

# 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](https://en.wikipedia.org/wiki/Financial_statement)) ; Wachovia National Bank

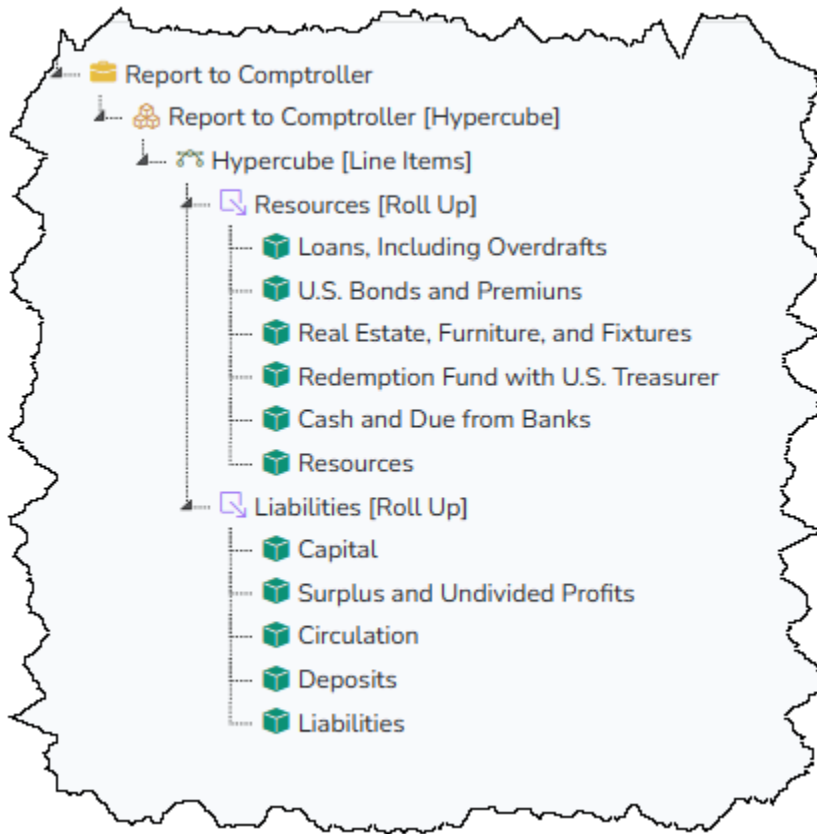
STATEMENT —OF—	
<b>WACHOVIA NATIONAL BANK,</b>	
JANUARY 29TH, 1906.	
(CONDENSED FROM REPORT TO THE COMPTROLLER OF THE CURRENCY.)	
RESOURCES.	LIABILITIES.
Loans, including Overdrafts \$ 511,789.61	Capital.....\$ 150,000.00
U. S. Bonds and Premiums 52,300.00	Surplus and Undivided Profits 171,167.89
Real Estate, Furniture and Fixtures,..... 4,500.00	Circulation..... 50,000.00
Redemption fund with U. S. Treasurer..... 2,500.00	
Cash and Due from Banks... 268,231 30	DEPOSITS,..... 468,153.02
\$839,320.91	\$839,320.91

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

Reporting Entity [Aspect]	Wachovia   <a href="http://www.comptroller.gov">http://www.comptroller.gov</a> /ID	
Unit [Aspect]	iso4217:USD	
	Period [Aspect]	
Concept [Aspect]	1906-01-29	
<b>Resources [Roll Up]</b>		
Loans, Including Overdrafts	\$	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
<b>Liabilities [Roll Up]</b>		
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:



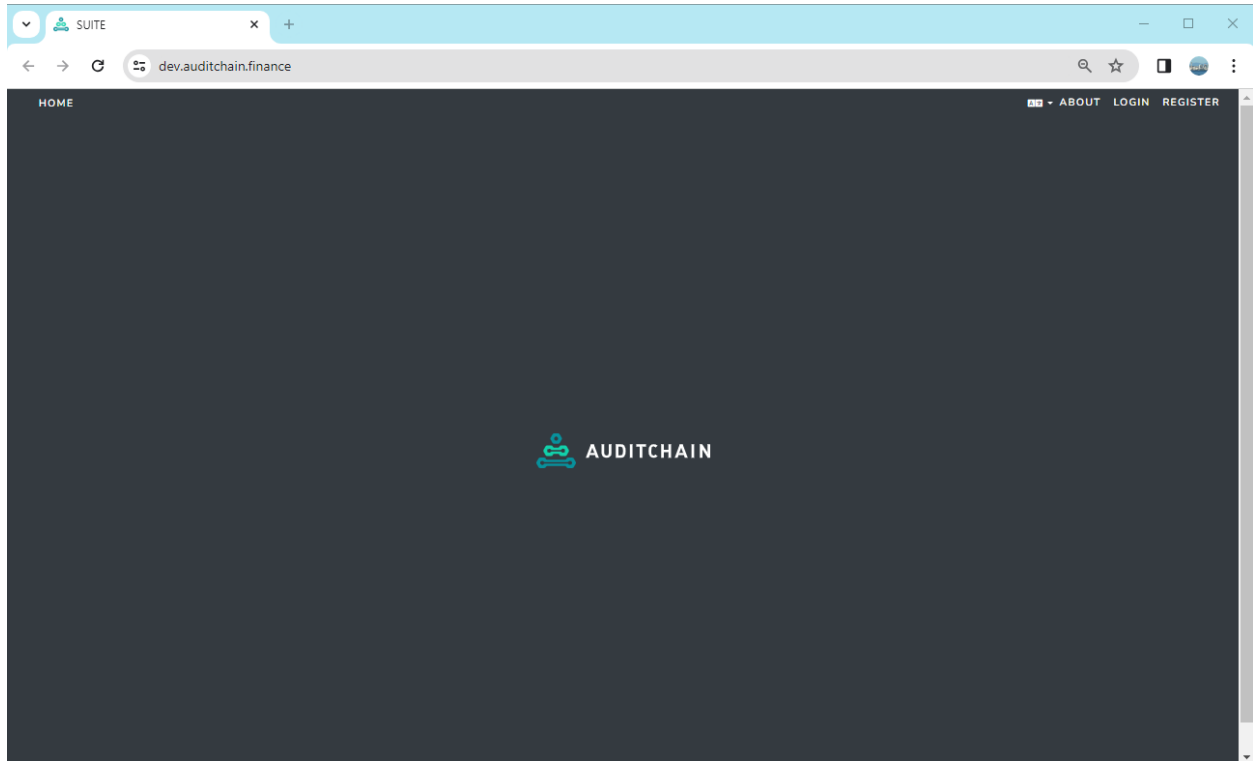
This is more details about the report elements for this report.

Label	Category	Data Type	Period	Balance	Preferred Label Role	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 Premiums	Concept	Monetary	Instant	Debit		report:USBondsAndPremiums
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.

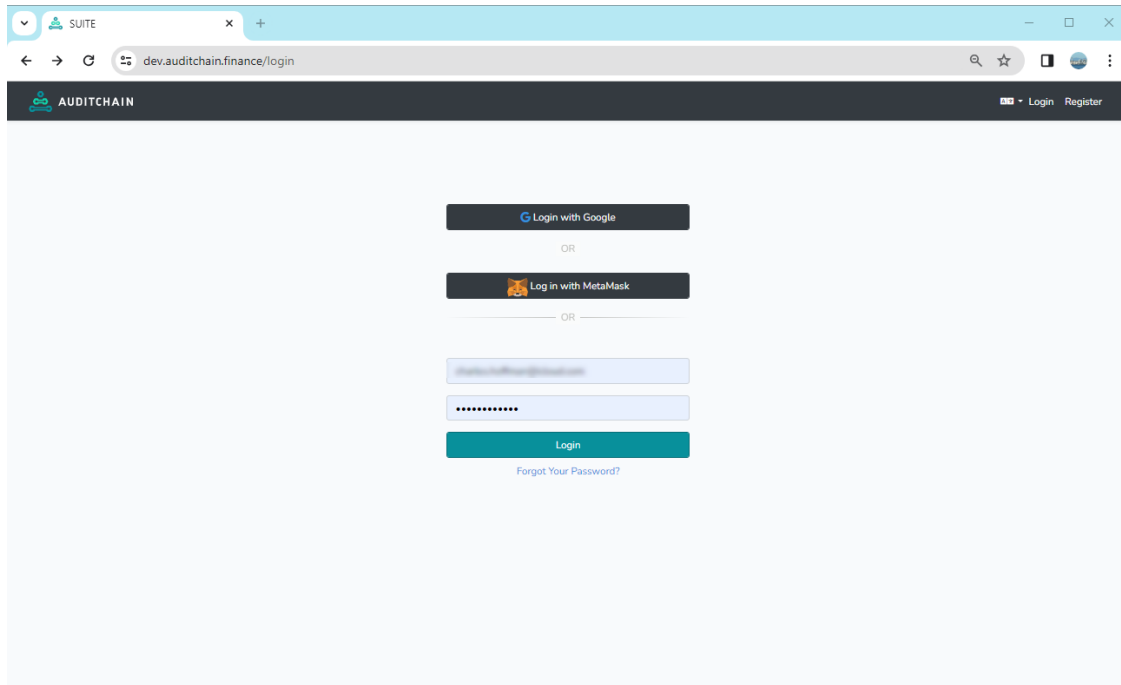
**STEP 1: Auditchain Luca Cloud Application.**

Go to the Auditchain Luca web site, <https://dev.auditchain.finance/>



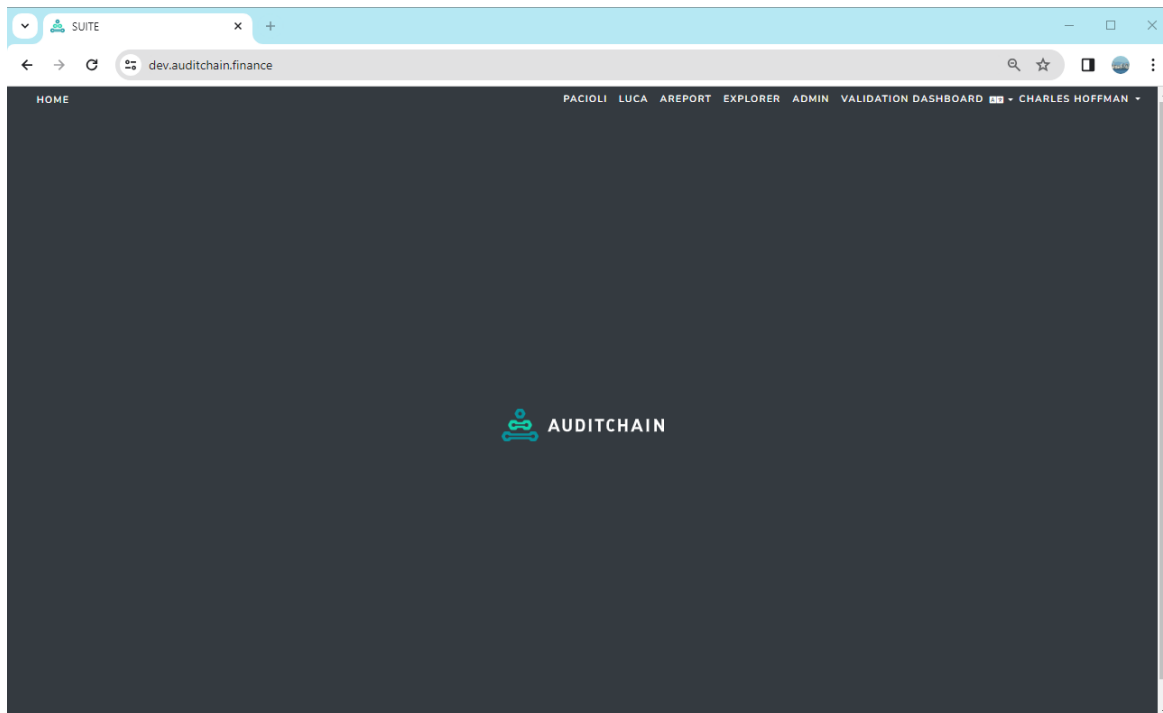
## STEP 2: Login.

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:



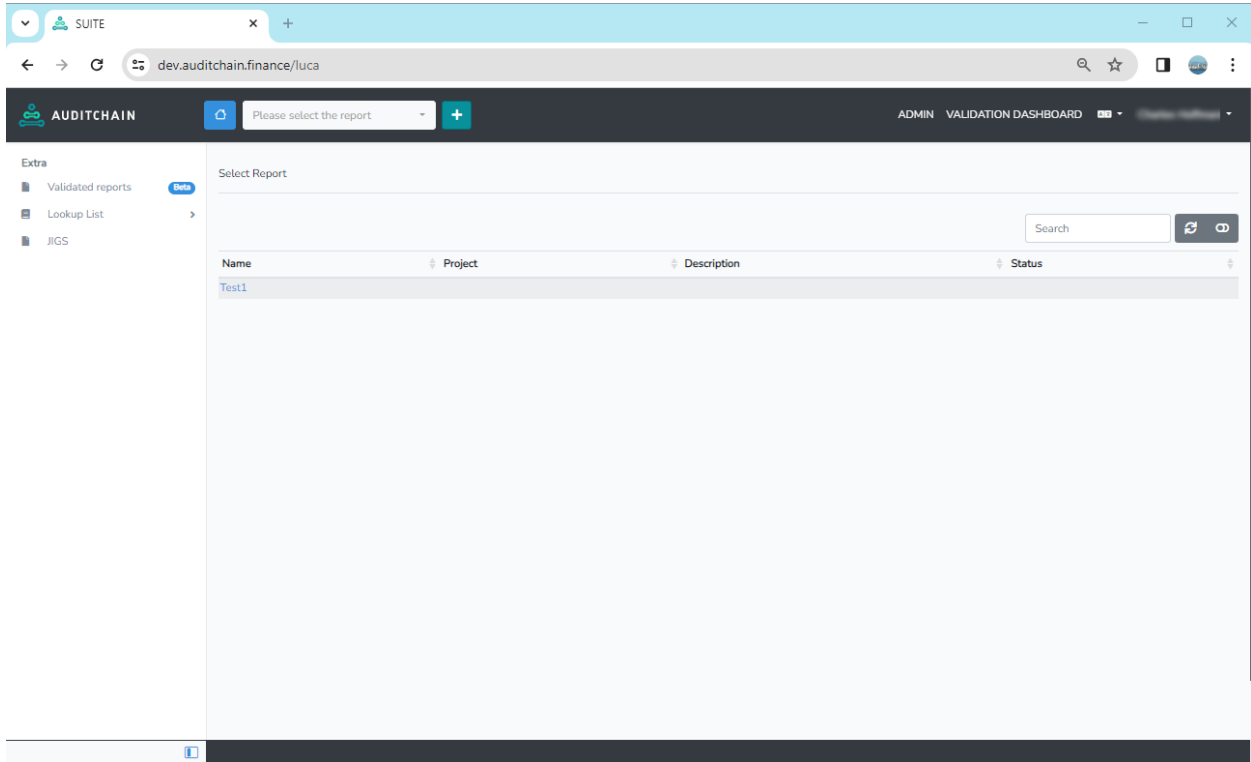
## STEP 2: Getting into Luca.

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.

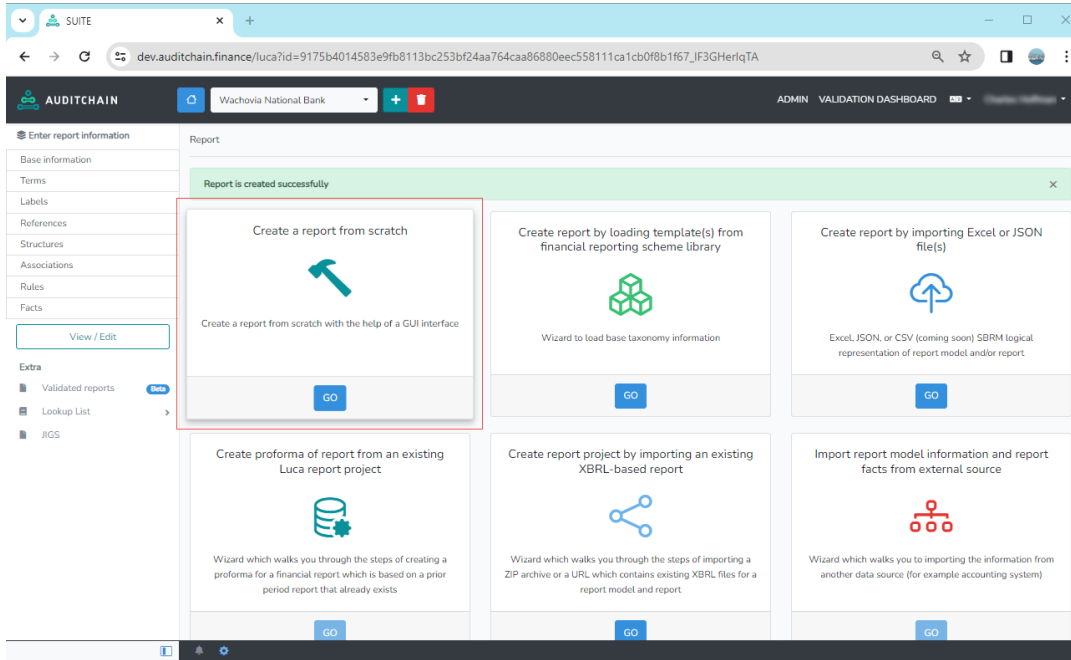


After pressing the “+”, the following form will appear. Enter the name of the report. We will call our report “Wachovia National Bank”:



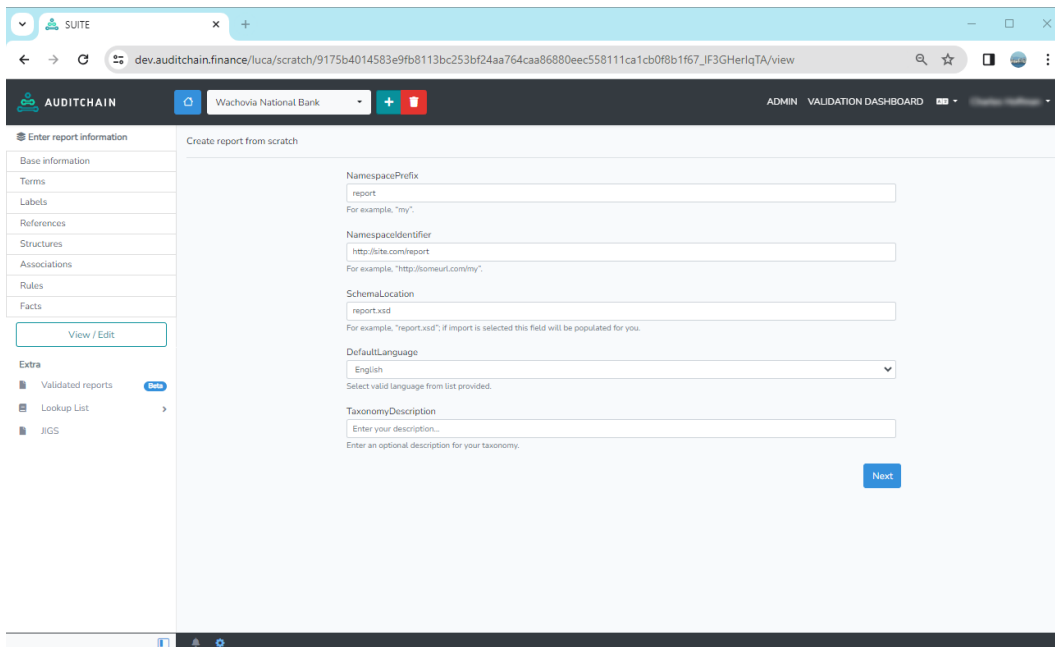
#### STEP 4: Create a report from scratch.

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.

**Default Values**

**ReportingEntityAspect**  
Wachovia | http://www.comptroller.gov/token  
Enter the entity identifier and the scheme used separated with a pipe character with a space on both sides. For example "123456789 | http://www.sec.gov/ok".

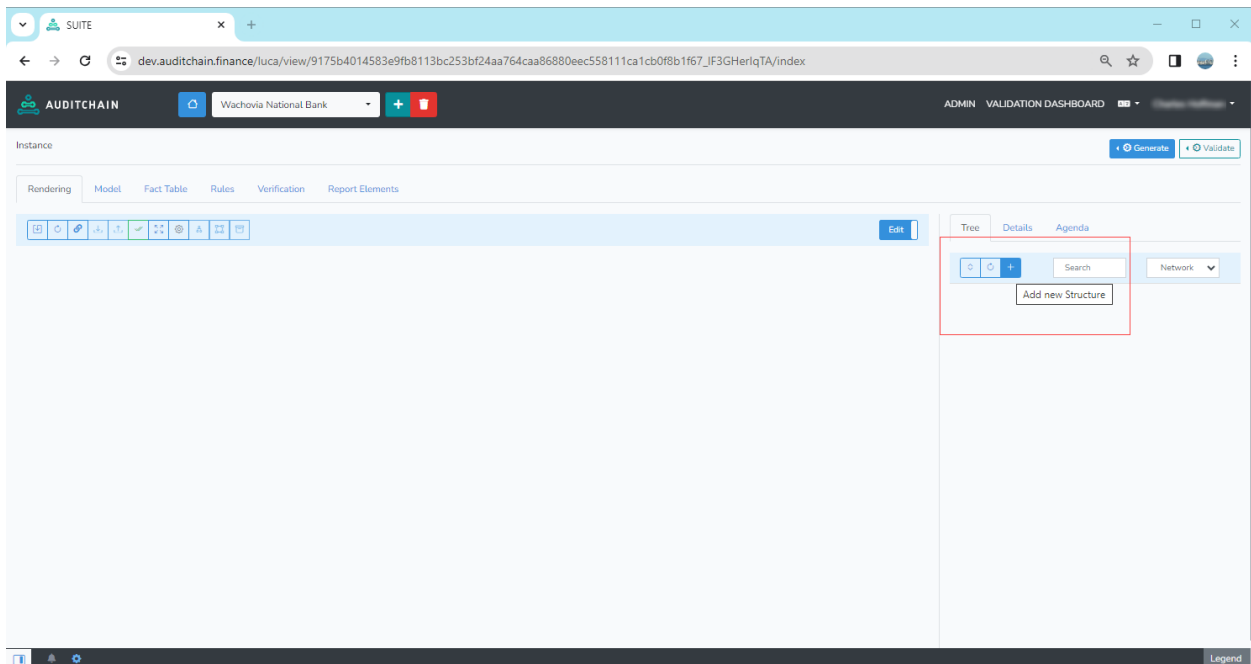
**CalendarPeriodAspect**  
1906-01-01 | 1906-12-31  
Enter the instant or duration period of the fact. For example, "2022-12-31" (which is an instant) or "2022-01-01 | 2022-12-31" (which is a duration).

**Currency**  
iso4217:USD

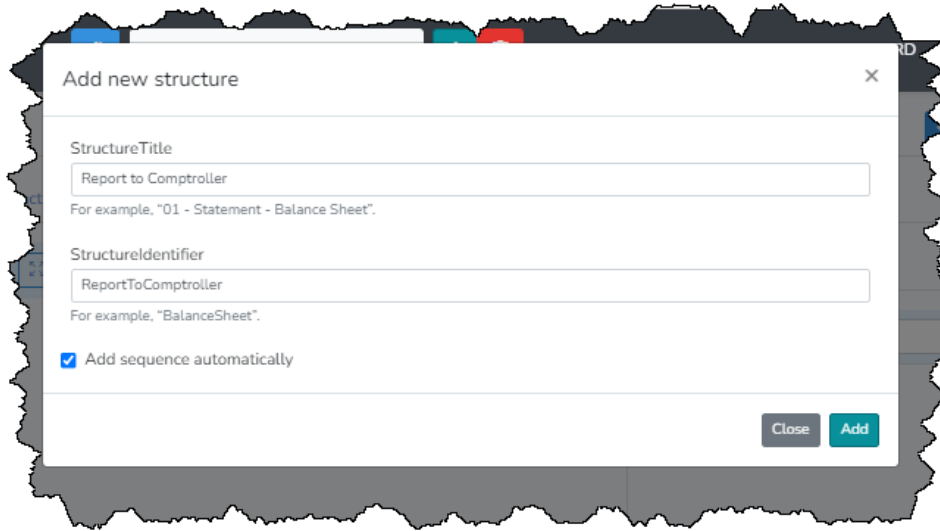
Cancel Set

### 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:

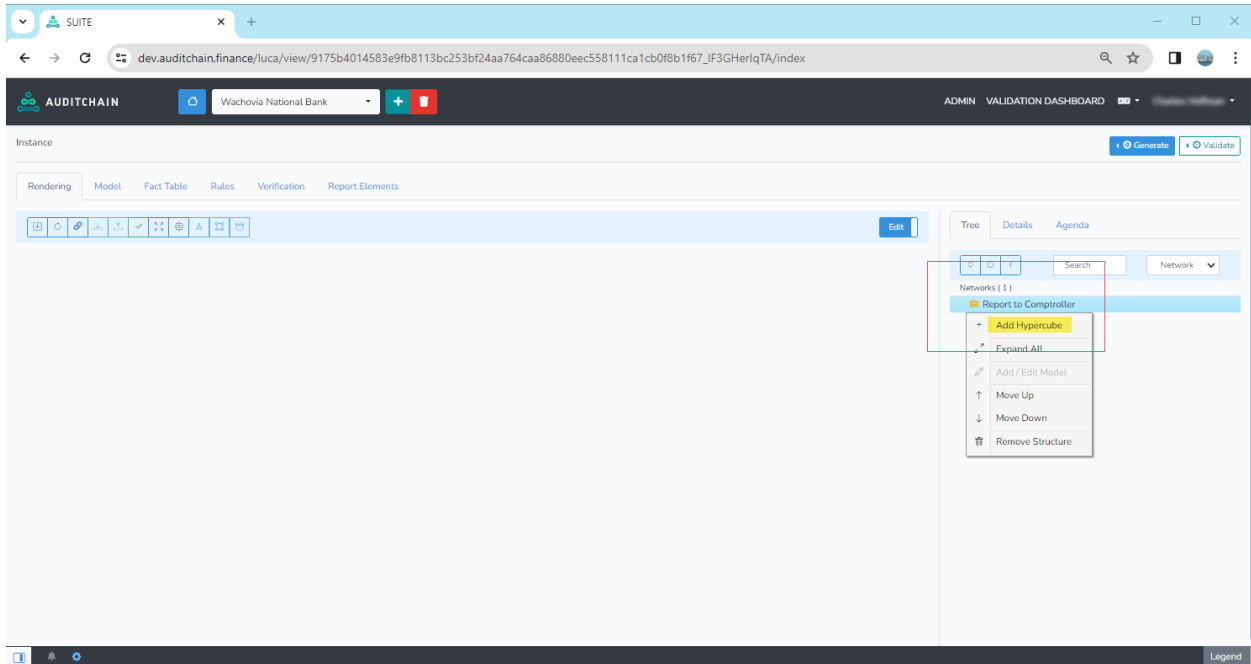


Enter the structure information as follows:



### STEP 8: Add hypercube.

To 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:





From the menu shown select the “Add new extension hypercube” tab and enter the name of the hypercube as can be seen highlighted in yellow:

Add Hypercube

Add existing hypercube   Add new extension hypercube   Add new hypercube from base financial reporting scheme   Add complete hypercube model using JIG

StandardLabel  
Report to Comptroller [Hypercube]  
For example, "Policies [Hypercube]".

ReportElementName  
ReportToComptrollerHypercube  
For example, "Policies-Hypercube".

Automatically add other association/term information  
 LineItems Terms and Associations (Presentation and Definition)

Close   Add

The hypercube is created in the structure you selected:

AUDITCHAIN   Wachovia National Bank   ADMIN   VALIDATION DASHBOARD

Instance   Generate   Validate

Rendering   Model   Fact Table   Rules   Verification   Report Elements

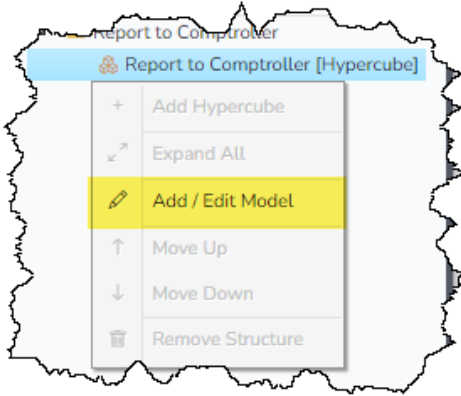
Reporting Entity [Aspect]   Wachovia | http://www.comptroller.gov/token

Tree   Details   Agenda

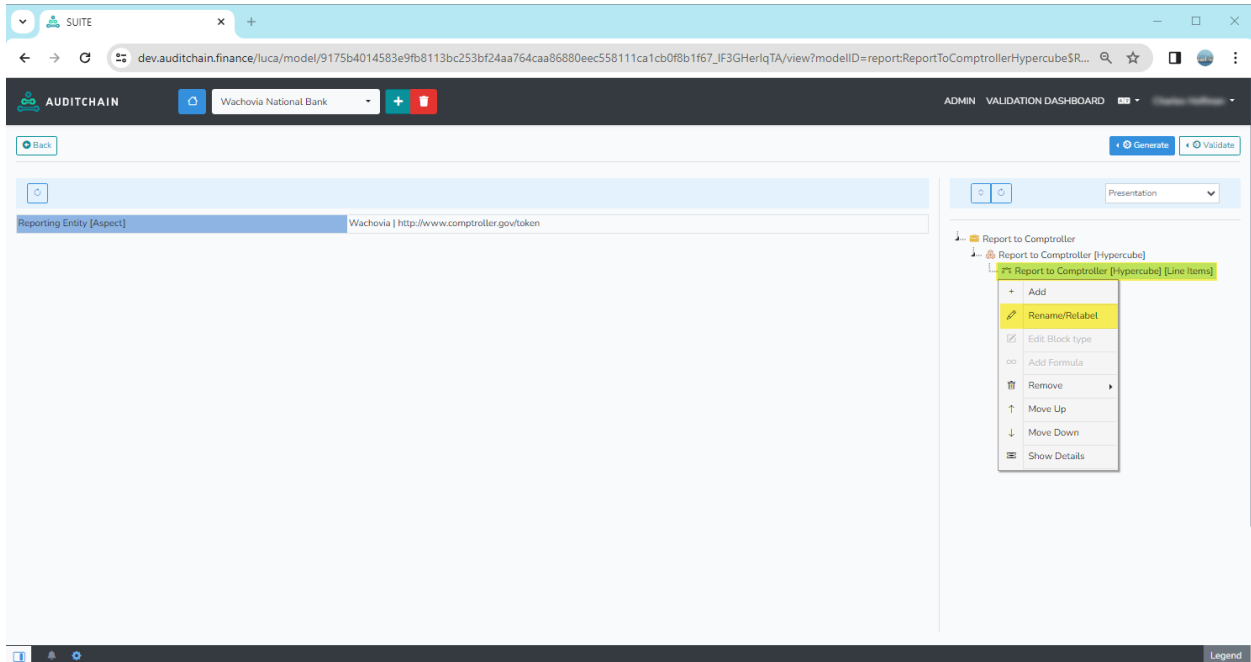
Networks [ 1 ]  
Report to Comptroller  
Report to Comptroller (Hypercube)

Legend

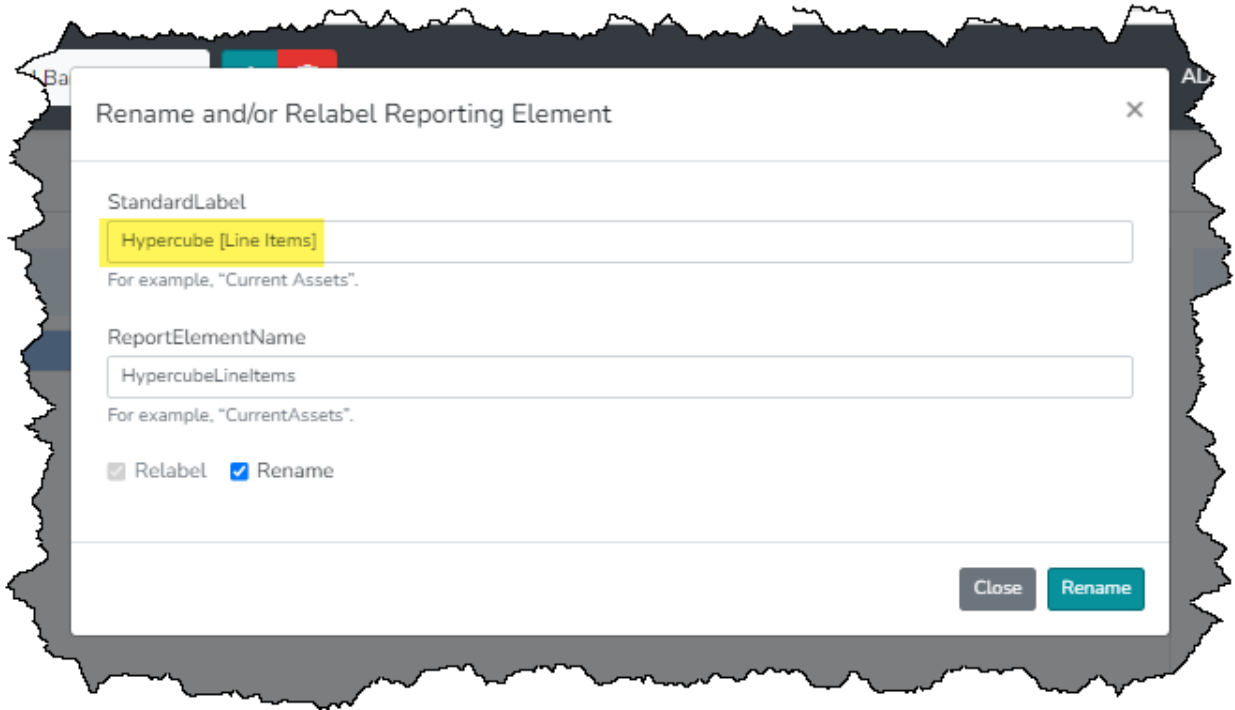
Right click over the hypercube and the following menu appears. Select “Add/Edit Model”:



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:

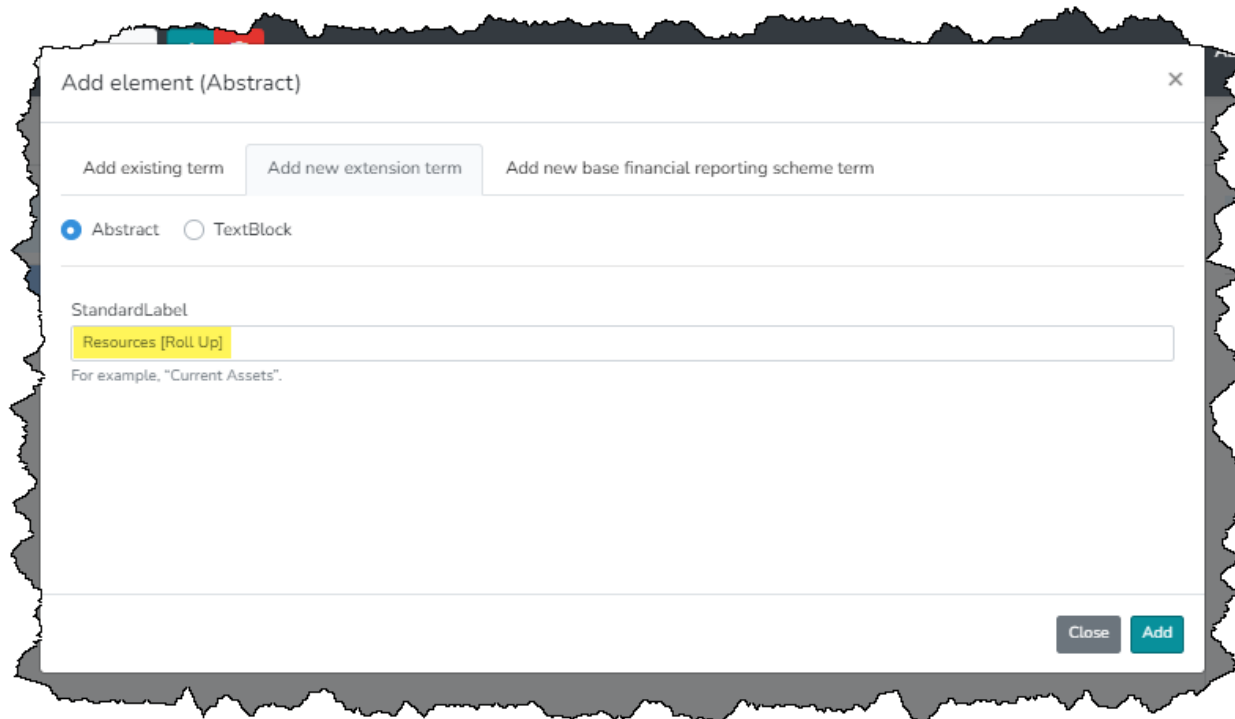


The software did not create a very good label for the Line Items so we are going to fix that. Rename the label as follows:



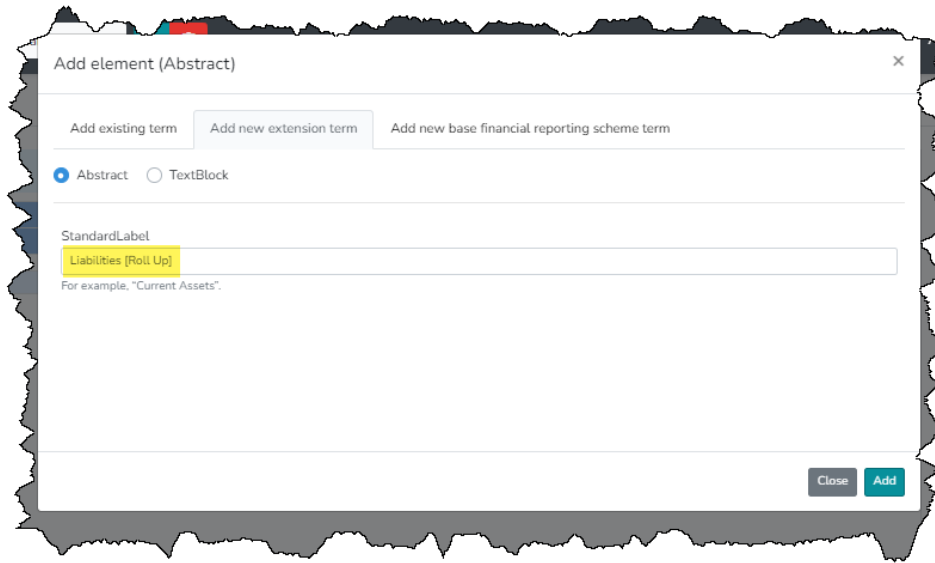
A screenshot of a software dialog box titled "Rename and/or Relabel Reporting Element". The dialog has a close button (X) in the top right corner. It contains two text input fields. The first field is labeled "StandardLabel" and contains the text "Hypercube [Line Items]". Below this field is the text "For example, 'Current Assets'". The second field is labeled "ReportElementName" and contains the text "HypercubeLineItems". Below this field is the text "For example, 'CurrentAssets'". At the bottom left, there are two checkboxes: "Relabel" (unchecked) and "Rename" (checked). At the bottom right, there are two buttons: "Close" and "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.

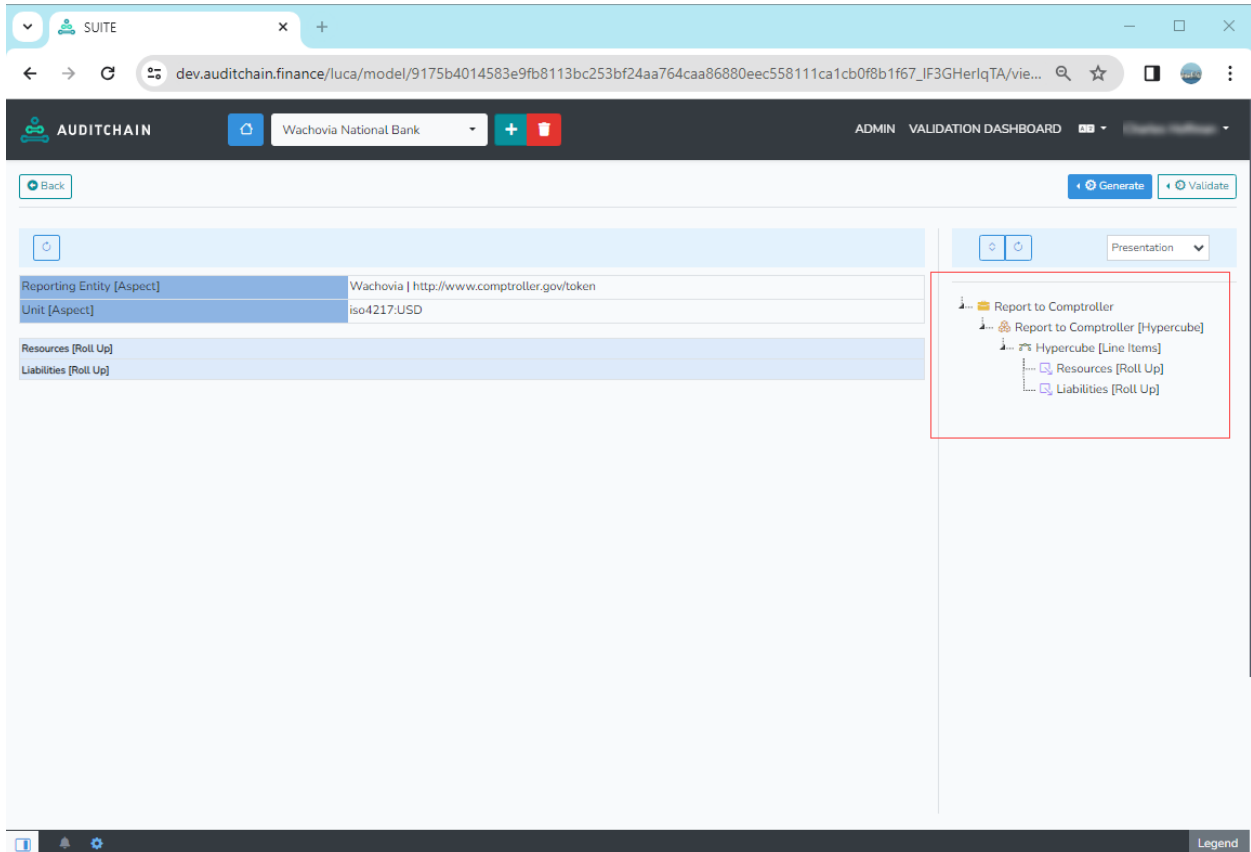


A screenshot of a software dialog box titled "Add element (Abstract)". The dialog has a close button (X) in the top right corner. It features three tabs: "Add existing term", "Add new extension term" (which is selected), and "Add new base financial reporting scheme term". Below the tabs, there are two radio buttons: "Abstract" (selected) and "TextBlock". Below this, there is a text input field labeled "StandardLabel" containing the text "Resources [Roll Up]". Below the field is the text "For example, 'Current Assets'". At the bottom right, there are two buttons: "Close" and "Add".

Repeat the same process to add the “Liabilities [Roll Up]” which we will also need:

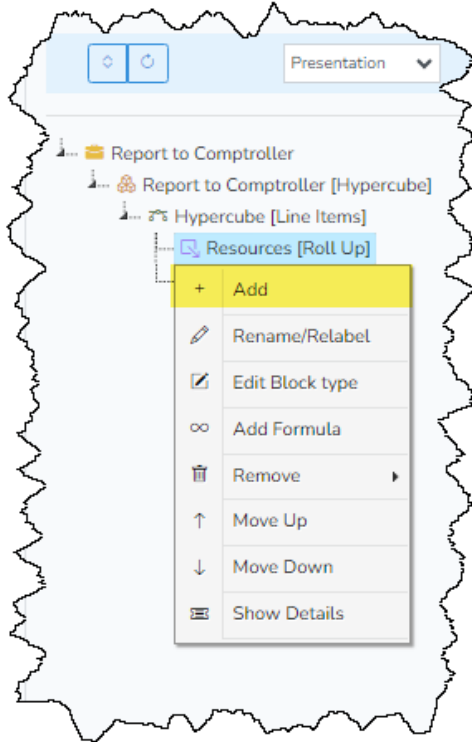


When you are done have edited the hypercube Line Items and then added the two abstract elements that will serve as a container for the concepts, what you have should look as can be seen below, in particular note the area outlined in red below:



**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:

The screenshot shows a dialog box titled "Add element (Concept)". At the top, there are three tabs: "Add existing term", "Add new extension term" (which is selected), and "Add new base financial reporting scheme term". Below the tabs, there are two radio buttons: "Abstract" and "Concept" (which is selected). The "StandardLabel" field contains the text "Loans, Including Overdraft". Below this field is a note: "For example, 'Current Assets'". The "Datatype" dropdown menu is set to "Monetary". Below this is a note: "Select the data type (if applicable)". The "CalendarPeriodType" dropdown menu is set to "Instant". Below this is a note: "For example 'Instant' is 'as of' a point in time; 'Duration' is 'for period' of time.". The "BalanceType" dropdown menu is set to "Debit". Below this is a note: "Select balance type of 'Debit' or 'Credit' if applicable.". There is an "Additional options" section with a blue header. Below it, there is a section titled "Automatically add other association/rule information" with three checked checkboxes: "Rule information", "Calculation associations", and "Definition associations". At the bottom right, there are "Close" and "Add" buttons.

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

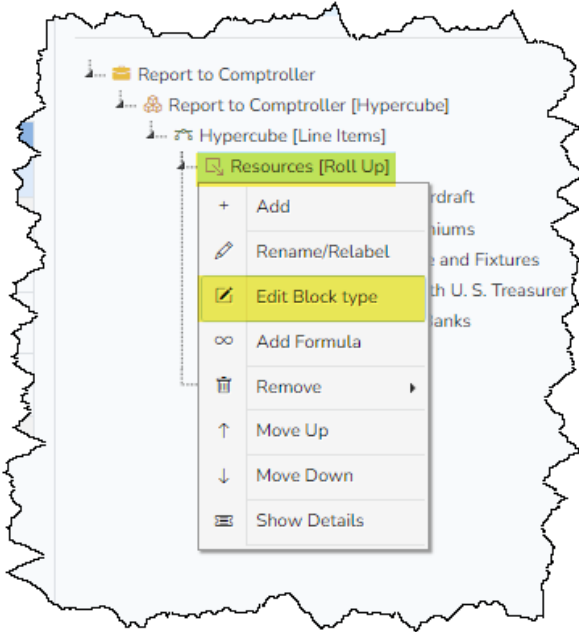
1. U. S. Bonds and Premiums
2. Reas Estate, Furniture and Fixtures
3. Redemption fund with U. S. Treasurer
4. Cash and Due from Banks
5. Resources

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:

The screenshot shows the AUDITCHAIN application interface. The main content area displays a financial report for Wachovia National Bank. The report includes the following details:

- Reporting Entity [Aspect]: Wachovia | http://www.comptroller.gov/token
- Unit [Aspect]: iso4217:USD
- Period [Aspect]: 1906-12-31

The main table shows the following categories and items:

Concept [Aspect]	Period [Aspect]
<b>Resources [Roll Up]</b>	1906-12-31
Loans, Including Overdraft	
U. S. Bonds and Premiums	
Real Estate, Furniture and Fixtures	
Redemption Fund with U. S. Treasurer	
Cash and Due from Banks	
	Resources
<b>Liabilities [Roll Up]</b>	

The right-hand sidebar shows a hierarchical tree structure for 'Report to Comptroller' with the following items:

- Report to Comptroller [Hypercube]
  - Hypercube [Line Items]
    - Resources [Roll Up]
      - Loans, Including Overdraft
      - U. S. Bonds and Premiums
      - Real Estate, Furniture and Fixtures
      - Redemption Fund with U. S. Treasurer
      - Cash and Due from Banks
      - Resources
    - Liabilities [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”.

Add element (Concept)

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

Abstract    Concept

StandardLabel  
Capital  
For example, "Current Assets".

Datatype  
Monetary  
Select the data type (if applicable).

CalendarPeriodType  
Instant  
For example "Instant" is "as of" a point in time; "Duration" is "for period" of time.

BalanceType  
Credit  
Select balance type of "Debit" or "Credit" if applicable.

Additional options

Automatically add other association/rule information

Rule information  
 Calculation associations  
 Definition associations

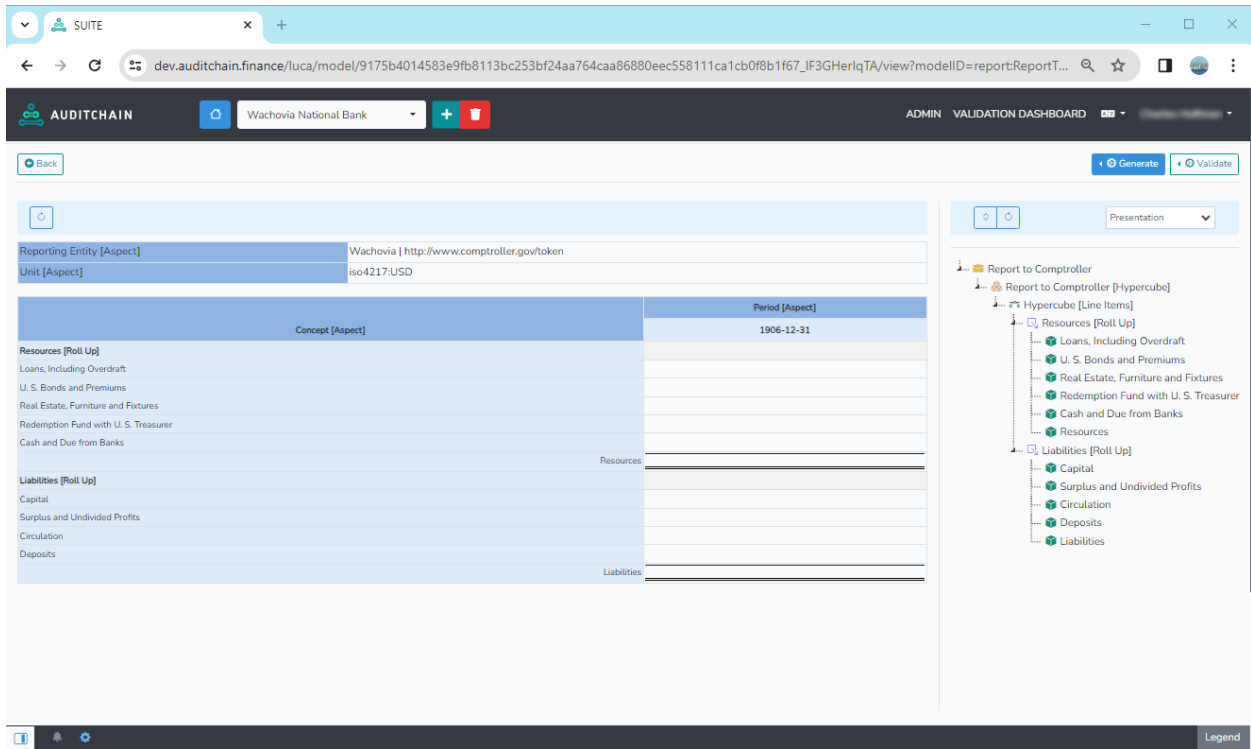
Close   Add

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

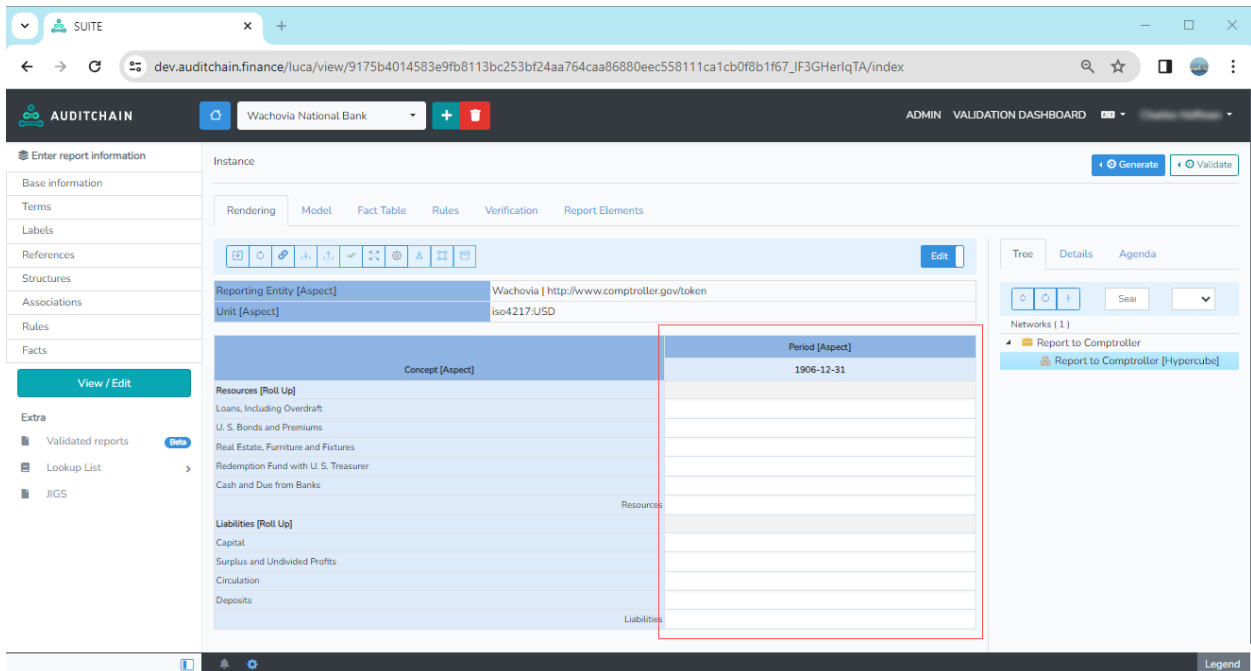
Now convert the Set to a Roll Up just like you did for the Resources.

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:

The screenshot shows the AUDITCHAIN software interface for Wachovia National Bank. The main area displays a table with the following data:

Concept [Aspect]	Period [Aspect]	Value
Reporting Entity [Aspect]	Wachovia   http://www.comptroller.gov/token	
Unit [Aspect]	iso4217:USD	
Concept [Aspect]	1906-12-31	
Resources [Roll Up]		
Loans, Including Overdraft		0
U. S. Bonds and Premiums		0
Real Estate, Furniture and Fixtures		0
Redemption Fund with U. S. Treasurer		0
Cash and Due from Banks		0
	Resources	0
Liabilities [Roll Up]		
Capital		0
Surplus and Undivided Profits		0
Circulation		0
Deposits		0
	Liabilities	0

[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:

The screenshot shows the AUDITCHAIN software interface for Wachovia National Bank. The main area displays a financial statement for the period 1906-12-31. The table is organized into Resources and Liabilities sections. The Resources section includes items like Loans, U.S. Bonds, Real Estate, and Cash and Due from Banks, with a total of 839,320.91. The Liabilities section includes Capital, Surplus and Undivided Profits, Circulation, and Deposits, also totaling 839,320.91. The interface includes a sidebar with navigation options, a top navigation bar, and a right-hand panel with a tree view.

Concept [Aspect]	Period [Aspect]	Value
<b>Resources [Roll Up]</b>		
Loans, Including Overdraft		511789.61
U. S. Bonds and Premiums		52300.00
Real Estate, Furniture and Fixtures		4500.00
Redemption Fund with U. S. Treasurer		2500.00
Cash and Due from Banks		268231.30
<b>Resources</b>		<b>839320.91</b>
<b>Liabilities [Roll Up]</b>		
Capital		150000.00
Surplus and Undivided Profits		171167.89
Circulation		50000.00
Deposits		468153.02
<b>Liabilities</b>		<b>839320.91</b>

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

The screenshot shows the AUDITCHAIN software interface for Wachovia National Bank, identical to the previous one, but with the 'View' button in the top toolbar highlighted with a red box. The financial statement table and other interface elements remain the same.

**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:

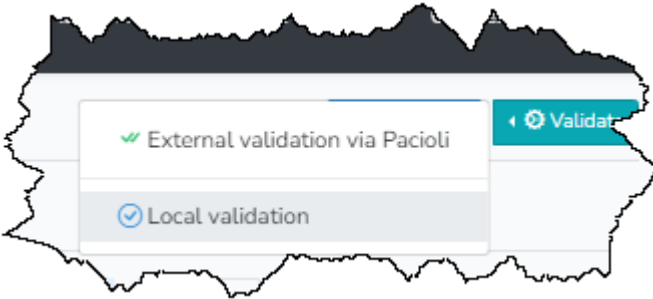
The screenshot shows a dialog box titled "Add row" with a close button (X) in the top right corner. The dialog contains several fields for configuring a rule:

- RuleType:** A dropdown menu with "ConsistencyRule" selected. A green checkmark and a downward arrow are visible on the right side. Below the field is the text: "Select from the list of provided rule types or pattern of the rule."
- RuleCode:** A text input field containing "RULE1". A green checkmark is on the right. Below the field is the text: "For example, 'Rule1' or 'BS1001'. Rule codes must be alpha numeric and start with a letter."
- Rule:** A text input field containing the XPath expression "\$Resources = \$Liabilities". A green checkmark is on the right. Below the field is the text: "Enter the XPath for the actual rule. For example, '\$Assets = \$Liabilities + \$Equity'".
- Concept:** A dropdown menu with "report:Resources" selected. Below the field is the text: "Select the concept that is on the left side of the equal sign that is a report element you have previously entered."
- StructureIdentifier:** A dropdown menu with "ReportToComptroller" selected. Below the field is the text: "Enter any commentary you might need that helps you when working with rules."
- Commentary:** A text input field containing "Added this rule manually." A green checkmark is on the right. Below the field is the text: "Pick 'Local' for your extension model and 'Import' to reference a base taxonomy."

At the bottom right of the dialog, there are two buttons: "Close" (grey) and "Save" (teal).

**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:

A screenshot of the AuditChain web application. The browser address bar shows the URL: dev.auditchain.finance/luca/internal\_validation/9175b4014583e9fb8113bc253bf24aa764caa86880eec558111ca1cb0f8b1f67\_IF3GHerlqTA/all. The page title is 'AUDITCHAIN' and the breadcrumb is 'ADMIN > VALIDATION DASHBOARD'. The main content area is titled 'Internal Validation' and shows 'Analysis of: Report'. Below this is a table of verification categories with their results. The first four categories are successful (green background and checkmark), while the remaining five are greyed out. Below the table is a 'Messages' section with two log entries.

#	Verification Category	Result
1	XBRL Technical Syntax Verification	✓
2	Report Mathematical Computations Verification (XBRL Calculations)	✓
3	Report Mathematical Computations Verification (XBRL Formula)	✓
4	Report Model Structure Verification	✓
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

#	Type	Stage	Message
1	info	loaded in 0.04 secs at 2024-01-24T13:23:04	dev.auditchain.finance/storage/c5344192-b624-487d-8c22-11e42ba5963/195be001/instance.xml
2	info	validated in 0.83 secs	dev.auditchain.finance/storage/c5344192-b624-487d-8c22-11e42ba5963/195be001/instance.xml

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:

The screenshot shows the 'Model Structure Validation' report in the AUDITCHAIN application. The report is a table with the following data:

Child	Parent						
	Networks	Hypercube (a.k.a. Table)	Dimension (a.k.a. Axis)	Member	Line Items (a.k.a. Primary Items)	Abstract	Concept
Networks	0	0	0	0	0	0	0
Hypercube (a.k.a. Table)	1	0	0	0	0	0	0
Dimension (a.k.a. Axis)	0	0	0	0	0	0	0
Member	0	0	0	0	0	0	0
Line Items (a.k.a. Primary Items)	0	1	0	0	0	0	0
Abstract	0	0	0	0	2	0	0
Concept	0	0	0	0	0	11	0

### 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:

The screenshot shows the 'State Properties' report in the AUDITCHAIN application. The report is a table with the following data:

Reporting scheme	Count
Reporting scheme	1
Fact count	11
Structure count	1
Hypercube count	1
Hypercube (explicit)	1
Hypercube (implied)	0
Block count	1
Disclosure count	1
Pattern count	1
Set	
Roll Up	1
Roll Forward	
Roll Forward Info	
Adjustments	
Variances	
Text Blocks	
Member Aggregation	
Arithmetic	
Validation inconsistencies depending on SBRM	0
XBRL Calculation	0
XBRL Formula	0
Model structure	0

## 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:

The screenshot shows the AUDITCHAIN application interface. On the left is a navigation menu with options like 'Enter report information', 'Base information', 'Terms', 'Labels', 'References', 'Structures', 'Associations', 'Rules', 'Facts', 'View / Edit', 'Extra', 'Validated reports', 'Lookup List', and 'JIGS'. The main area displays a 'Notification' table with the following data:

RuleType	Expression	Period	StructureIdentifier	Result
RollUpRule	Resources==Loans, Including Overdraft+U. S. Bonds and Premiums+Real Estate, Furniture and Fixtures+Redemption Fund with U. S. Treasurer+Cash and Due from Banks	1906-12-31	ReportToComptroller	true
	reportResources = 839,320.91			
	reportLoansIncludingOverdraft = 511,789.61			
	reportUSBondsAndPremiums = 52,300.00			
	reportRealEstateFurnitureAndFixtures = 4,500.00			
	reportRedemptionFundWithUSTreasurer = 2,500.00			
	reportCashAndDueFromBanks = 268,231.30			
RollUpRule	Liabilities==Capital+Surplus and Undivided Profits+Circulation+Deposits	1906-12-31	ReportToComptroller	true
	reportLiabilities = 839,320.91			
	reportCapital = 150,000.00			
	reportSurplusAndUndividedProfits = 171,167.89			
	reportCirculation = 50,000.00			
	reportDeposits = 468,153.02			
ConsistencyRule	\$Resources = \$Liabilities	1906-12-31	ReportToComptroller	true
	reportResources = 839,320.91			
	reportLiabilities = 839,320.91			

Showing 1 to 3 of 3 rows

## 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:

The screenshot shows the AUDITCHAIN application in edit mode. The main area displays a report model table with the following data:

Reporting Entity [Aspect]	Wachovia   http://www.comptroller.gov/token
Unit [Aspect]	iso4217:USD
Concept [Aspect]	Period [Aspect]
	1906-12-31
<b>Resources (Roll Up)</b>	
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
<b>Resources</b>	<b>\$ 839,320.91</b>
<b>Liabilities (Roll Up)</b>	
Capital	150,000.00
Surplus and Undivided Profits	171,167.89
Circulation	50,000.00
Deposits	468,153.02
<b>Liabilities</b>	<b>\$ 839,320.91</b>

On the right side, there is a tree view showing the report structure:

- Report to Comptroller
  - Report to Comptroller [Hypercube]
    - Hypercube [Line Items]
      - Resources [Roll Up]
        - Loans, Including Overdraft
        - U. S. Bonds and Premiums
        - Real Estate, Furniture and Fixtures
        - Redemption Fund with U. S. Treasurer
        - Cash and Due from Banks
        - Resources
      - Liabilities [Roll Up]
        - Capital
        - Surplus and Undivided Profits
        - Circulation
        - Deposits
        - Liabilities



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

The screenshot displays the AUDITCHAIN application interface. At the top, there is a navigation bar with the AUDITCHAIN logo and a dropdown menu for 'Wachovia National Bank'. Below this, there are buttons for 'Back', 'Generate', and 'Validate'. The main content area is divided into two sections. On the left, there is a table with the following data:

Reporting Entity [Aspect]	Wachovia   <a href="http://www.comptroller.gov/token">http://www.comptroller.gov/token</a>	
Unit [Aspect]	iso4217:USD	
Concept [Aspect]	Period [Aspect]	
	1906-12-31	
<b>Resources [Roll Up]</b>		
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
<b>Liabilities [Roll Up]</b>		
Capital		150,000.00
Surplus and Undivided Profits		171,167.89
Circulation		50,000.00
Deposits		468,153.02
	Liabilities	\$ 839,320.91

On the right side, there is a sidebar with a tree view showing the report structure:

- Report to Comptroller
  - Report to Comptroller [Hypercube]
    - Hypercube [Line Items]
      - Resources [Roll Up]
        - Loans, Including Overdraft
        - U. S. Bonds and Premiums
        - Real Estate, Furniture and Fixtures
        - Redemption Fund with U. S. Treasurer
        - Cash and Due from Banks
        - Resources
      - Liabilities [Roll Up]
        - Capital
        - Surplus and Undivided Profits
        - Circulation
        - Deposits
        - Liabilities

You can generate the report information as HTML or PDF:

Component: (Network and Hypercube)	
Network	Report to Comptroller ( <a href="http://site.com/report/role/ReportToComptroller">http://site.com/report/role/ReportToComptroller</a> )
Hypercube	Report to Comptroller [Hypercube]

Reporting Entity [Aspect]	Wachovia   <a href="http://www.comptroller.gov/token">http://www.comptroller.gov/token</a>
Unit [Aspect]	iso4217:USD

Concept [Aspect]	Period [Aspect]	
	1906-12-31	
<b>Resources [Roll Up]</b>		
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
<b>Liabilities [Roll Up]</b>		
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:

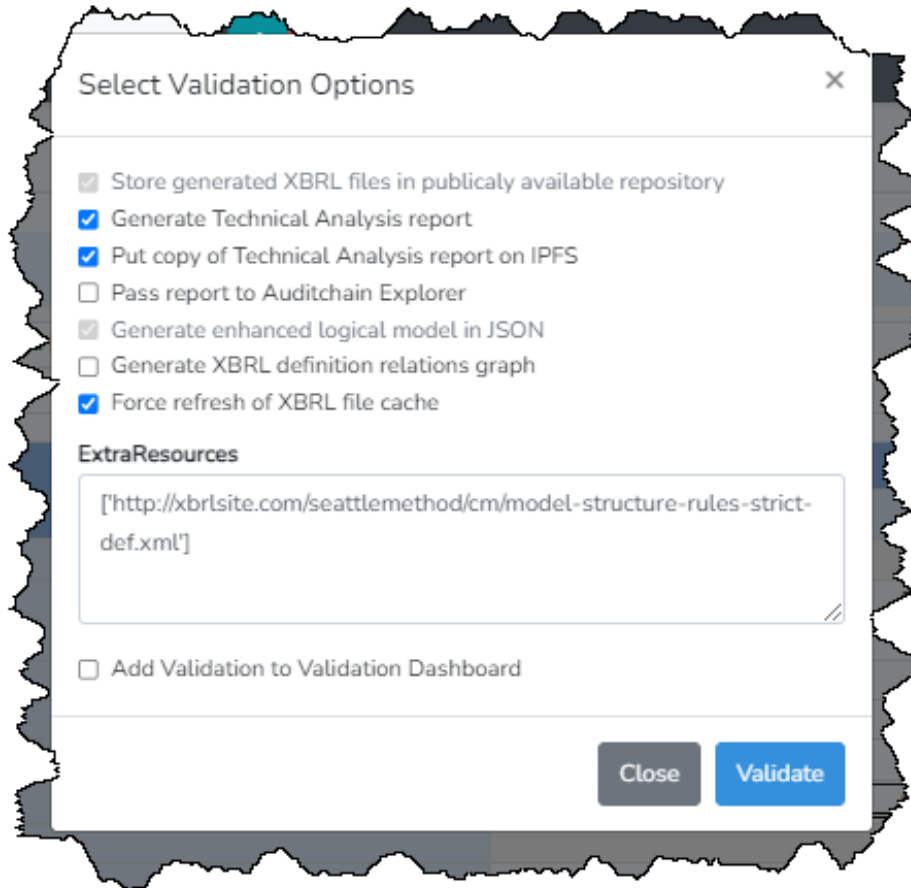
The screenshot shows the AUDITCHAIN web interface. A modal window is open, displaying the generated XBRL code. The interface includes a navigation menu on the left with options like 'Back', 'Reporting Entity', 'Unit', 'Resources', and 'Liabilities'. The modal window has a 'Download All' button and a 'Close' button. The generated XBRL code is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Generated by http://luca.auditchain.finance -->
<!-- 2024-01-24 18:29:21 -->
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:link="http://www.xbrl.org/2003/linkbase"
  xmlns:xbrli="http://www.xbrl.org/2003/instance"
  xmlns:num="http://www.xbrl.org/dtr/type/numeric"
  xmlns:nonnum="http://www.xbrl.org/dtr/type/non-numeric"
  xmlns:xbrldt="http://xbrl.org/2005/xbrldt"
  xmlns:generic="http://xbrl.org/2008/generic"
  elementFormDefault="qualified" targetNamespace="http://site.com/report" xmlns:report="http://site.com/report">
  <xsd:annotation>
    <xsd:appinfo>
      <link:linkbaseRef xlink:type="simple" xlink:role="http://www.xbrl.org/2003/role/linkbaseRef" xlink:arcrole="http://www.xbrl.org/2003/role/referencesLinkbaseRef" xlink:arcrole="http://www.xbrl.org/2003/role/presentationLinkbaseRef" xlink:arcrole="http://www.xbrl.org/2003/role/calculationLinkbaseRef" xlink:arcrole="http://www.xbrl.org/2003/role/definitionLinkbaseRef" xlink:arcrole="http://site.com/report/role/ReportToComptroller" id="ReportToComptroller">
        <link:definition>Report to Comptroller</link:definition>
        <link:usedOn>link:presentationLink</link:usedOn>
        <link:usedOn>link:calculationLink</link:usedOn>
        <link:usedOn>link:definitionLink</link:usedOn>
        <link:usedOn>generic:link</link:usedOn>
      </link:roleType>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:schema>
```

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:



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

The screenshot shows the Luca interface for a verification report. The browser address bar shows the URL: `dev.auditchain.finance/luca/validation/9175b4014583e9fb8113bc253bf24aa764caa86880eec558111c...`. The page header includes the AuditChain logo, a dropdown menu for 'Wachovia National Bank', and navigation links for 'ADMIN' and 'VALIDATION DASHBOARD'. A 'Back' button is visible at the top left.

The main content area displays the following information:

- Analysis of:** Report for Wachovia on 1906-12-31
- Analysis ID:** 45d7c8c3075e8173b530f9073259e4a405fa6bb7
- Verification result details:** Technical analysis
- Verification result details on IPFS:** Technical analysis on IPFS

Under 'Validate options you selected:', the following options are checked:

- newRulesFormat
- cacheValidity(0)
- noCertificateCheck
- saveToIPFS
- extendedJSON
- pacioliTraceExtensions([unboundRuleMarkup])

The 'Verification Category' table shows the following results:

#	Verification Category	Result
1	XBRL Technical Syntax Verification	✓
2	Report Mathematical Computations Verification (XBRL Calculations)	✓
3	Report Mathematical Computations Verification (XBRL Formula)	✓
4	Report Model Structure Verification	✓
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	✓

The 'Messages' table shows the following message:

#	Type	Stage	Message
1	info	xbrlValidation(done)	"XBRL syntax was verified"

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/>