



# Style Guide and Functional Guide

## Loan Delivery Next Generation

10/20/14



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# Document Information

The purpose of this document

Style guide will provide the visual experience direction used through the LDNG application. Existing and any new additions to the application should follow this guide.

The behavior guide provides the interactive and functional experience used through the LDNG application. It describes the front end functions and provides consistency to the user experience.

This document is the guideline for creating a modern and user friendly application for the lender community. Providing an exceptional user experience will be the end result of using this guide. The guide will help to build and adhere to best practices in future development of the LDNG application.

# Style Guide

This chapter contains:

Color  
Buttons and Icons  
Typography



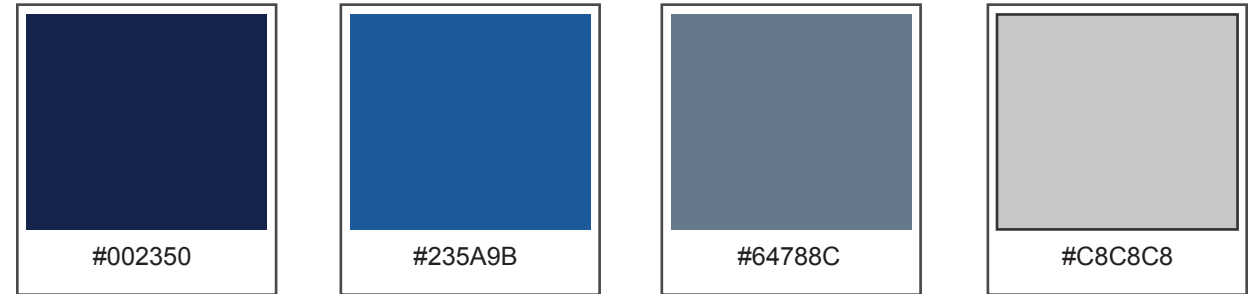
# Color

The Fannie Mae color palette provides functional clarity for users, while reinforcing Fannie Mae's core brand.

Color should not be used superfluously; by using a classic palette with strategic use of bold colors we can assist users with navigation, legibility, findability and orientation. This color palette is specific to user interface elements such as type, icons, strokes and backgrounds. When editing HTML or creating new HTML use this color palette for your color selection.

Icon colors have a primary color (first on the palette) and a border color (second on the palette) The palette includes a letter that relates to the specific icon. See the buttons and icons page for relationships.

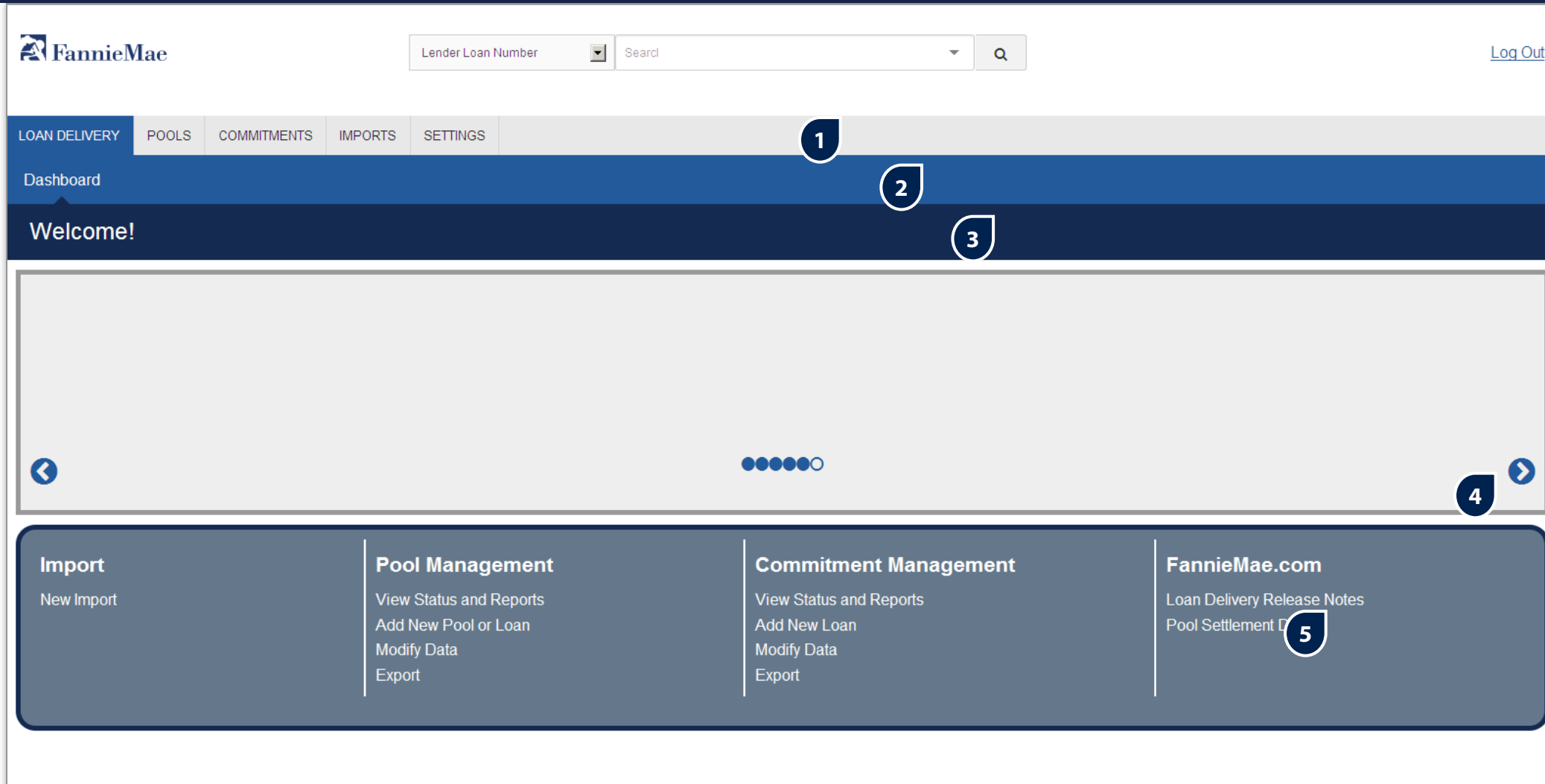
## PRIMARY COLORS



## ICON COLORS



# Example of Color Usage



1. #C8C8C8
2. #235A9B
3. #002350
4. #235A9B and #284B87 (color D)
5. #64788C

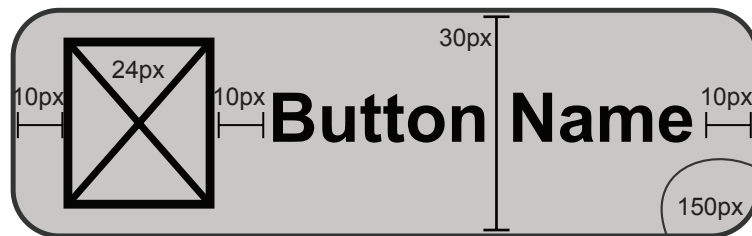
# Buttons and Icons

A button is a small outlined area that elicits a command.

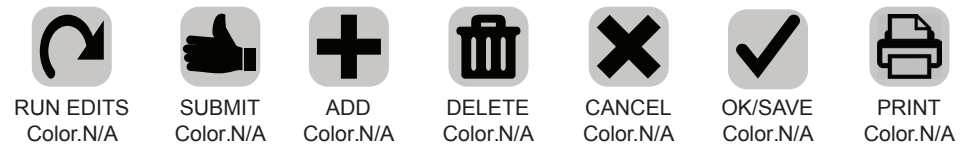
An icon is an image that represents an application, a capability, or some other concept/specific entity with meaning for the user.

## BUTTON LAYOUT

Unless otherwise noted in wireframes and the specification document, the button naming convention utilizes the exact functional command.



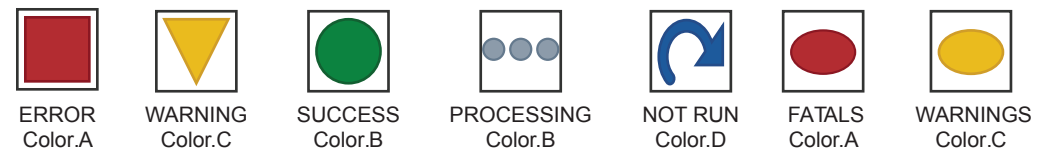
## BUTTON ASSOCIATED ICONS



## BUTTON NON-ASSOCIATED ICONS



## NON-BUTTON ICONS



# Typography

Arial is approved throughout the application. Sample Styles are outlined below with specifications that should be used when creating elements within HTML components.

## PAGE HEADER

### **This is the typography**

Font-size: 24px    Font-weight: Bold    Color: #000000

## FIELDS/HYPERLINKS/DROP DOWNS

This is the typography

Font-size: 13px    Font-weight: Regular    Color: #000000

## PRIMARY NAVIGATION (NOT SELECTED)

**THIS IS THE TYPOGRAPHY**

Font-size: 16px    Font-weight: Bold    Color: #000000

## APPLICATION TITLE

**This is the typography**

Font-size: 16px    Font-weight: Bold    Color: #FFFFFF

## BUTTON LABEL

**This is the typography**

Font-size: 13px    Font-weight: Bold    Color: #000000

## PRIMARY NAVIGATION (SELECTED)

**THIS IS THE TYPOGRAPHY**

Font-size: 16px    Font-weight: Bold    Color: #FFFFFF

## SECONDARY NAVIGATION

**This is the typography**

Font-size: 16px    Font-weight: Bold    Color: #FFFFFF



# Functional Guide

This chapter contains:

Global Behavior  
Navigation Behavior  
Form Behavior  
Pagination  
Grid Behavior  
Import Behavior  
Carousel  
Notification Behavior

Polling Behavior  
Logout Behavior



# Global Behavior

## RESOLUTION

- 960 grid & non responsive
- Width - min (960px) / max (100%)

## STICKY ELEMENTS (See #1)

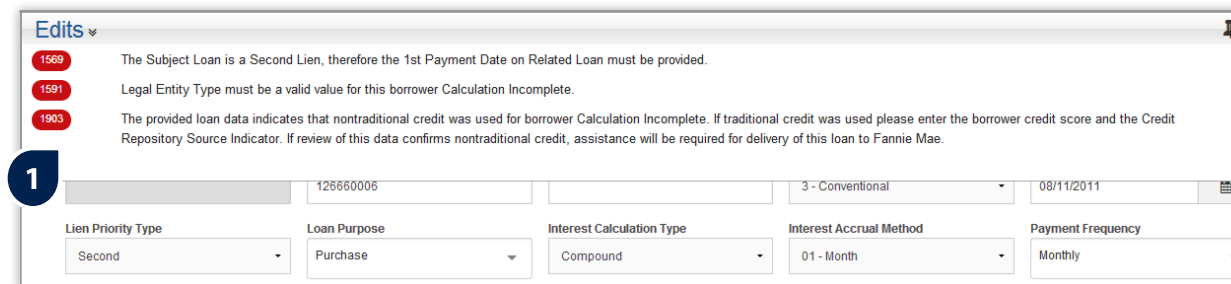
HTML DOM elements which will follow the user as they scroll through the page in a definable region. This is done so important information is always present to the user as progress through the page.

Placed in:

- Loan Details: Edit Section
- \* Pool Details: Remaining Balance

## TRUNCATION (See #2)

If textual content is larger than the space provided to render it, the text is truncated with an elyipsis appended to the truncated text and a tooltip will appear with the complete text when the user hovers over the element.

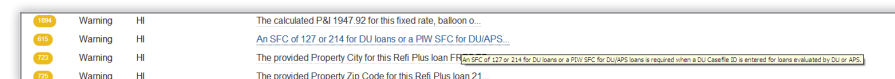


The screenshot shows a web form titled "Edits" with a sticky error message box at the top. The error messages are:

- 1569 The Subject Loan is a Second Lien, therefore the 1st Payment Date on Related Loan must be provided.
- 1591 Legal Entity Type must be a valid value for this borrower Calculation Incomplete.
- 1903 The provided loan data indicates that nontraditional credit was used for borrower Calculation Incomplete. If traditional credit was used please enter the borrower credit score and the Credit Repository Source Indicator. If review of this data confirms nontraditional credit, assistance will be required for delivery of this loan to Fannie Mae.

Below the errors is a form with the following fields:

125660006		3 - Conventional	08/11/2011	
Lien Priority Type	Loan Purpose	Interest Calculation Type	Interest Accrual Method	Payment Frequency
Second	Purchase	Compound	01 - Month	Monthly



The screenshot shows a tooltip with the following content:

1569	Warning	HI	The calculated P&I 1947.92 for this fixed rate, balloon o...
1591	Warning	HI	An SFC of 127 or 214 for DU loans or a PRW SFC for DU/APS...
1903	Warning	HI	The provided Property City for this Refi Plus loan FH...
1903	Warning	HI	The provided Property Zip Code for this Refi Plus loan 21...

# Global Behavior

## TOOL TIPS

The standard HTML title attribute is used to create the hover over tooltip functionality.

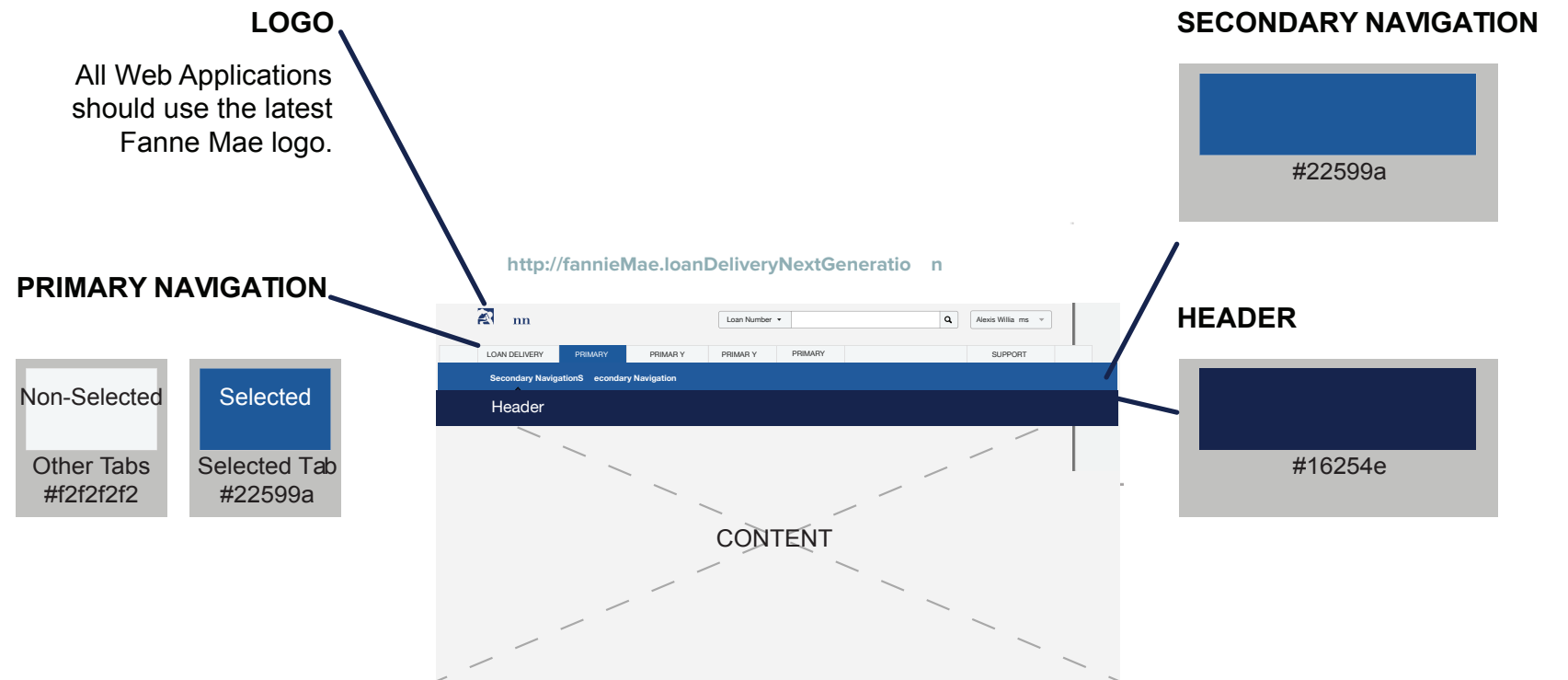


## APPLICATION THEMING, STYLE AND LAYOUT

The image itself (size/format/etc) and the action it performs when clicked are customizable to the needs of the client.

The application is intended to be similar to a white label site where the specified theming, styles and layout can be changed via the CSS at any point in time.

Currently Zurb Foundation (<http://foundation.zurb.com>) is used for this structure)



# Form Behavior

Fields should be laid out in a 12 column grid with the labels positioned above the input.

## FIELDS

Fields should be laid out in a 12 column grid with the labels positioned above the input. If the field is disabled, it is grey out.

## FIELD TYPES

### Input

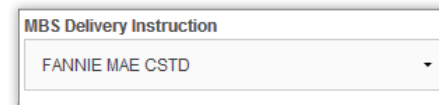
Standard HTML component



Amount (\$) 123 CSTD Trade Number

### Select

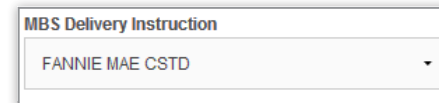
Standard HTML component



MBS Delivery Instruction  
FANNIE MAE CSTD

### Selectize

A select box which allows for users to type in additional accepted values as options to select from



MBS Delivery Instruction  
FANNIE MAE CSTD

### Checkbox

Standard HTML component

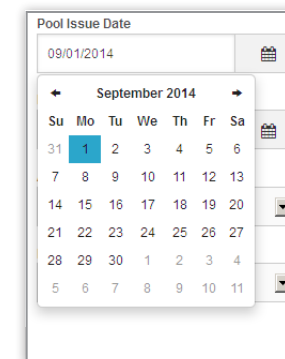


Modify

### Date

Input box with a calendar button

- Input - tabbing into the field will allow user to input the date via the keyboard
- Click - the button will bring up a calendar component which allows the user to navigate from month to month then select a date - the calendar component is only hidden once the user selects a date or on blur of the field
- Validation - check the date is the same value once it is converted to a new Date()



Pool Issue Date  
09/01/2014

September 2014

Su	Mo	Tu	We	Th	Fr	Sa
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

# Form Behavior

## TABBING

Tabbing should be sectioned by field grouping and should progress from left to right top to bottom skipping any disabled fields.

## VALIDATION

Validation - check is performed on blur and the user is kept in the invalid field along with the display of validation error messages

- Min / Max Length Constraints
- RegEx Pattern Matching
- Required Check

Pool Detail Information

Pool Number \*    Suffix    Pool Issue Date

US1116    B    09/01/2014jjj

Pool Issue Date must be in the format of MM/DD/YYYY and must be a valid date

## GROUPING

Sectioning of fields grouped based on feature which can be expanded, collapsed, hidden or shown based on a users interaction or a combination of field values

- ARM Details
- Pool Parameters
- Loan Details - sections and sub-sections are expandable or collapsible

General Loan Information Expand All

- Indicators
- Loan Terms
- Underwriting
- Insurance
- Property Addresses
- Borrower(s)
- Contract/Commitment

## FORM STATES

- Dirty- Changes have been made but not persisted to the backend and any navigation request is prompted with a confirmation that the user is willing to discard changes.

Are you sure you want to cancel updates?

Yes No

- Clean- Changes have been cancelled or saved to the server or if the user refreshes the page all changes will be discarded.

# Pagination

## PAGINATION SIZE

Drop down allowing the user to change the quantity of records per page. This widget should be aligned to the far left of the screen - with recommended steps of [15, 25, 50, 75, 100]

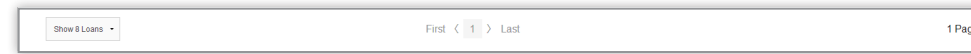
## PAGINATION SELECTION

Clickable concentric links in the center of the screen which allows the user to jump to the selected page

- First & Last - these are the outer links which jumps to the first or the last page and are disabled if the user is already on the first or the last page
- Previous & Next - are the next links displayed as arrows which moves the user forward or backward through the set of page numbers - if the user is on the first or the last page the arrows for Previous and Next will be disabled
- - once reaching the beginning or the end of the set of page numbers the ending page number will shift to the beginning or end of the list and a new 4 page numbers will be displayed in the sequence
- Page Number - are 5 page links in the center of the screen which allows the user to navigate directly to the page of their choice - the page the user is on should be highlighted and the link should become disabled

## PAGINATION PAGES

A label which conveys the total number of pages in the pagination widget and should be aligned to the far right of the screen



# Grid Behavior

## NUMBER OF SELECTED RECORDS

Should be updated whenever a checkbox is checked or unchecked and the count will reflect the total number of records selected in the grid across all pagination pages.

## COLUMNS

### Selecting (See #1)

Checking the checkbox in the column should highlight and select all the rows in the grid for that pagination page and add all those records to the selected grouping for actions to be performed on the grouping.

### Linking

Navigation and modification

### Special Values

If a value is blank a dash should be displayed instead and if the value is too long to be displayed then an elipsis should be rendered and the text should be truncated and a hover over to display the full text should be added.

## SORTING (See #2)

Column header should appear as a clickable link if the column is sortable and sorting should initially be based on primary key unless otherwise specified and when the sorting column isn't a primary key the primary key must be used as a secondary sort value. Grid sorting should support 3 states of sort:

### Default Sort

The data will be displayed in accordance to the initial sorting criteria and sort arrows will be displayed in accordance with the sort criteria

### Ascending Sort

The data will be displayed in ascending order for the selected column in accordance with the sort criteria and the sort arrow will display pointing upwards

### Reverse Sort

The data will be displayed in opposite order of the ascending sort and the sort arrow will display pointing downwards

85 Pools / 2 Pools selected

Export ▾

<input type="checkbox"/>	Pool No.	Seller No.	Issue Month	Book Entry Date
<input checked="" type="checkbox"/>	SP0015A	19730-000-0	Sep-14	07/30/2014
<input type="checkbox"/>	AB6171H	19730-000-0	Sep-14	07/01/2014
<input checked="" type="checkbox"/>	CD6172C	19730-000-0	Sep-14	12/03/2012
<input type="checkbox"/>	US6625M	19730-000-0	Aug-14	12/04/2012
<input type="checkbox"/>	SS0016S	19730-000-0	Aug-14	12/20/2012

Show 10 Pools ▾

First < 8 9

### No Sort

The data will be displayed in the order it is received from the backend (i.e. database order) and no sort arrow will be displayed

1

<input type="checkbox"/>	Pool No. ▾
<input type="checkbox"/>	zz1212
<input type="checkbox"/>	xx1234567
<input type="checkbox"/>	kk3122
<input type="checkbox"/>	dr0006A
<input type="checkbox"/>	dr0005A
<input type="checkbox"/>	dr0004A
<input type="checkbox"/>	dr0001A
<input type="checkbox"/>	aa1111vvv

# Grid Behavior

## ROWS

### Selecting (See #1)

Should highlight the row in the grid and add that record to the selected grouping for actions to be performed in that grouping.

### Hyperlink

A link can be added to a data element in the grid and when clicked will perform either a navigation action or if is an 'Edit' link it will display a modification modale.

### Special Values

if a value is blank a dash should be displayed instead and if the value is too long to be displayed then an elyipsis should be rendered and the text should be truncated and a hover over to display the full text should be added.

### Detail Button (See #2)

A button which brings up a tooltip box supplying the user with data and multiple hyperlink options to gather more information (for example, a column to in the import management screen displays the pool IDs imported and if there is more than one a 'View All' button will appear which when clicked will show all pool IDs as hyperlinks to the pool details).

### Icons

Represent statuses using icons from Font Awesome (<http://fontawesome.github.io/Font-Awesome/>).

Pool No.	Seller No.	Issue Month	Book Entry Date	Loans	Issue UPB \$	PTR	Edits	Wiring Status	Submit Status
SP0015A	19730-000-0	Sep-14	07/30/2014	2	160,000.00	-	●	-	10/07/2014
AB6171H	19730-000-0	Sep-14	07/01/2014	1	159,840.72	5.50	●	🔗	10/06/2014
CD6172C	19730-000-0	Sep-14	12/03/2012	2	320,000.00	-	●	🔗	10/06/2014
US6625M	19730-000-0	Aug-14	12/04/2012	1	320,000.00	-	●	🔗	09/04/2014
SS0016S	19730-000-0	Aug-14	12/20/2012	1	320,000.00	-	●	🔗	08/12/2014

2 MBS **VIEW ALL** US1188D  
1 MBS RM0001P US1199D  
1 MBS RM0001P US1199D



# Import Behavior

## IMPORT MODAL

- Accessed by clicking the Import Button in the dashboard Button Bar
- Select File - has validations performed on it during processing
  - Acceptable formats are zip or XMLfiles
  - Size limitation
  - Virus check
- Whole Loan Delivery tab
  - Override options for the imported file content are:
    - Pool Number
    - Seller Number
- MBS Delivery Tab
  - Override options for the imported file content are:
    - Commitment Number
- Default Tab
  - The 'Previous Tab' is recalled for the session and every time the 'Import Modal' is opened, that tab is selected by default
- Import Button - will send the file as a multi-part submit to the back-end
- Cancel Button - will dismiss the modal and discard all entries

- Processing File - while the file is processing, a loading screen is shown and, once processing is complete, the application will forward the user to the 'Import Results' page

## IMPORT RESULTS BEHAVIOR

- Import Results page is sectioned into two parts:
  - FSV Results - File validation , schema validation and Pool/Commitment validation errors are presented in this section. Polling is employed in order to returns the results in real-time. Once FSV Results are returned (provided that they pass) Eligibility Results begins.
  - Eligibility Results - Pool/Commitment - Loan level corrections are presented in the section. Again, polling is used to facilitate real-time results.

MBS Delivery Whole Loan Delivery

Select File Please select an XML or ZIP file to import

Pool Number Override (optional)

Pool Number Enter Pool Number Seller Number Select a Seller Number

All loans in the import file will be assigned to the MBS pool number and Seller Number specified. Both fields are required to override.

Import File Close

MBS Delivery Whole Loan Delivery

Select File Please select an XML or ZIP file to import

Commitment Number Override (optional)

Commitment Number Enter Commitment Number

All loans in the import file will be assigned to the Whole Loan Commitment Number specified.

Import File Close

# Carousel

Supports html content with a fixed height of 175px and overflowing content is scrollable.

## BULLETS

A clickable navigation element for the user to jump to a particular slide in the slideshow and the current slide is highlighted by a hollow bullet.

## BACKWARDS

Moves backwards through the slides wrapping back to the last slide after the beginning.

## FORWARDS

Moves forwards through the slides wrapping back to beginning after the last slide.

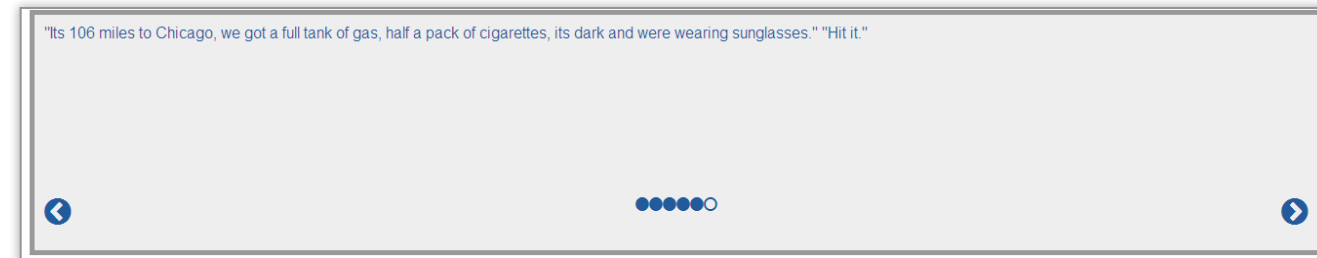
## SLIDESHOW

Automatically navigates through the slides at a configurable interval. Currently there are a 6 slide maximum limitation.

## ANNOUNCEMENT BEHAVIOR

### Content

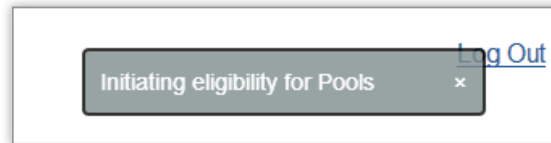
A region on the dashboard page that renders an HTML blob on content inside of it used for notifying the users of important announcements.



# Notification Behavior

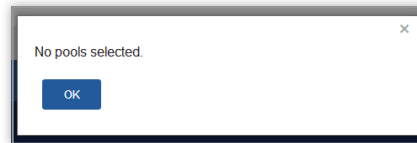
## GROWL

Notifications which quickly represent the user with acknowledgement their action was triggered. It fades away after 3 seconds.



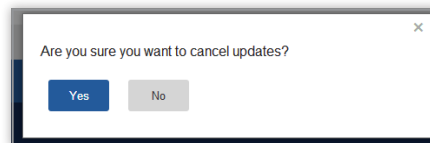
## ALERT

Notification the user must dismiss such as error notifications.



## CONFIRMATION

Notification the user must confirm if they want to proceed or decline the action about to be performed.



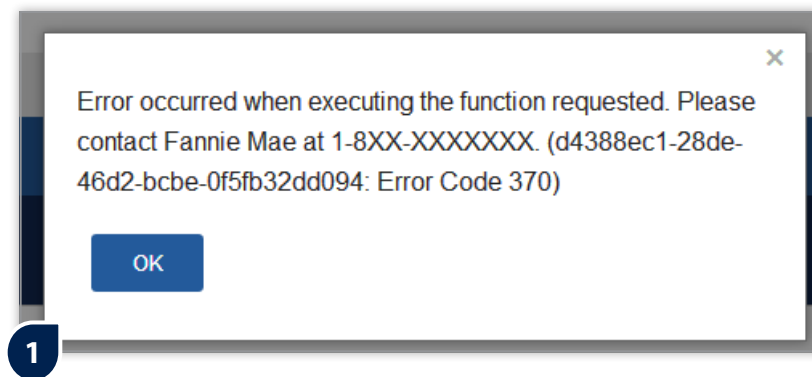
# Polling Behavior

## TRANSACTION POLLING (See #1)

Polling triggered by a user interaction with the server which is an async request. The polling interval is configurable and polling will cease once all queued transactions have been processed.

## ENTITY POLLING

Polling on a configurable interval which updates an entity model in the view (most commonly a datagrid). Polling will continue until a configurable number of errors / polls has been reached.



# Navigation Behavior

There are two types of navigational requests.

## INTERNAL

- Navigation should rewrite the url without making a new request to the server and will add the page change into history using `history.pushState()` so the user can use the browser's Back button as normal.
- Additionally an event is fired for the navigation action which is listened to by the appropriate controller.
- The following are all the different navigational element permutations:
  - Button Bar - four buttons on the dashboard page which link the user to frequently used sections of the application
  - Hyperlink - uses the application's internal navigate function to trigger events and move the user through the screens without making a server request
  - Button Link
  - Main Navigation Tab Bar
    - Primary Tab Bar used for navigating the sections (modules) of the application
    - Selected tab should be highlighted and if no sub navigation tab is provided in the url then the default sub navigation tab will be selected

- Sub Navigation Tab Bar
  - Secondary Tab Bar used for specifying the application sub-section
  - Sub Navigation Tags can be one of the following:
    - Visible - these routes are accessed by clicking the visible tabs in the sub navigation bar
    - Hidden - these routes are hidden from the sub navigation bar and can only be accessed from the url
- In Page Tab Bar Navigation
  - Used for switching between functionality such as editing (Details/Loans/Edits) for pools or commitments
  - Selected tab
    - First tab will be selected by default; otherwise the user will select the tab by clicking it and that tab will be highlighted to convey that it is selected

## EXTERNAL

These requests should be handled in a new tab leaving the application intact for the user to continue to interact with.

# Logout Behavior

## CLIENT-SIDE SESSION

### Warning Modal

Once the Idle Warning is triggered a modal will display with a countdown timer and present the user with two options.

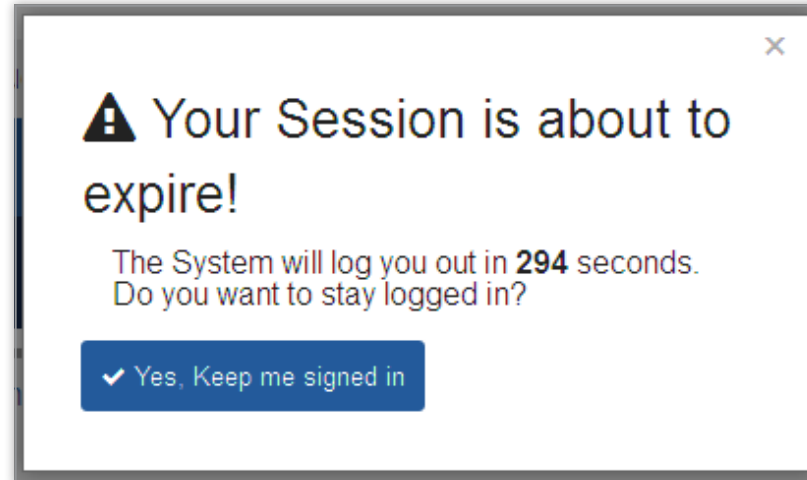
- Once the timer on the warning modal expires, the tab will redirect to the logout url, at which point it is the server's responsibility to invalidate the user session.
- Interaction - if the user interacts with the Warning Modal, the user's session is extended by resetting the client side timer and a heartbeat is sent to the server to extend the server side session
- Idle - If the user remains idle during the countdown timer the application will redirect the user to the ESSO Logout Page where the user must click the 'Continue' button or eventually the ESSO session will timeout

### 302 Redirect

Whenever the client side receives an http status code of 302 from any request to the back end the application will forward the user to the ESSO Login page.

### Warning Modal Timeout

A configurable amount of milliseconds that will begin counting down to 0 when the user ceases to make any click events or keystrokes on the page. Once the timer expires, the "warning modal" will appear.



## SERVER-SIDE SESSION

Configurable session in Tomcat which uses a cookie to establish and maintain a session.

## ESSO SESSION

Single sign-on for users of the Fannie Mae suite of software. Once the user is logged out, they are logged out of all applications simultaneously and they are severed a 302 redirect to the ESSO login page.