

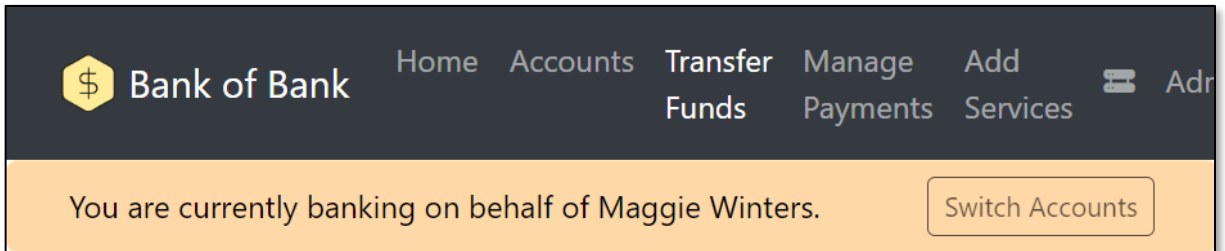
During the login session in which the user was asked to specify tasks for the session, anytime they navigated to a page that did not relate to one of the chosen tasks, they were asked to confirm the navigation. This was intended to further explore public commitment, suggestion of alternatives, and impact of friction on the user's experience.



The screenshot shows a mobile app interface titled "Navigation Confirmation". Below the title is a message: "When you selected the tasks you were going to perform today, you did not select balance checking. Would you like to continue, or turn back?". At the bottom are two buttons: a red "Go Back" button and a blue "Continue" button.

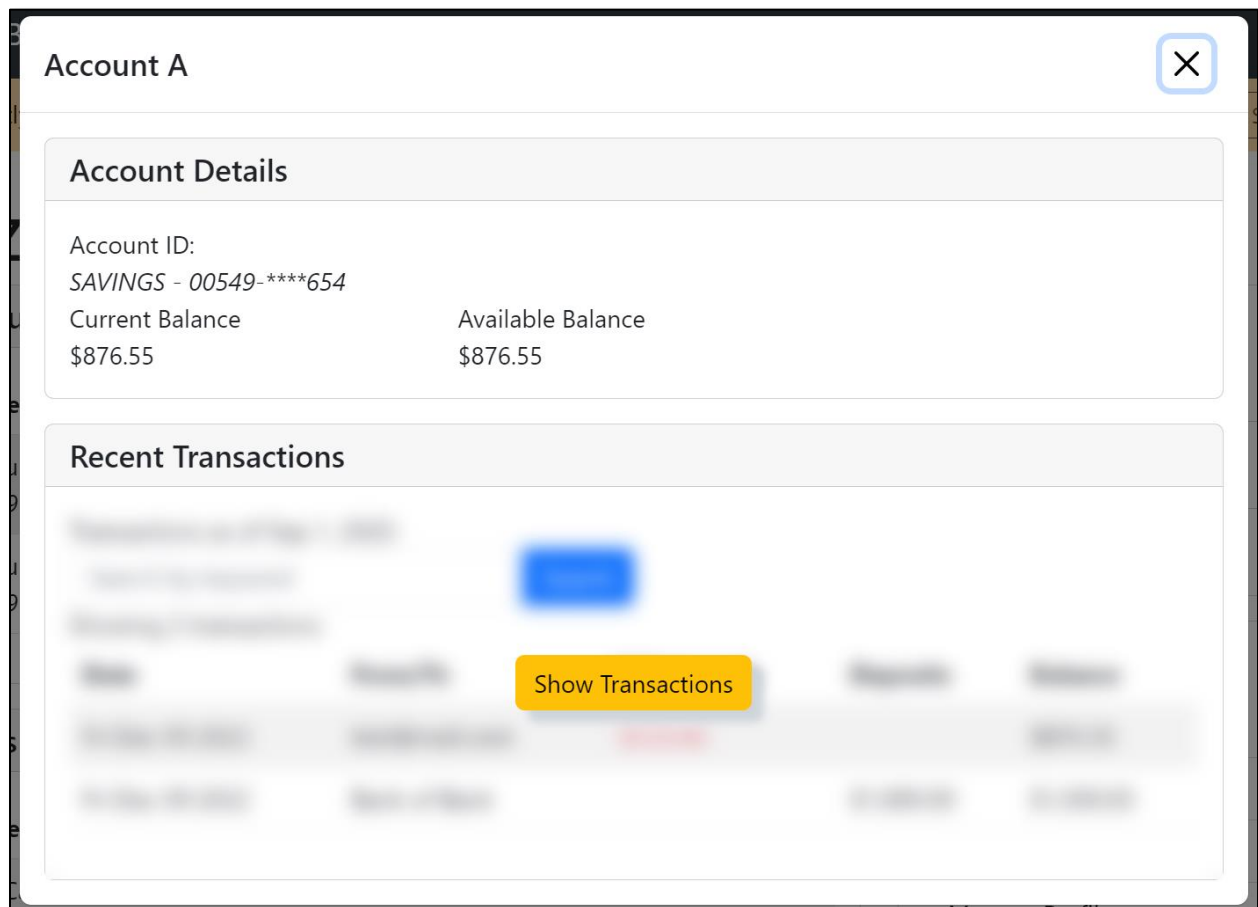
### Banking on Behalf Of Banner

At the top of the page, just below the navbar, was a banner that reminded the user that they were banking on behalf of an older adult close to them. This nudge was meant to instigate empathy and reduce the distance of the results of their actions.



### Show Transactions: Button

While not strictly required by the tasks the participants were asked to perform, we considered that they may want to check the balances on the accounts, as they might in their own contexts. We opted to add a nudge here that leveraged the hiding paradigm. When they looked at the details for a given account, the specific transactions were blurred by default, and a button to show them hovered above.



### Show Transactions: Prompt

When the participants opted to show the hidden transactions, they were asked to confirm their action, with the additional caveat that the older adult would be notified to raise visibility of their actions.

### Show Transactions

Are you sure you want to look at the details of Maggie's accounts? They will get a notification that you've elected to do so.

CancelShow Transactions

### Colored Amount Field

In a very subtle nudge, the value field of the funds transfer form started with a white background and changed towards a red background based on the amount input into the field. This is an example of ambient feedback.

Amount:

\$

20.34

Amount:

\$

200.34

### Unusual Amount Prompt

One of the tasks asked the participants to pay a cellphone bill of a specified amount. When they filled out the transfer form, they were presented with a prompt that indicated that the amount they were transferring was unusual for that bill, and asked if they wanted to reset it to the previous value. This is a just-in-time prompt that enables comparisons and suggests alternatives.

#### Transfer Funds

From:

Account A (SAVINGS) - 00549-\*\*\*\*654 (\$876.55) ▼

To:

Telecom Wireless Inc. - TelcoWireless (76732110) ▼

Amount:

\$ 54.67

The value of the payment to this payee is different from your usual amount. Would you like to reset this to the usual amount, or submit with this new amount?

Submit Reset

### Automatically Set Balance

One of the participants' tasks was to pay a credit card bill. When filling out the funds transfer or bill payment forms, selecting the credit card as the destination account would cause the credit card's current balance to automatically populate the transfer amount field. This nudge leverages defaults and the status quo bias.

To:

Visa Cash Back - Ending in 4321 (\$180.71) ▼

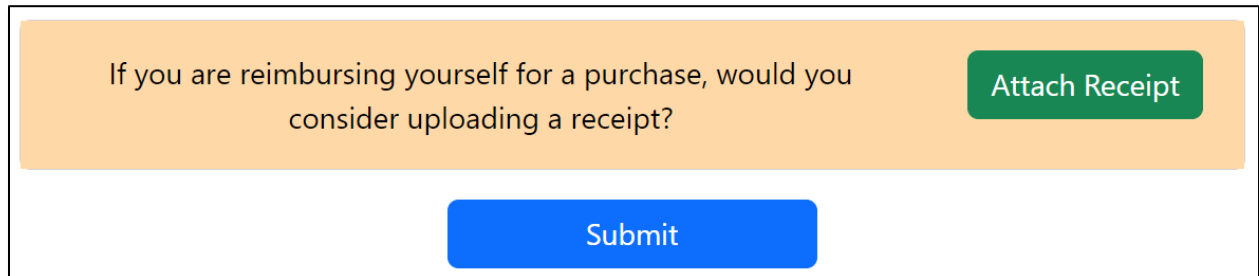
Amount:

\$ 180.71

Submit

### Add Receipt Prompt

When participants were about to submit a transfer from one of the older adult's accounts to their own (one of their specified tasks), the form presented a prompt that asked if the user would like to upload a receipt to go along with the transaction. If they clicked the button, it allowed them to select a file from their own computer. (This file was not actually uploaded.) The nudge leverages public commitment, just-in-time prompting, suggestion of alternatives, and raising visibility of their actions.

A UI mockup of a receipt prompt. It features a light orange rectangular box with a thin black border. Inside the box, the text "If you are reimbursing yourself for a purchase, would you consider uploading a receipt?" is centered in a dark gray font. To the right of this text is a green button with the text "Attach Receipt" in white. Below the orange box, centered, is a blue button with the text "Submit" in white.

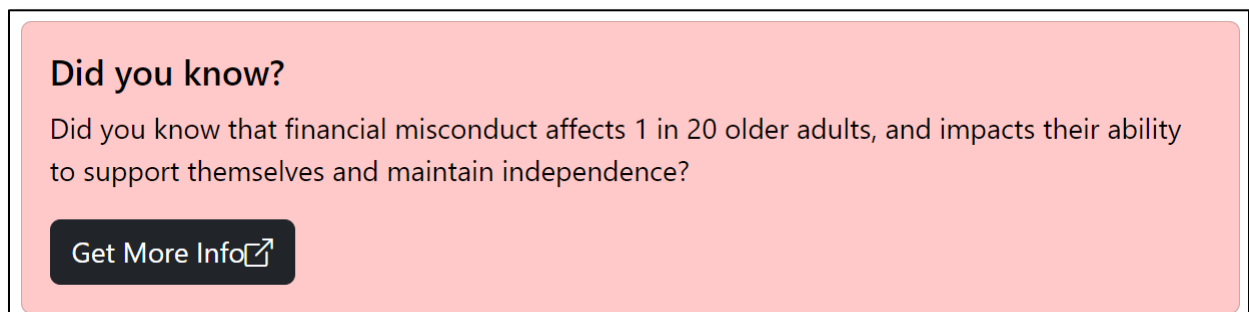
If you are reimbursing yourself for a purchase, would you consider uploading a receipt?

Attach Receipt

Submit

### Financial Misconduct Info

In multiple places and formats, the prototype presented information about the prevalence of financial abuse against older adults to the user. This is a confrontational nudge that was meant to indirectly remind the user of the consequences of their actions, and instigate empathy towards the older adult.

A UI mockup of a financial misconduct information box. It features a light pink rectangular box with a thin black border. Inside the box, the text "Did you know?" is in bold. Below it, the text "Did you know that financial misconduct affects 1 in 20 older adults, and impacts their ability to support themselves and maintain independence?" is in a dark gray font. At the bottom left of the box is a dark gray button with the text "Get More Info" and a small square icon with an upward-pointing arrow.

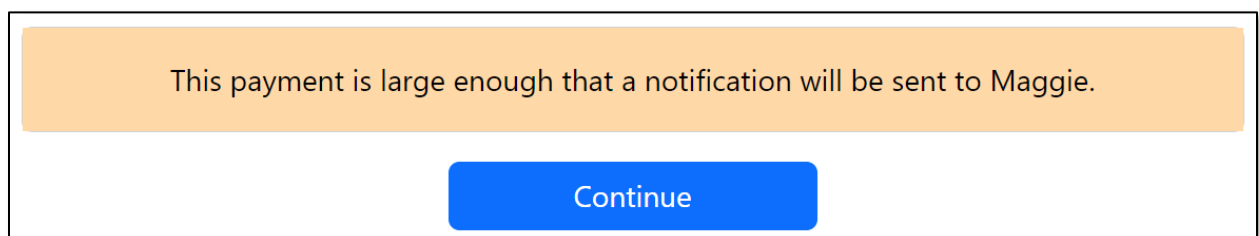
Did you know?

Did you know that financial misconduct affects 1 in 20 older adults, and impacts their ability to support themselves and maintain independence?

Get More Info

### Large Amount Notification

When participants were about to submit a large transfer (over \$200, one of their specified tasks), the form presented an alert that the older adult would be notified of the transaction. This raises the visibility of the user's actions.

A UI mockup of a large amount notification. It features a light orange rectangular box with a thin black border. Inside the box, the text "This payment is large enough that a notification will be sent to Maggie." is centered in a dark gray font. Below the orange box, centered, is a blue button with the text "Continue" in white.

This payment is large enough that a notification will be sent to Maggie.

Continue

### Adding Payee Notification

When participants added a payee (one of their specified tasks), the form presented an alert, when filled out but before submission, that the older adult would be directly notified of the new payee. This raises the visibility of the user's actions.

Add Payee

Nickname

Nickname

Account

Other Bank's Client

e-Transfer

Other

Email

person@people.com

Phone

Phone

Notification of this new payee will be sent to Maggie.

Submit