

Purpose:

This usability test was conducted before the alpha release as a preliminary analysis of how the new site worked. The site was tested for design, structure, navigation, and learnability as well as looking at new features (per stakeholder's request, including the data table expand feature and new symbol comparison page).

Participants:

Five people were chosen from the office to participate in the Usability Test. All of them use the site on a regular basis so there were no completely "new" users or new people to the brand. The participants were chosen as representation for the general audience: people interested in news and general market movement, as well as active traders.

2 MOBILE USERS: 1 person tested with an Android phone and 1 person used an iPhone6

3 DESKTOP USERS: All other participants tested with the Google Chrome Browser

Summary:

- All participants quickly adjusted to the new navigation AKA mega menu structure. There was some hesitation about the label changes, but in general people could find what they needed after a small amount of time.
- All user's skipped the welcome modal so they were unaware of the new features added to the site that were mentioned in it.
- Most users liked the general look and feel of the new graphics and layout.

Task 1: What is something that you do on a regular day on Barchart.com?

Objective: Can the user find what they need on the new site?

Findings: Users were able to adapt to the new navigation structure and layout.

Users seemed hesitant for a few moments after their initial interaction with the new sites, but most were able to find what they were looking for within a few minutes.

Some responses from individuals about daily tasks:

- Look at favorite symbols
- Check portfolio
- Glance at market overviews
- Read Morning Call publication

Task 2: Where is the first place you go to find the last price for the front month of corn?

Objective: Will the navigation and/or search help users find common symbols?

Findings: All users completed the task.

Most participants used the navigation menu to go to "Futures" > "Grains" to find Corn in the table rather than searching for the contract (ZC*0).

Suggestions:

No suggestions.

Task 3: Can you find the top 3 symbols on the NYSE 52-Week Lows page?

Objective: Can the user navigate the new data table structure filters and use the new navigation labels?

Findings: Most participants could not complete this task.

Many people were looking for the words "52 Week" in the menu. When they didn't see this label, they navigated to the New Highs & Lows page or to the Market Momentum page. Participants who went to the Market Momentum page could not complete the task. The participants who made it to the New Highs & Lows page were able to filter with NYSE, but were hesitant to use the filter "12-Months", which was the correct filter.

Suggestions:

I think it is likely that once users become more familiar with the site they will have an easier time finding the New Highs & Lows page. There is a small learning curve. Once finding the correct page, the label should be changed from "12-Months" to "52 Week" because users are more familiar with the latter. The consistency of the data table structure will help the user learn the site quicker because the drop down filters are used on every page which wasn't the case on the old site.

Task 4: If you wanted to learn more about a symbol on a data table (without leaving the page), how would you do it?

Objective: Is the user aware of the new expand feature?

Findings: Only participants who tested on mobile devices were aware of the new expand feature.

Most desktop users clicked on the ticker symbol link which goes to the quote page instead of finding the '+' icon on the left.

Both mobile participants made the button look intuitive and found it instantly.

Many participants said in retrospect after the task ended that the feature might be useful when they are browsing.

Suggestions:

Allow this feature to be found naturally, thus likely only being used by power users, or spend time introducing it in one of the first interactions with the user on the site (ie. tutorial).

Task 5: If you wanted to compare 2 symbols how would you do it?

Objective: Can the user find the new “compare symbols” page (do they know it exists)?

Findings: Participants were not aware of the new “compare symbols” page.

Although most participants found their own unique way of comparing two symbols, whether it be charts or watchlists, none of them successfully identified the new page. Even though this page doesn’t jump out to users in their initial experience, many people will likely find it with more exposure to the site.

Suggestions:

Again, this is something that users will find with time or something for more advanced users. If not including it in a brief site tutorial, this might be a feature worth highlighting in an email drip campaign for new features.

Task 6: Locate the 6 month period high for the symbol ABX.

Objective: Can the user locate a specific symbol and can they find historical data for a symbol?

Findings: All users found the search bar easily, but many took a long time to locate the correct data.

Many people did not know how to assimilate “6 month period high” with the links offered in the menu, so it took a few tries to get to the “Performance Report” for most users. Part of the problem might stem from the fact that some participants in this test are not traders and do not correlate “performance” with a period high/low. Users that are more familiar with trading found the data in other locations, such as the widget on the “Price History” page.

Suggestions:

Further testing is needed. Testing more users, both new to trading and experienced, will help verify if “Performance Report” is the best label.

Task 7: Add ABX to a watchlist.

Objective: Can the user use the new watchlist feature?

Findings: Most participants could complete this task.

The biggest hinderance with this task was the login process. If the user was logged in, most were capable of completing the task. This task unintentionally revealed that the “sign up” form is indistinguishable from the login which caused some confusion. It also highlighted some bugs with error messages that didn’t inform the user how to proceed.

Suggestions:

The watchlist seems to be working efficiently, but the login/signup forms need further testing and QA.

Task 8: Change the watchlist name to “Stocks 1”.

Objective: Can the user manipulate/edit the new watchlist feature?

Findings: All participants completed this task, but it took more clicks than expected.

This is the first time the participants were exposed to the watchlist feature, so it is likely that the UI will become easier and quicker for them with time. That said, since no participants got it right on the first try, it seems the edit button does not stand out enough or is not in the best location.

Suggestions:

The edit button should be enhanced by making it larger with a brighter background or adding it to the dropdown menu where a few users tried clicking. More testing is needed to see where the best option is.

While a project of this size will always have a few set backs, the overall flow went pretty smoothly. There could have been better coordination of grouping like-pages into sprints so they could all be done the same way at the same time. We also should have done a better job preparing for more difficult API's so that front end developers were not left waiting to implement them. Using code "spikes" to compartmentalize large sections of the site and review code before starting the next section would have helped create more consistent patterns for maintainability in the CSS. Over halfway through the project, the design choices that were established had to be changed (for example the call-to-action buttons were grey and changed to blue), and instead of being able to access one file to make this change, each individual widget had to be modified. Earlier review would have made it obvious that the buttons were not working as the color they were, and the code was not set up in a way that was easy to change.

User Research

This project was a redesign and not built brand new, so there could have been more done for user research in the beginning to learn about how people were already using the site and what information they desired. While Bchart has basic user demographic data and a history on google analytics based on browsers, devices, and screen resolution, there was little known about the users' behaviors and goals. Some of the features that were thought to be unused or convoluted were actually really important to power users and loyal clients. It was difficult to take some of old features of the site and try to adapt them to more modern patterns. We tried to lessen the learning curve for new users, while not completely alienating the old users, but a lot of the decisions were hit or miss. Many people would have probably been more open to the changes if we had done them gradually or incorporated the things that they really "needed", but instead we completely rebuilt some features so they looked and

worked completely differently. Sometimes it was due to technical constraints, but other times it was just intended to help the user and we didn't find out until later that it wasn't actually helping.

User Testing

In retrospect it would have been better to spend more time paper prototyping and doing quick tests on the more complicated UI's in the My Bchart section. Once one layout was built, it was used as the template for all of the others in that section and there was never any testing done early on. A few problems cropped up with how users navigated each page and these resonated throughout the sections since the layouts were so similar. The only advantage here was that the one fix applied to the navigation sort of worked across the board.

Conclusion & Further Research

Being a small team means that personal opinions can skew judgement about what is best for the broader audience. Testing and meticulous analysis is the only way to objectively make a case for or against a design, rather than "I think it should be this way". The outcome of testing can give more of a majority perspective about how people percieve a UI, but instead we were left many times with how one person interprets how do something. More testing and research would have resolved many of the problems. Going forward we have installed a user tracking software to try and identify user patterns. So far this has revealed small issues such as confusing button labels, and places that require more clicks than necessary. We would also like to do a few focus groups and some in-person tests, mostly on the My Bchart section because that is where most of the complicated UI is. This is also where we make some of our revenue, so if we can make it better, more people will want to use it.

APPENDIX B

Usability Test Script

We're getting closer to releasing the beta version of the barchart.com redesign and would like to get some preliminary HONEST feedback on our design. To gage the usability of the new layout, we have constructed 9 simple tasks to be completed in this test.

This is a test of our product, not a test of you. There are no right or wrong answers as everyone navigates websites differently, so do not overthink it. Any frustrations you might feel completing these tasks are completely valid, so please vocalize any thoughts you have while you working.

As you complete these tasks please DO NOT attempt to assume you know anything about who our users are or what they would like, etc. Just be yourself as if you were navigating the site in your personal time.

As you open the site, please be in the mindset that you have just come to barchart.com expecting the old layout, but instead the redesign is in its place.