

SavvyMoney - Mobile Integration Guide

Version	Revised On	Changes
1.4	01 Feb 2017	Updated with API
1.5	05 May 2017	Updated screenshots from AACU
1.6	10 Jan 2018	Updated with relay state parameter
1.7	03 Apr 2018	Updated description of external API
1.8	17 Sep 2019	Removed Relay state URL requirement

Introduction

This document provides technical and UI specifications of SavvyMoney's Mobile solution. This cross platform solution provides Partners' end users access to SavvyMoney's credit score product on mobile apps. There are 3 key components of a mobile integration:

1. Establishment of Single Sign On between SavvyMoney and the Partner's Online and/ or Mobile Banking
2. Embedding in an iFrame in Partner's mobile application (also called a container)
3. Utilizing SavvyMoney's APIs for select credit data

SavvyMoney Mobile Integration Solution

1. Establishment of Single Sign-On (SSO) (Required)

SavvyMoney's partners can provide their end users access to SavvyMoney's product without creating separate end user login credentials. This can be accomplished by establishing a Single Sign On connection with SavvyMoney using REST API or SAML 2.0 (Secure Access Markup Language) protocol. Partner's Mobile and/ or Online Banking will utilize SSO to securely transfer end user's data for authentication, and for login to SavvyMoney.

Please refer to SavvyMoney's SSO integration Guide.

2. iFrame Integration (Required)

SavvyMoney's credit score product can be integrated as an iFrame within a container in mobile banking. Since SavvyMoney's website is responsive, it allows for seamless integration with mobile interfaces.

The iFrame can be integrated with native, hybrid and web based mobile applications.

3. External Credit API (Required)

SavvyMoney provides a set of APIs that allow partners to securely retrieve and display certain credit score data. The API is a required component for the integration - this is how partner and SavvyMoney will identify mobile user logins. This is also used when the partner wants to drive the look and feel of how that limited data is presented in their UX.

Please refer to the API library in the document titled SavvyMoney API Document for implementation details. Here is a high level list of our APIs:

- i) User Status - This API returns a user's status within SavvyMoney. This helps partners display their own marketing banner/message for users who are not signed up for SavvyMoney's services.
- ii) User Credit Score - This API returns a user's credit score, score rating, monitoring alerts, and date of their latest score pull. This helps partners provide a more engaging experience to users.

SavvyMoney iFrame Solution

iFrame specifications and samples:

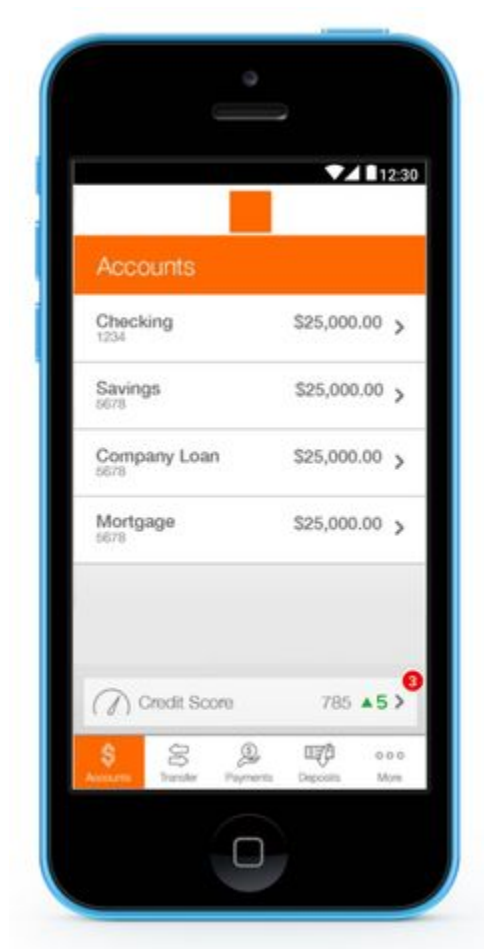
Sample of HTML iFrame (will depend on specific platform, implementation and environment)

```
<iframe width="100%" height="100%" frameborder="0" src="https://partnersample.com/SAML2/SSO?providerId=https://www.savvymoney.com/shibboleth&target=https://www.savvymoney.com/external/session" sandbox="allow-same-origin allow-scripts allow-popups allow-forms" class="centered" ></iframe>
```

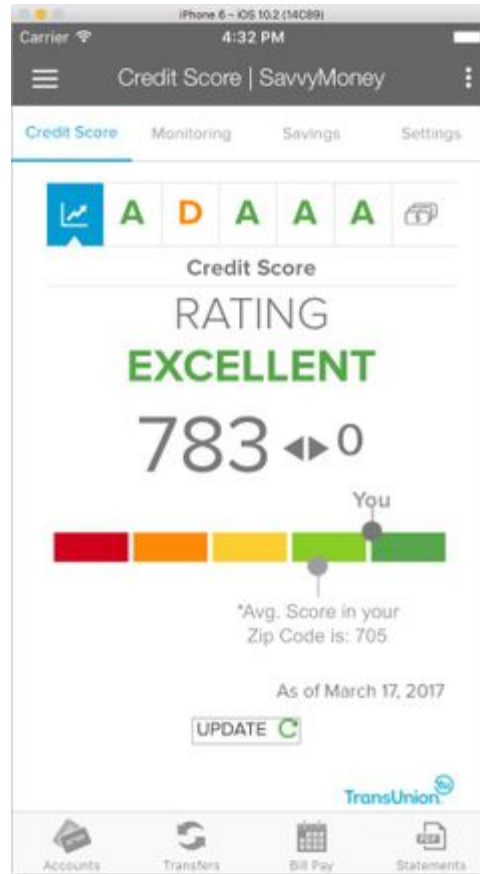
Screenshots of Credit application within mobile banking

Partner uses SavvyMoney's **Credit external API** to display the user's credit score, score change, and notifications. The mobile friendly UI and navigation are driven by the relay parameter passed during SSO.

The following is an example of API implementation, where the mobile platform is retrieving score information from SavvyMoney and displaying very select amount of data (Credit Score, score increase, notifications).



The following are examples of SavvyMoney iFrame within the mobile app's container. Note that the 'X' at top of the screen navigates back to the main mobile app.



This document describes SavvyMoney's Mobile Integration guidelines, and should not be reproduced, copied, transformed or adopted in any form or means without the prior permission of SavvyMoney, Inc.