

Banknote Usability Round 8 Polarization (Pole) Security Feature Focus Groups Moderation Guide

Objectives

The Board's Usability Program is proposing a study to assess the use and functionality of a new security feature technology in circulation that is activated with a polarization (Pole) filter. The study will assess the following to determine if there is merit to implementing this technology into the new family of Federal Reserve Notes (FRNs). The study also intends to gather data to assist the project team in down-selecting specific polarization effects to improve engagement with the feature.

1. Is a Pole Feature functional in commerce?
2. Does a Pole Feature aid the public with authentication?
3. Will a Pole Feature be used by business users and members of the public?
4. How frequent would the feature's use be compared to an Ultraviolet (UV) activated effect?
5. Does the Pole Feature increase engagement with the feature?
6. Does using a Pole Tester impact ease of use for the polarized feature compared to a commercially available lens sheet or sunglasses?

Approach

- 24 focus groups, 60 minutes each, across 3 markets
 - High sunshine market: Los Angeles, CA
 - Medium sunshine market: Chicago, IL
 - Low sunshine market: Pittsburgh, PA
- Each market will include five groups of only General Cash Users and three groups of only Business Cash Users
- Six participants will be recruited for each group, with an expected show rate of at least five participants per group
- PRA information will be displayed on a sheet during each focus group.

Pole Feature Prototype

A security feature company will supply prototypes that contain the Pole Feature for this study. The Pole Feature will be applied to blank paper. There will be three different variations of the new technology that will be assessed, in the following ways: (1) Comparing direction of image rotation (sample A vs. B), (2) Comparing segment size (sample B vs. C). The study will also utilize genuine NextGen (NXG) U.S. banknotes with a UV light as a control. The participants will be given a different form of polarizer with various prompts to determine the intuitiveness of using polarizers. This will allow research participants to assess the Pole Feature against the embedded thread.

The Polarizers to be tested include:

1. The company's "Pole Tester"
2. Commercially available linear polarizing lens sheet
3. Commercially available circular polarizer
4. Linear polarized sunglasses

Genuine U.S. banknotes and UV devices for authenticating them will also be provided for participants to use while giving feedback.

Moderation Guide

Guide Overview

- Discussion Guidelines and Warm-up (8 minutes)
- Discussion of banknote authentication techniques (8 minutes)
- Feedback on Pole Security Feature (40 minutes)
 - Handling of test coupons and various Pole Feature authentication tools
 - Handling of UV lights and genuine U.S. banknotes
 - *Note: half of the groups will view the Pole Feature coupons first and the other half will view UV features first*
 - Comparison with UV thread feature on genuine U.S. banknote
- Collect stimuli and wrap-up (4 minutes)

Discussion Guidelines and Warm-up (8 minutes)

Hello and welcome. My name is ____ and I will be moderating our focus group. Our session today will last about 60 minutes. Today we'll be talking about cash. I'll ask you to do a few activities as we go along, to prompt discussion. Before we get started, a few things to keep in mind:

- Please be respectful of others during this focus group.

- There may be differences of opinion. That's ok. In fact, that's great because we are interested in hearing from people with a range of experiences and opinions.
- Don't be afraid to speak up, we want to hear from everyone. And allow others space to speak up as well.
- Regardless of whether you agree with someone, let them finish speaking. We want to make sure everyone has a chance to be heard.
- Because I want to make sure that we hear from everyone, I may sometimes call on you specifically.

Keep in mind that, while we will be doing some activities, we are not testing you. There are no right or wrong answers. Feel free to be open and honest with your feedback, you won't hurt my feelings.

We will be **recording the video and audio of the session** today. Video, audio, and personally identifiable information will not be shared with the client. Your other data will be held confidential and will not be shared with anyone outside the client or Ipsos. Recording allows me to focus more on talking with you and less on taking notes because I can review the recording afterward if necessary. From time to time, you will see me type on my laptop; please don't think I am ignoring you, I'm just jotting down some notes. I also have a colleague watching who might have questions for me. Recordings will be deleted at the end of the project and are not shared with our research sponsor.

Please be aware that all the information you provide will be shared only with our project team. Your **name will not be associated** with your comments.

In turn, you have signed a **confidentiality agreement** stating that you will not share or discuss what you do here today with anyone else. You can share that you participated in a study, but not share what we talked about today.

Do you have any questions about what we will be doing today?

Ok, let's start by going around and saying first names only. [[Participants will also receive name cards to place in front of them during the session.](#)] Thanks for introducing yourselves.

1. Tell me a little about how you typically use cash. What role does cash play in your life? *Listen for and prompt on where participants get their cash, what they use it for, and why.*

Discussion of Banknote Authentication Methods (8 minutes)

2. Let's talk about authenticating bank notes. Has anyone ever authenticated a banknote?
3. Those that say yes:

- a. How do you authenticate? *Probe for specific security features and tools (UV light, pen)*
 - b. In what settings are you more/less likely to authenticate? Why?
4. Those that say no:
 - a. Why do you think you haven't authenticated a banknote before?

Feedback on Pole Feature Prototype (40 minutes)

Pole Feature

Thanks for sharing your experiences with banknote authentication. Before I hand out some items for us to use and discuss, I'd like to hear about something a bit different. As you may know, some lenses, such as certain sunglass lenses, are polarized.

1. In your own words, what do 'polarized lenses' do?
 - a. Do you use polarized sunglasses? Why or why not?

Polarized lenses, just so we're all working with the same definition in a minute, are lenses that filter light, only letting light rays through that are all oriented in the same direction, while blocking other light rays. In sunglasses, which is the most common application of this technology, this reduces glare.

2. Before we get into reviewing the prototypes, what's your initial reaction to the idea of a security feature that utilizes polarization? *Probe for how they imagine this feature might work*
 - a. Does this sound like something you might use to authenticate bank notes? Why or why not?

I'm now passing out several prototypes that contain potential new security features using the technology of polarization. Along with these prototypes, with the polarization features applied to them, I'll pass out a few different tools for use with the features.

3. What is your first impression of these polarization features?
4. Are there any variants that you like better than the others? Why?
5. Are any of these tools for viewing the polarization effect easier to use than the others? Why?

UV Feature

1. Has anyone ever used the UV light security feature on U.S. banknotes before?
 - a. *If anyone says yes:* Tell us a little about how that feature works.

I'm going to pass out some UV lights and some genuine U.S. banknotes. I'd like each of you to take a minute to examine several banknotes with a UV light. *Moderator: Make sure each*

participant receives at least three different denominations. Listen for descriptions of how the UV feature works and especially ease of use or statements of confusion.

2. Now that you've had a minute, tell me a little bit about how effective you think this UV feature is. Why is that?

Comparing UV and Pole Features

We've had a chance now to look at two different types of security features, one that requires a UV light and one that requires a polarized lens.

1. What do you think are the pros and cons of each of these two types of security features?
2. Of everything you've tried today, which combination of feature and testing tool was easiest to use? What is easy about it?
3. Of everything you've tried today, which testing tool would you be most likely to use, if you needed to authenticate a U.S. banknote? Why?

Collect Prototypes and wrap-up (4 minutes)

Thank you for sharing your opinions with me today. We're almost out of time so please pass all of the items down to me. As I put these away, does anybody have any final thoughts about polarized security features?