Getting Started with Auditchain Luca:

Creating a Report Manually from Scratch

This document explains step-by-step the very basics of creating a basic financial report using Auditchain Luca. This project makes use of the development version of Auditchain Luca.

This financial report is what we will represent in Auditchain Luca: (from Wikipedia, https://en.wikipedia.org/wiki/Financial_statement) ; Wachovia National Bank

When you have completed this project, the final result will look something like the following:

Reporting Entity [Aspect]	Wachovia	http://www.comptroller.gov/ID
Unit [Aspect]	iso4217:USD

		Period [Aspect]
Concept [Aspect]		1906-01-29
Resources [Roll Up]		
Loans, Including Overdrafts	$	511,789.61
U.S. Bonds and Premiuns		52,300.00
Real Estate, Furniture, and Fixtures		4,500.00
Redemption Fund with U.S. Treasurer		2,500.00
Cash and Due from Banks		268,231.30
Resources	$	839,320.91
Liabilities [Roll Up]		
Capital		150,000.00
Surplus and Undivided Profits		171,167.89
Circulation		50,000.00
Deposits		468,153.02
Liabilities	$	839,320.91

Helpful information

The following is information helpful to you when you create this report in Auditchain Luca. The report model structure should look something like the following:
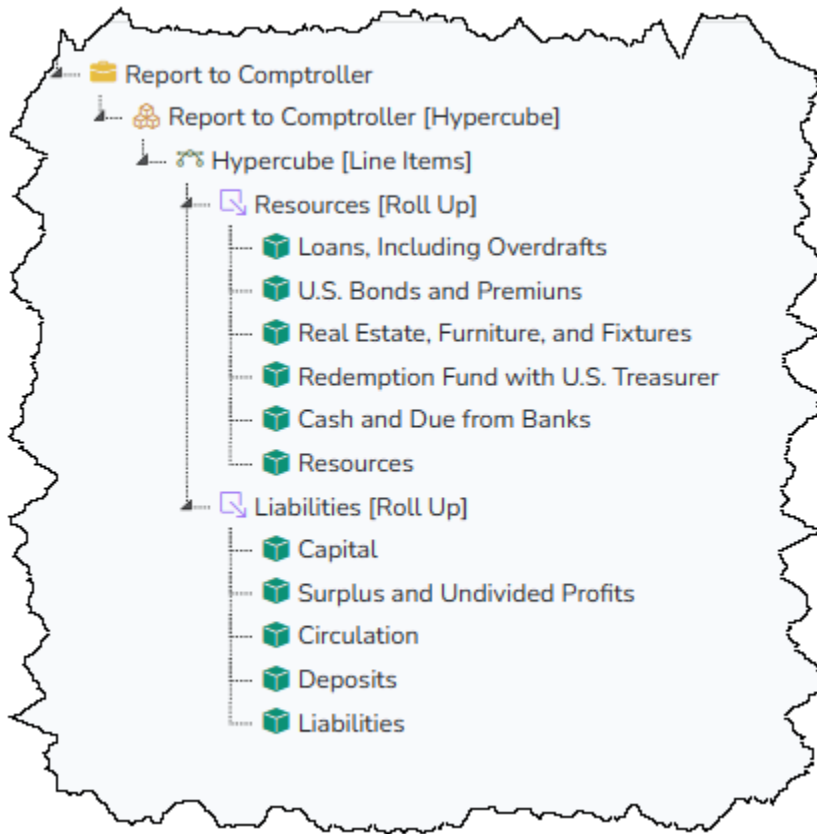

This is more details about the report elements for this report.

Label	Category	DataType	Period	Balance	PreferredLabelRole	Name
▼ Report to Comptroller [Hypercube]	Hypercube					report:ReportToComptrollerHypercube
▼ Hypercube [Line Items]	LineItems					report:HypercubeLineItems
▼ Resources [Roll Up]	Abstract					report:ResourcesRollUp
Loans, Including Overdrafts	Concept	Monetary	Instant	Debit		report:LoansIncludingOverdrafts
U.S. Bonds and Premiuns	Concept	Monetary	Instant	Debit		report:USBondsAndPremiuns
Real Estate, Furniture, and Fixtures	Concept	Monetary	Instant	Debit		report:RealEstateFurnitureAndFixtures
Redemption Fund with U.S. Treasurer	Concept	Monetary	Instant	Debit		report:RedemptionFundWithUSTreasurer
Cash and Due from Banks	Concept	Monetary	Instant	Debit		report:CashAndDueFromBanks
Resources	Concept	Monetary	Instant	Debit		report:Resources
▼ Liabilities [Roll Up]	Abstract					report:LiabilitiesRollUp
Capital	Concept	Monetary	Instant	Credit		report:Capital
Surplus and Undivided Profits	Concept	Monetary	Instant	Credit		report:SurplusAndUndividedProfits
Circulation	Concept	Monetary	Instant	Credit		report:Circulation
Deposits	Concept	Monetary	Instant	Credit		report:Deposits
Liabilities	Concept	Monetary	Instant	Credit		report:Liabilities

The objective of the project is to create an XBRL-based financial report for the Wachovia National Bank condensed financial report.
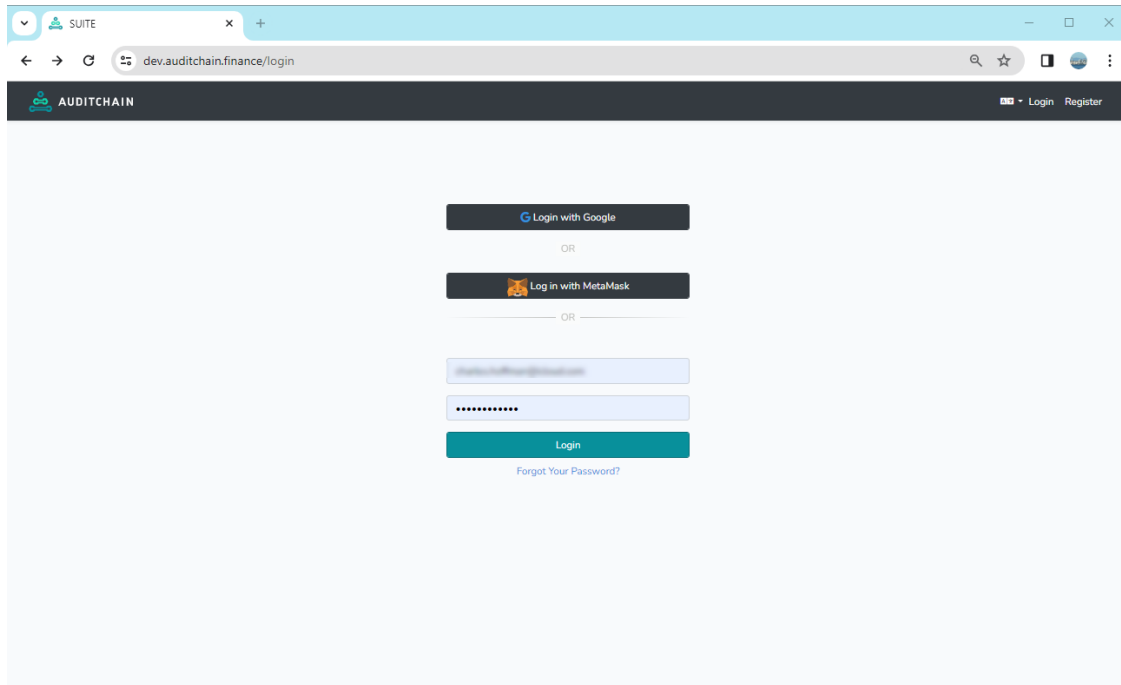
STEP 1: Auditchain Luca Cloud Application.
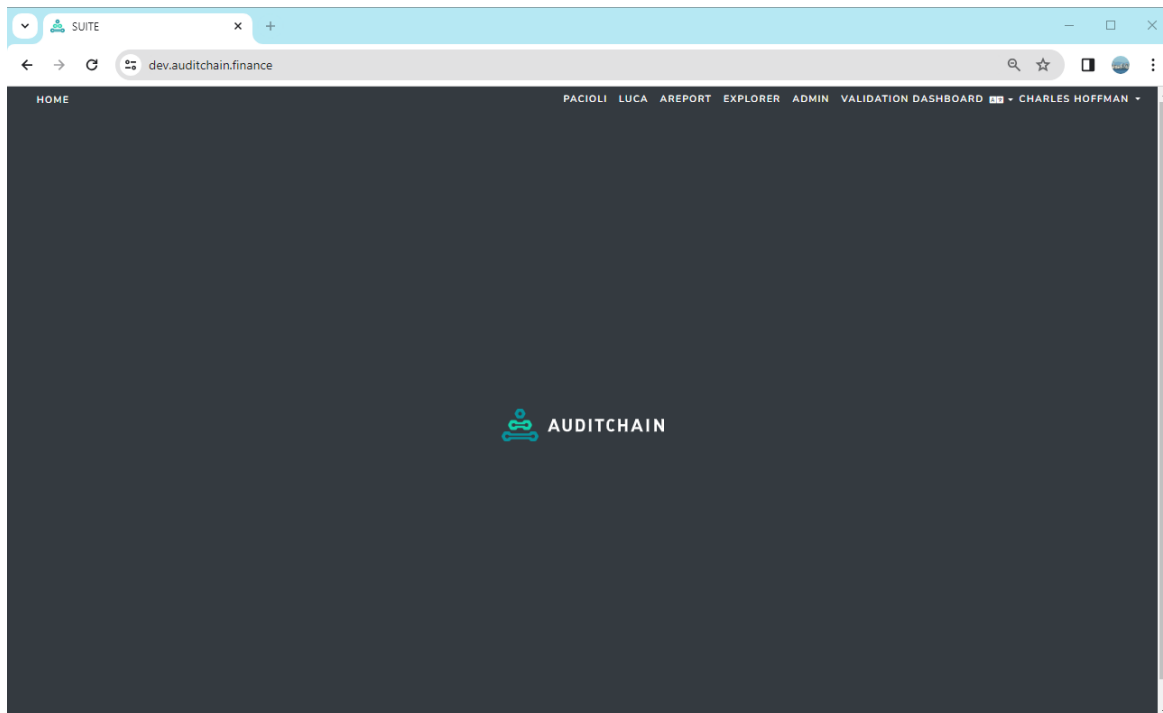
Go to the Auditchain Luca web site, https://dev.auditchain.finance/
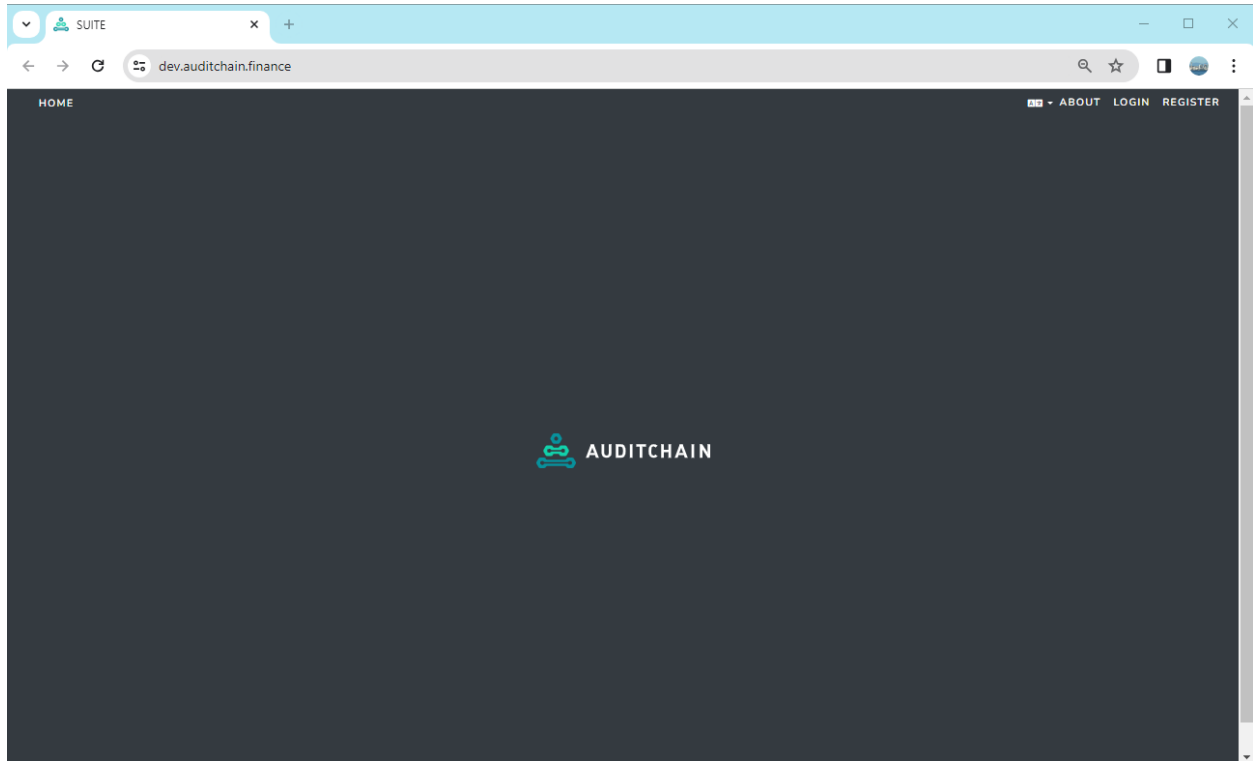
STEP 2: Login.

We are assuming you have registered. If you have not, then please read the Getting Started: Registration and Login document. Enter you email address and password or login using Google or MetaMask:
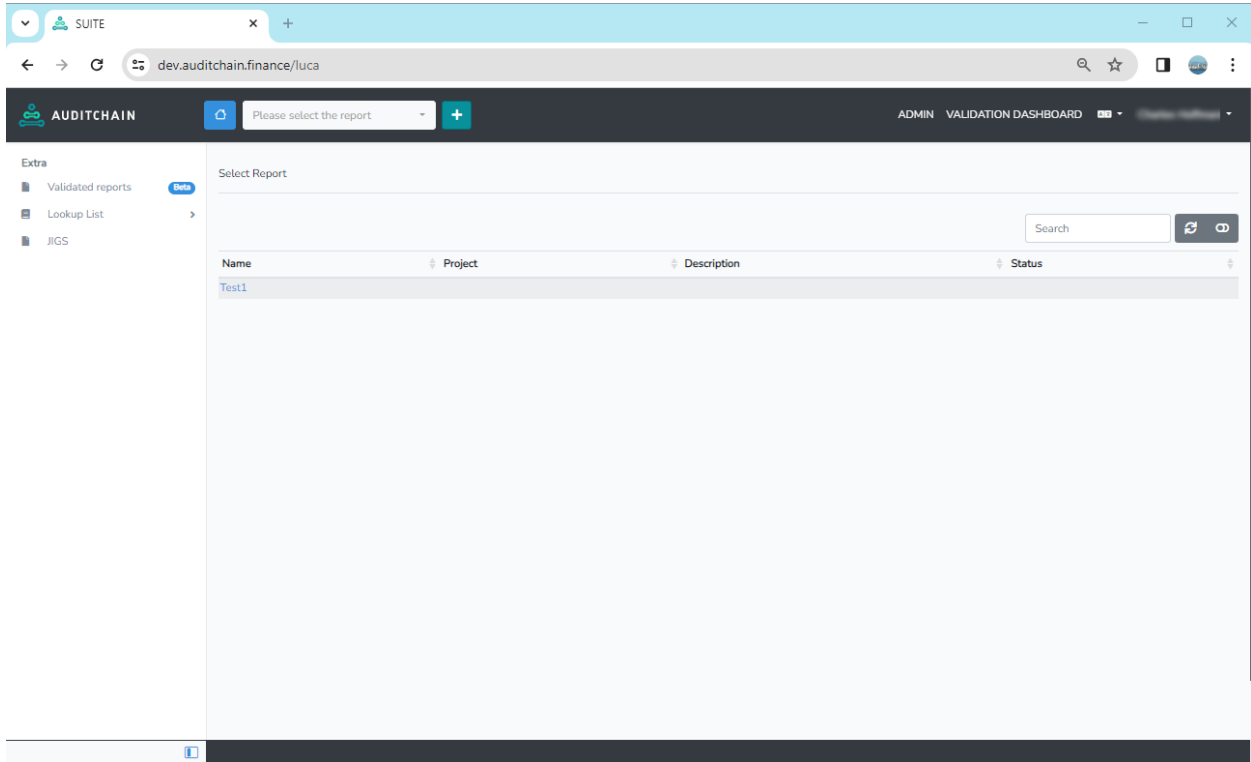

STEP 2: Getting into Luca.

Select "LUCA" from the menu items by clicking it.

STEP 3: Create New Report.

After selecting Luca in the step above, now press the green "+" at the top of the screen towards the center area of the menu bar.

After pressing the "+", the following form will appear. Enter the name of the report. We will call our report "Wachovia National Bank":

STEP 4: Create a report from scratch.

From the set of options to create a report, select "Create a report from scratch," by pressing the blue "GO" button. This option is outlined in red below:
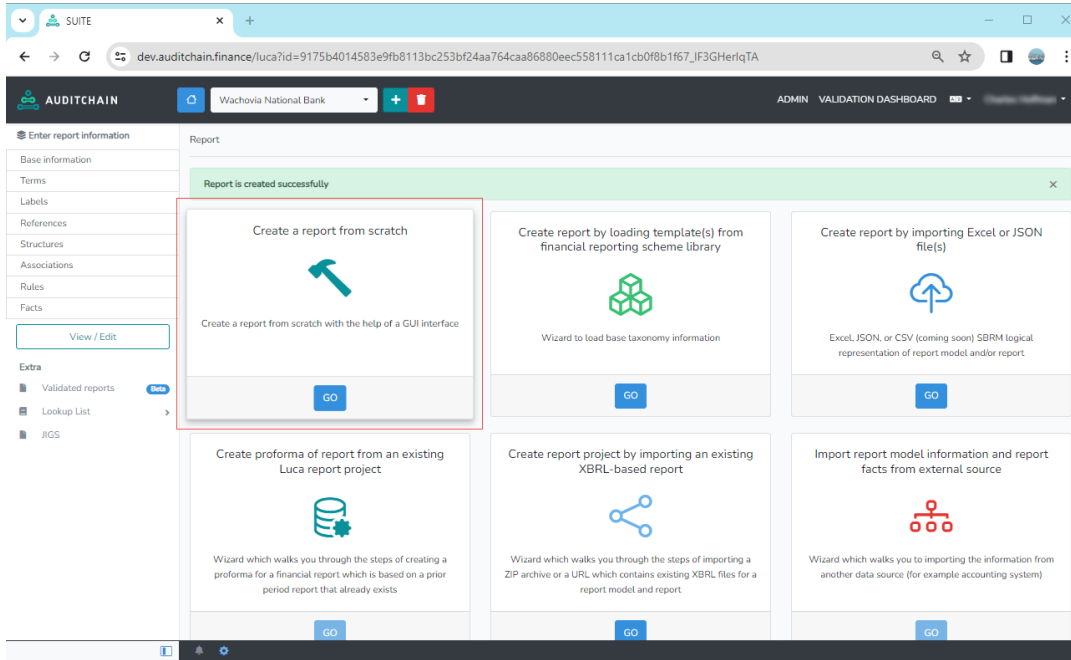
STEP 5: Select default report options.

You can change the report properties or you can just go with the defaults. Either option will work in our case.
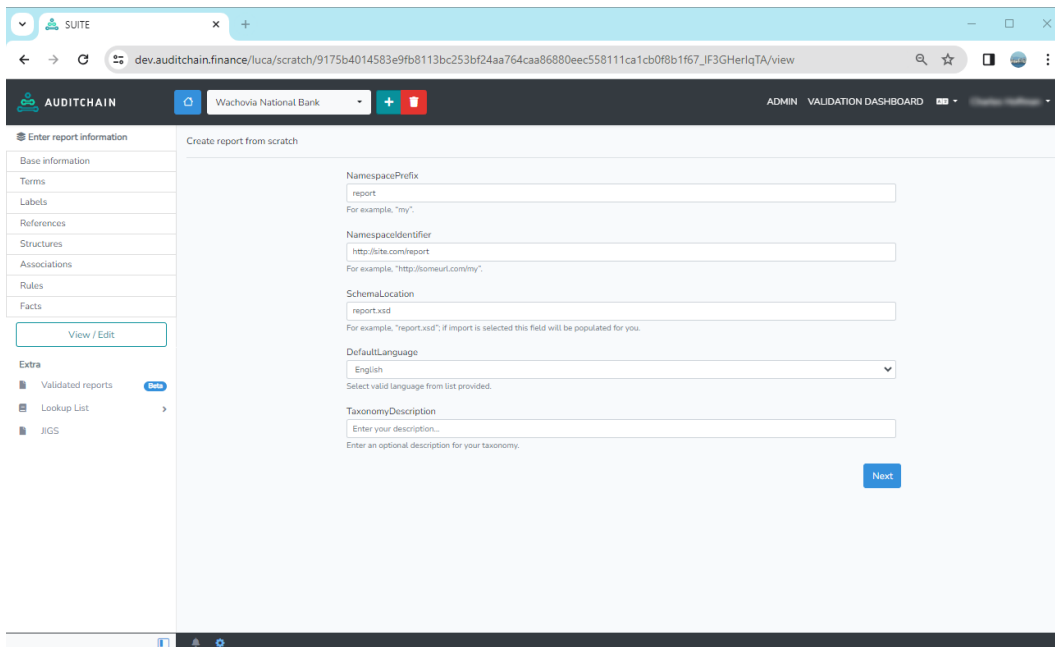
STEP 6: Default values for a fact.

Enter the default values that will be used to create facts. Enter what you see below into the Luca application to complete this form.

STEP 7: Add structure.

To add the first structure, press the blue "+" as can be seen in the right hand side of the form, outlined in red below:
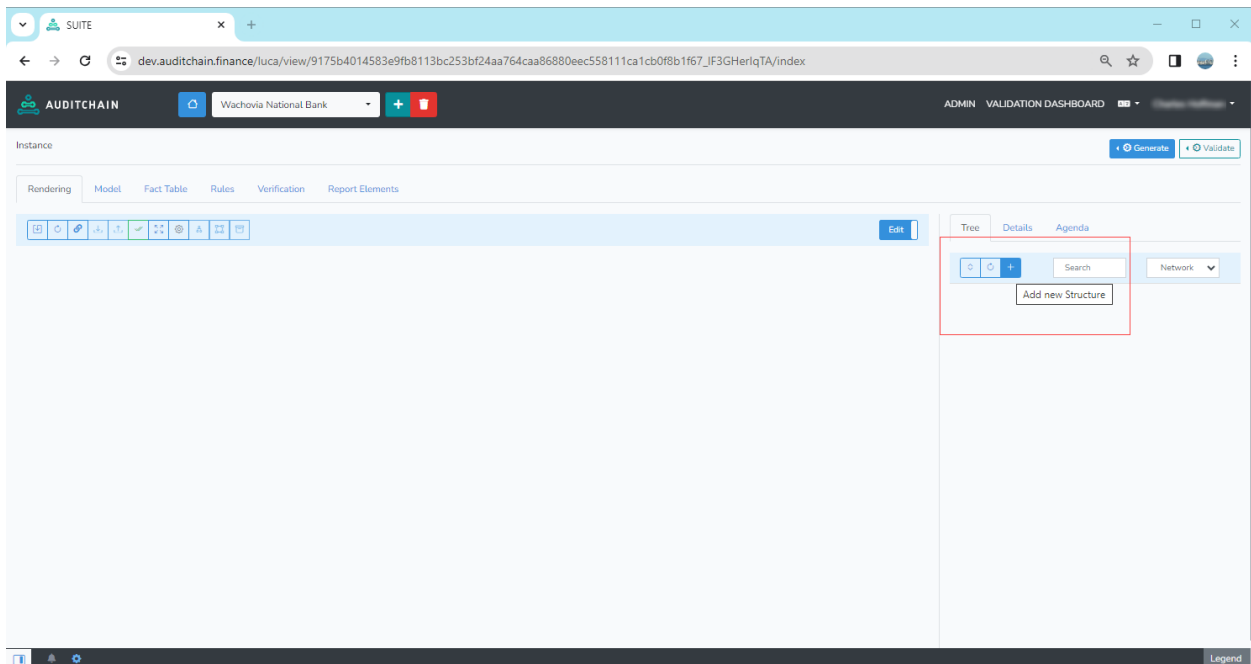
Enter the structure information as follows:
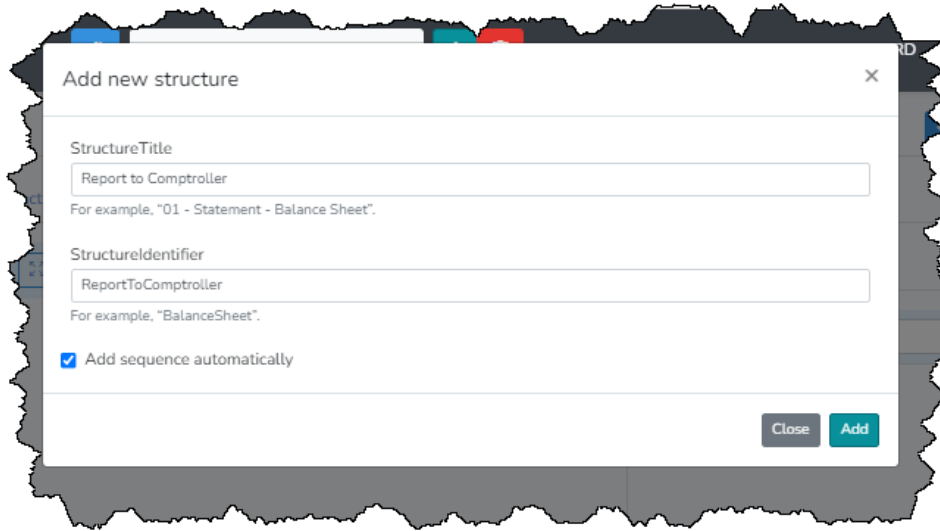
STEP 8: Add hypercube.

Tuo add a hypercube to the structure you created in the last section, right click while you have that structure selected. Select "Add Hypercube" from the menu:
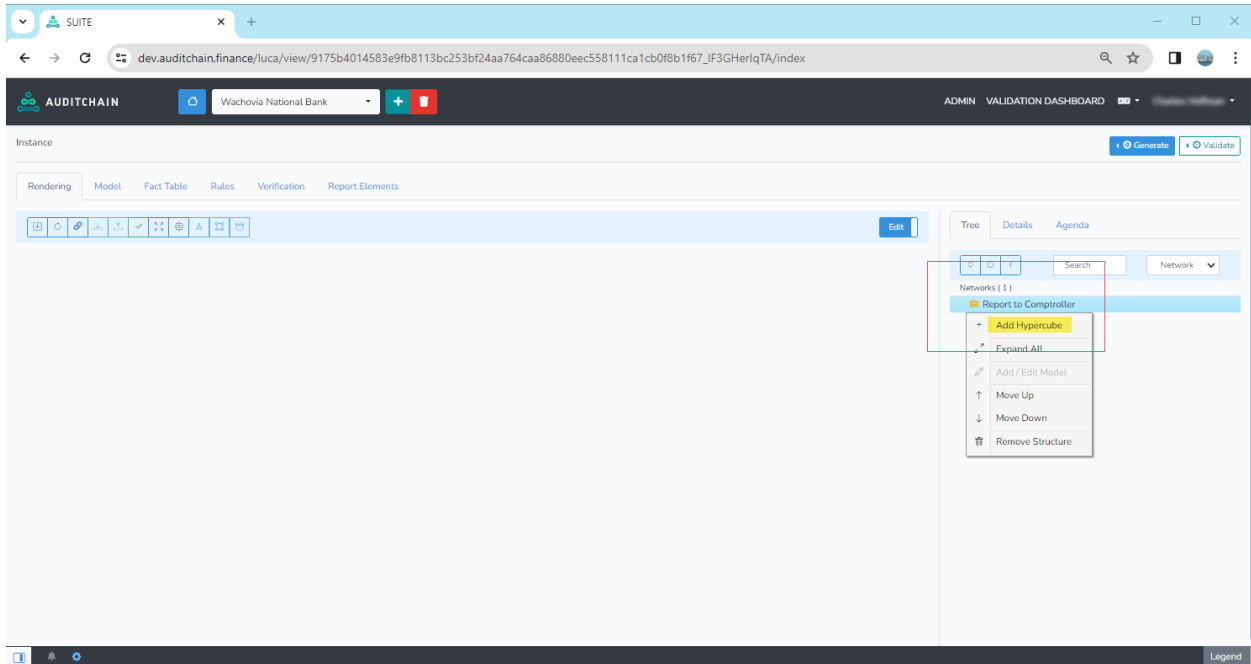
Frome the menu shown select the "Add new extension hypercube" tab and enter the name of the hypercube as can be seen highlighted in yellow:

The hypercube is created in the structure you selected:
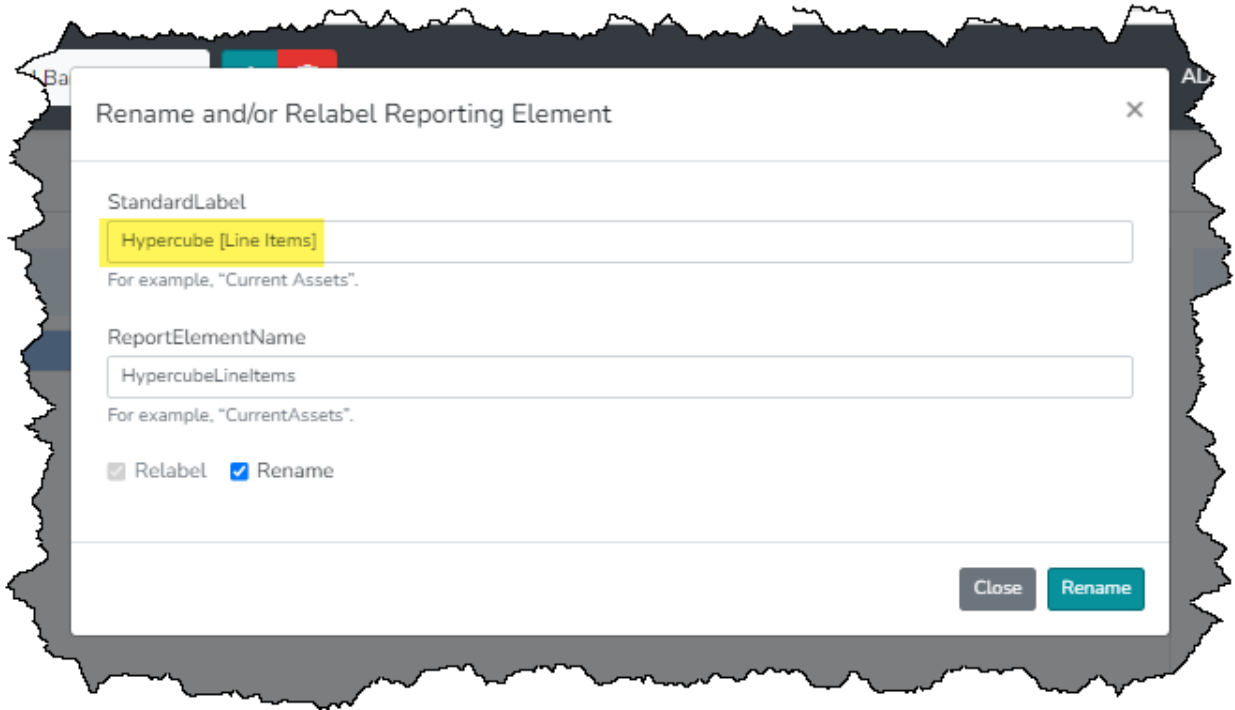
Right click over the hypercube and the following menu appears. Select "Add/Edit Model":
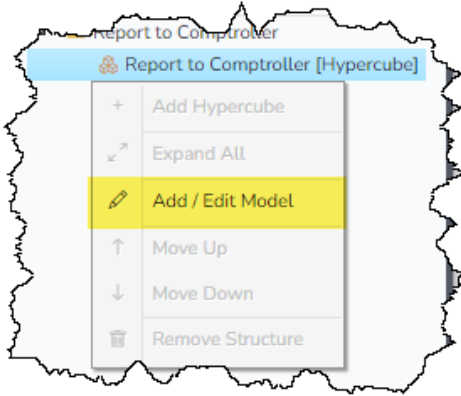
A form appears that you can use to add things to or edit the report model. You would see the report rendering on the right (but we have not constructed anything yet, that will come later). On the right you see the structures and hypercubes. Select the hypercube Line Items to make a quick adjustment:
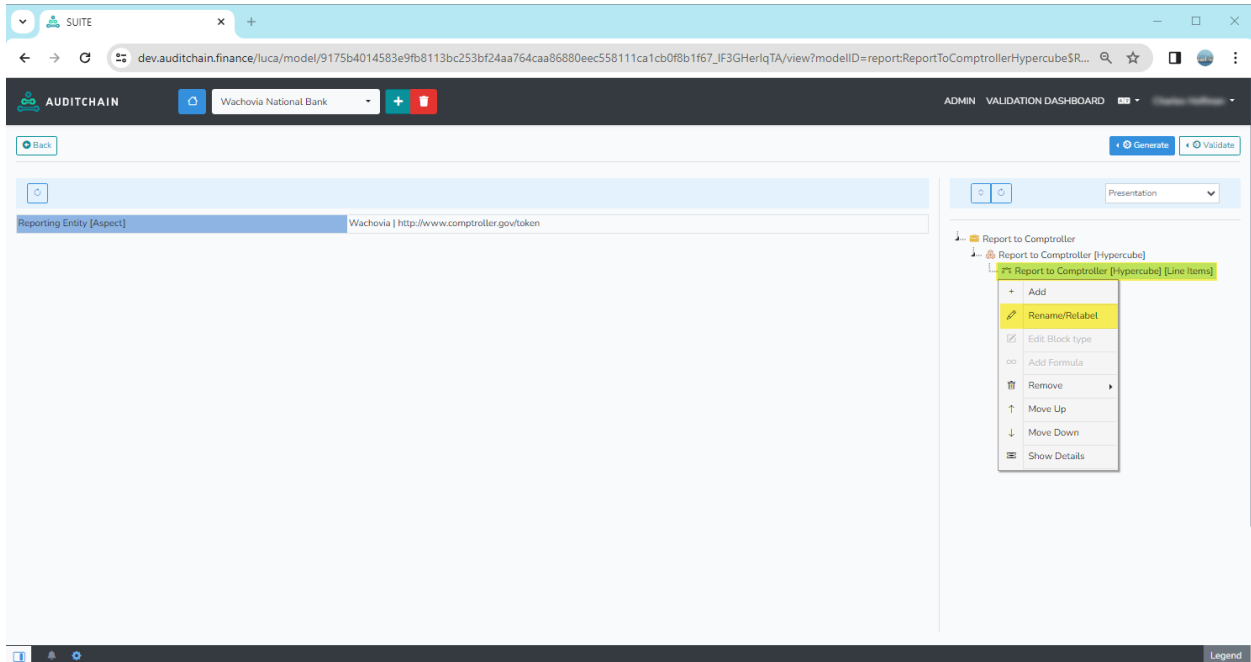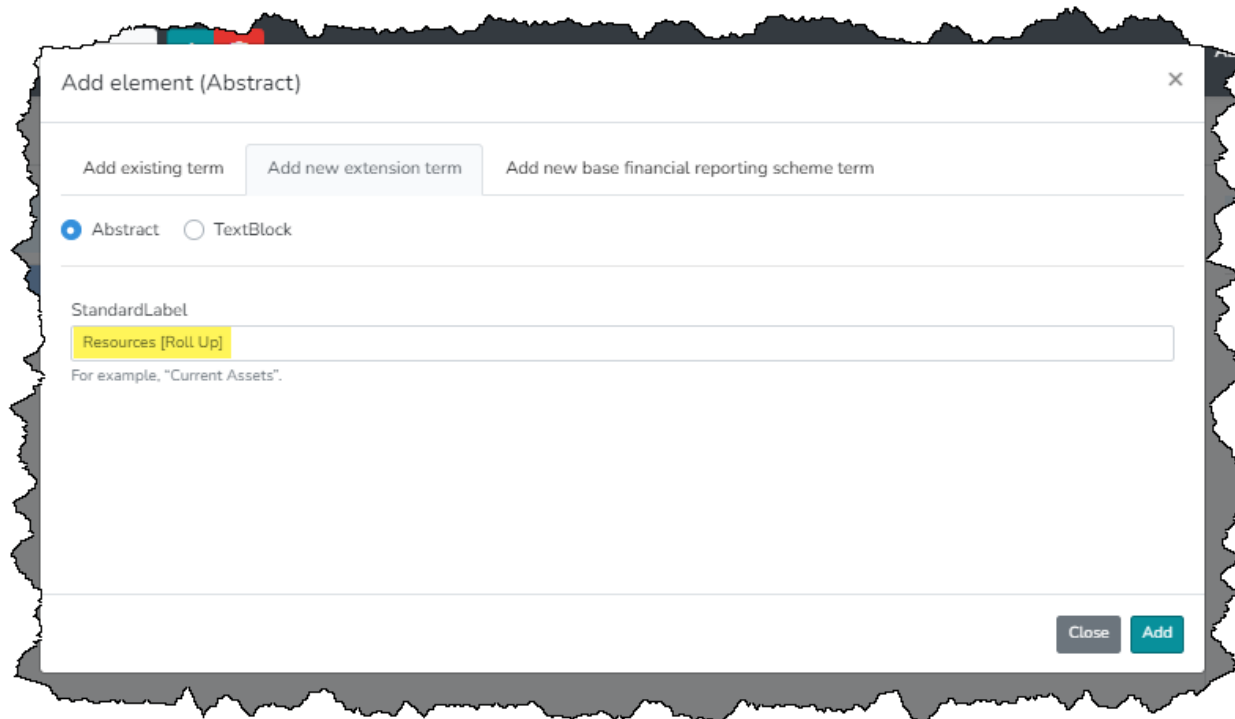
The software did not create a very good label for the Line Items so we are going to fix that. Rename the label as follows:

Rename and/or Relabel Reporting Element ✕

StandardLabel

Hypercube [Line Items]

For example, "Current Assets".

ReportElementName

HypercubeLineItems

For example, "CurrentAssets".

☑ Relabel ☑ Rename

Close Rename

Press "Rename" and then when you return to the prior form, select the line items. Select "Add" and you can add the abstract concept "Resources [Roll Up]" as shown below.

Add element (Abstract) ✕

Add existing term Add new extension term Add new base financial reporting scheme term

🔘 Abstract ⚪ TextBlock

StandardLabel

Resources [Roll Up]

For example, "Current Assets".

Close Add

Repeat the same process to add the "Liabilities [Roll Up]" which we will also need:
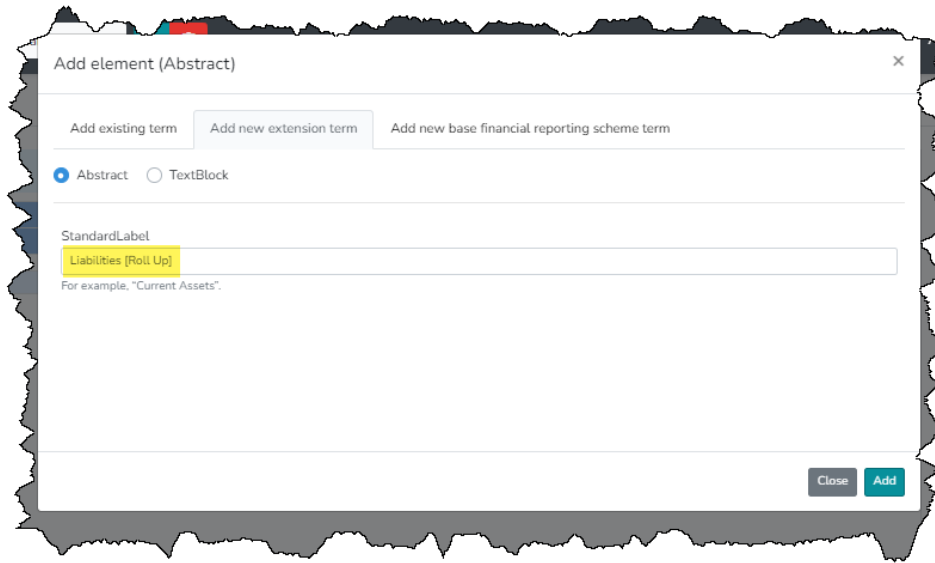
When you are done have edited the hypercube Line Items and then added the two abstract elements that will serve as a container for the concepts, what you have should look as can be seen below, in particular note the area outlined in red below:
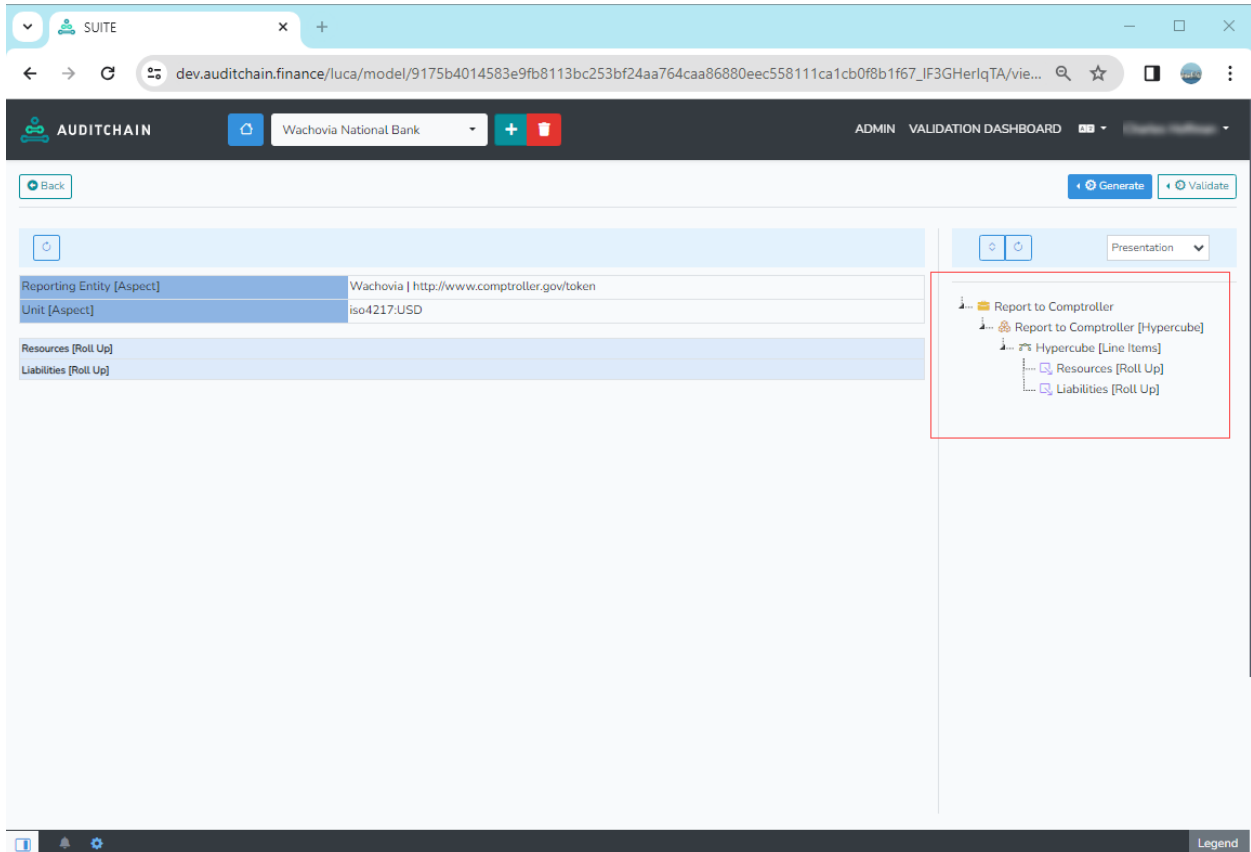
STEP 9: Add concepts for resources.

Select "Resources [Roll Up]" and then right click and from the context menu that you will see, select the "Add" option:
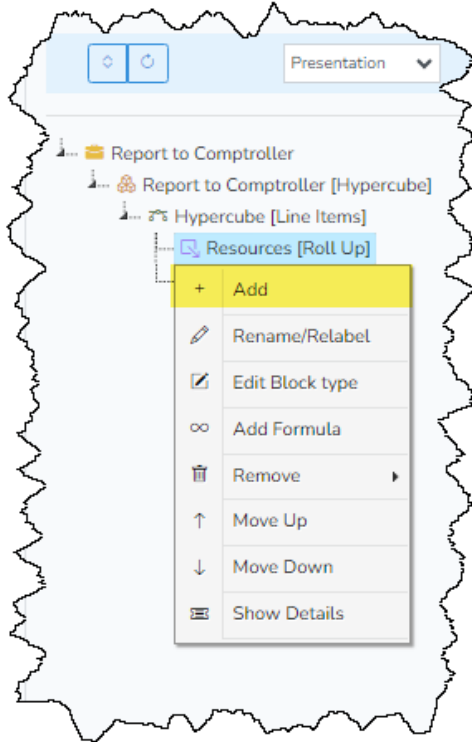
Select the "Add new extension term" tab, and then enter the information that you see highlighted in yellow as shown below:

Press the green "Add" button and the concept will be added. Now, repeat this same process to add the remaining four concepts:

1. U. S. Bonds and Premiums
2. Reas Estate, Furniture and Fixtures
3. Redemption fund with U. S. Treasurer
4. Cash and Due from Banks
5. Resources

Pay particular attention to the DataType, CalendarPeriodType, and BalanceType which are all the same as that first concept.

Now we want to add the mathematical computations to the report model. The software does not know that we want to create a roll up unless we tell the software to do so. Once the roll up is crated, the software will maintain the logic of the roll forward for you.

But now we need to convert from what amounts to a Set of information into a Roll Up by telling the software to do so.

Right click over the "Resources [Roll Up]" abstract container. Select "Edit Block Type".
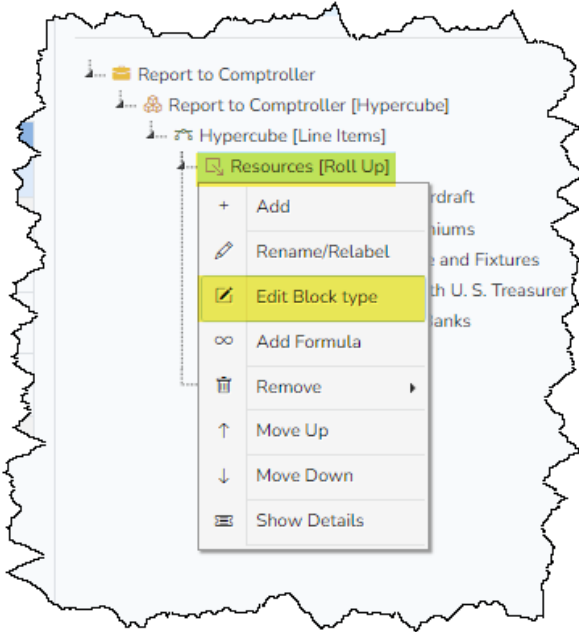
Then, select "RollUp" from the "Change Block Type to" combo box. Then press the green "Edit" button:

Once you have made that change, notice the rendering on the right. See the single underscore and double underscore? That helps you see that the rendering is now a roll up:

STEP 10: Add liabilities by repeating the above process for liabilities roll up.

Select "Liabilities [Roll Up]" Now, repeat the same process for the "Liabilities [Roll Up]". Here is the first concept that you need to add; notice that the DataType and CalendarPeriodType are the same but now the BalanceType is "Credit".

Press the "Add" button. Now repeat this process to add the remaining concepts:

1. Capital
2. Surplus and Undivided Profits
3. Circulation
4. Deposits
5. Liabilities

Now convert the Set to a Roll Up just like you did for the Resources.

Now, the rendering on the left of your screen looks like this:
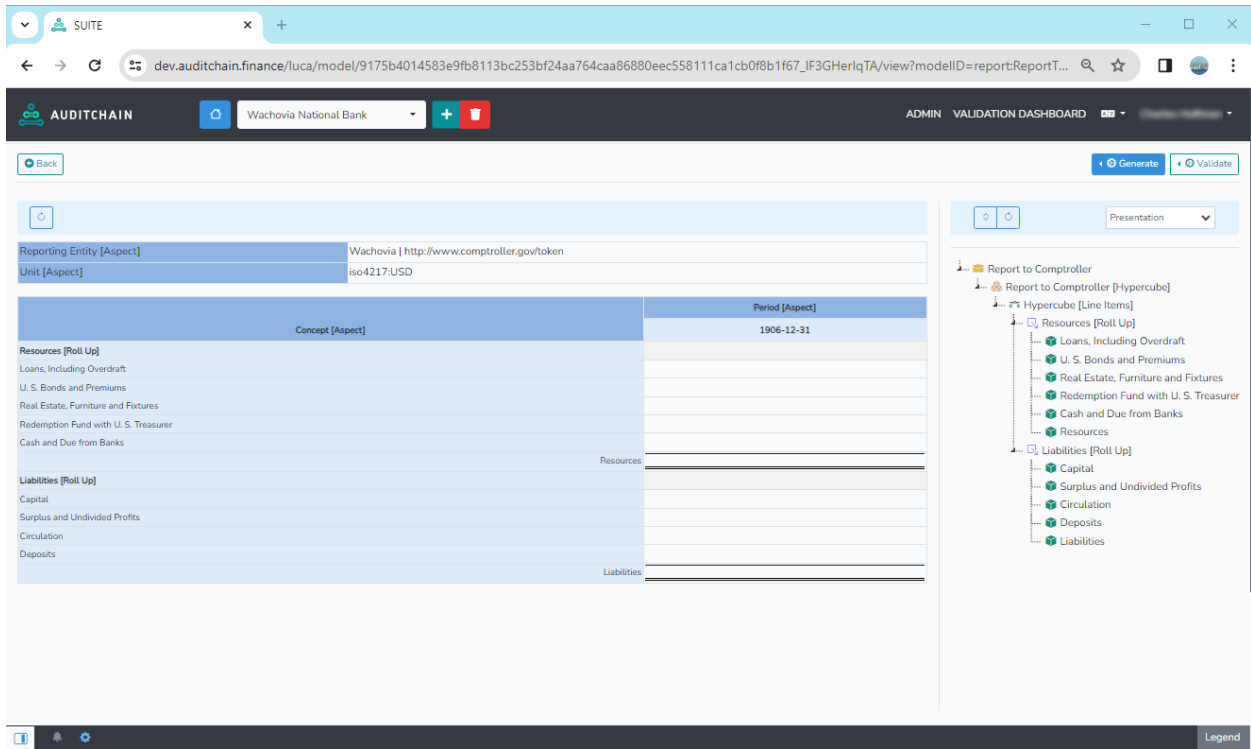
STEP 11: Add initial set of facts.

Press the "View/Edit" button on the left; and then select the hypercube you created in the structure you created and what you see should look like this, paying particular attention to the area outlined in red below:
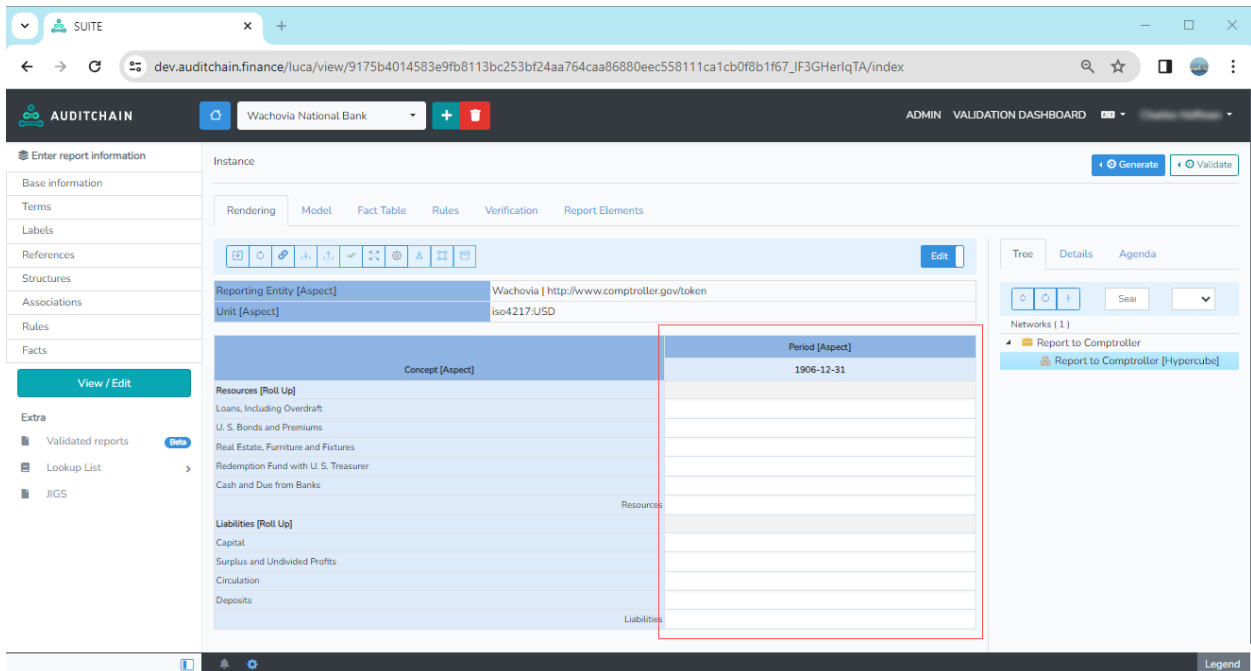
Enter a 0 into each of the cells that you can edit which corresponds to the concept of the fact. Press the add or calculation button and now you can see that the software is keeping tabs on the math for the rendering:

[NOTE: Work around for bug. Currently facts are defaulted to a Rounding value of INF. To fix this, go to the facts form and change the Rounding value for each fact from "INF" to "2".]

STEP 12: Enter actual fact values.

Enter the values of each fact by referencing the statement at the beginning of this document. After you have entered the values appropriately, the form in your software will show this:

Change the "Edit" to "View" by pressing that toggle button, and you see the formatting of the facts:

STEP 13: Adding rule to verify that the balance sheet balances.

How do you know that your total Resources equals the value of your total Liabilities? Well, thus far you have to check that manually. But, we can add a rule to automate the process of checking that math. Select "Rules" from the Enter report information and enter the following consistency rule:

STEP 14: Validate report you created.

Select "Validate" and the "Local validation" from the View/Edit mode that you are in:
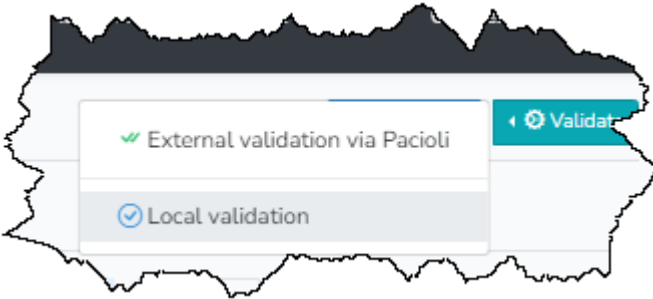
The local validation process will run and you should get the results that you see below:

If you click on a line item you can see the details of the validation for that line item. For example, if you click on "Report Model Structure Verification" you will see the following:

STEP 15: Report properties.

Click on the blue gear in the application status bar and you can see the properties of the report and you can navigate to the details of each property:

STEP 16: Report notifications.

Click on the green bell in the application status bar and you will see notifications related to messages about the mathematical relations and of the report:

STEP 17: Viewing report model Information.

The Edit mode is a great way to review a report because it has both the rendering and the report model information on one form as you can see below:

Note that you can close the left side menu by clicking the white icon at the bottom left of the black status bar:

You can generate the report information as HTML or PDF:

Component: (Network and Hypercube)	
Network	Report to Comptroller (http://site.com/report/role/ReportToComptroller)
Hypercube	Report to Comptroller [Hypercube]

Reporting Entity [Aspect]	Wachovia | http://www.comptroller.gov/token
Unit [Aspect]	iso4217:USD

	Period [Aspect]
Concept [Aspect]	1906-12-31
Resources [Roll Up]	
Loans, Including Overdraft	$ 511,789.61
U. S. Bonds and Premiums	52,300.00
Real Estate, Furniture and Fixtures	4,500.00
Redemption Fund with U. S. Treasurer	2,500.00
Cash and Due from Banks	268,231.30
Resources	$ 839,320.91
Liabilities [Roll Up]	
Capital	150,000.00
Surplus and Undivided Profits	171,167.89
Circulation	50,000.00
Deposits	468,153.02
Liabilities	$ 839,320.91

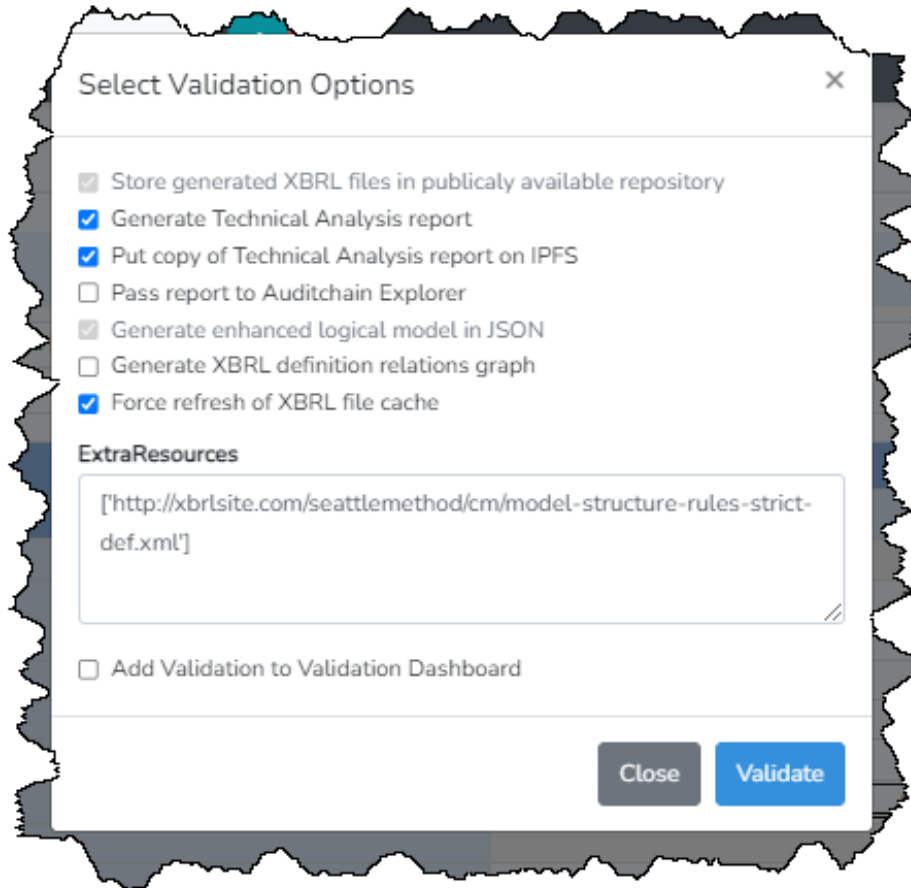You can, if you want to, generate XBRL for the report:

You can also generate Excel or JSON import files. Other formats will be supported eventually.

STEP 18: Viewing report model Information.

You can run your report through Pacioli report verification from within Auditchain Suite and Luca. Select that option from the Validate button:

Select Validation Options ✕

☑ Store generated XBRL files in publicaly available repository
☑ Generate Technical Analysis report
☑ Put copy of Technical Analysis report on IPFS
☐ Pass report to Auditchain Explorer
☑ Generate enhanced logical model in JSON
☐ Generate XBRL definition relations graph
☑ Force refresh of XBRL file cache

ExtraResources

['http://xbrlsite.com/seattlemethod/cm/model-structure-rules-strict-def.xml']

☐ Add Validation to Validation Dashboard

Close   Validate

When verification is complete, you will see a summary of the verification results in Luca:

You can also press the "Technical Analysis" or "Technical Analysis on IPFS" button to view the validation report on line or share the result with others:

https://auditchain.infura-ipfs.io/ipfs/Qme7ao1ziAs2CYeYBEvXUxNzat9toLwcuss5C2b4Dgz2DA/