IBM Information Governance Catalog guided demo: Governing Risk Data Aggregation

In this demo, IBM® InfoSphere® Information Governance Catalog helps banks properly manage and govern their risk aggregation and reporting in order to comply with the industry's BCBS 239 regulatory requirement.

See an overview youTupe video about this demo: https://www.youtube.com/watch?v=5_lihZyqCs8

Start the demo in IBM Cloud (a registered IBM Cloud Id is needed!):

https://www.ibm.com/cloud/garage/dte/producttour/ibm-information-governance-catalog-guided-demo-governing-risk-data-aggregation

Tutorial

See the value of having enterprise data assets cataloged in a central repository that identifies relationships between data objects and business terms and metadata. Such a repository provides companies with a repeatable, consistent method of tracking data usage, quality, and lineage, in order to meet industry-specific regulatory requirements.

In this product tour, you get experience with the following features:

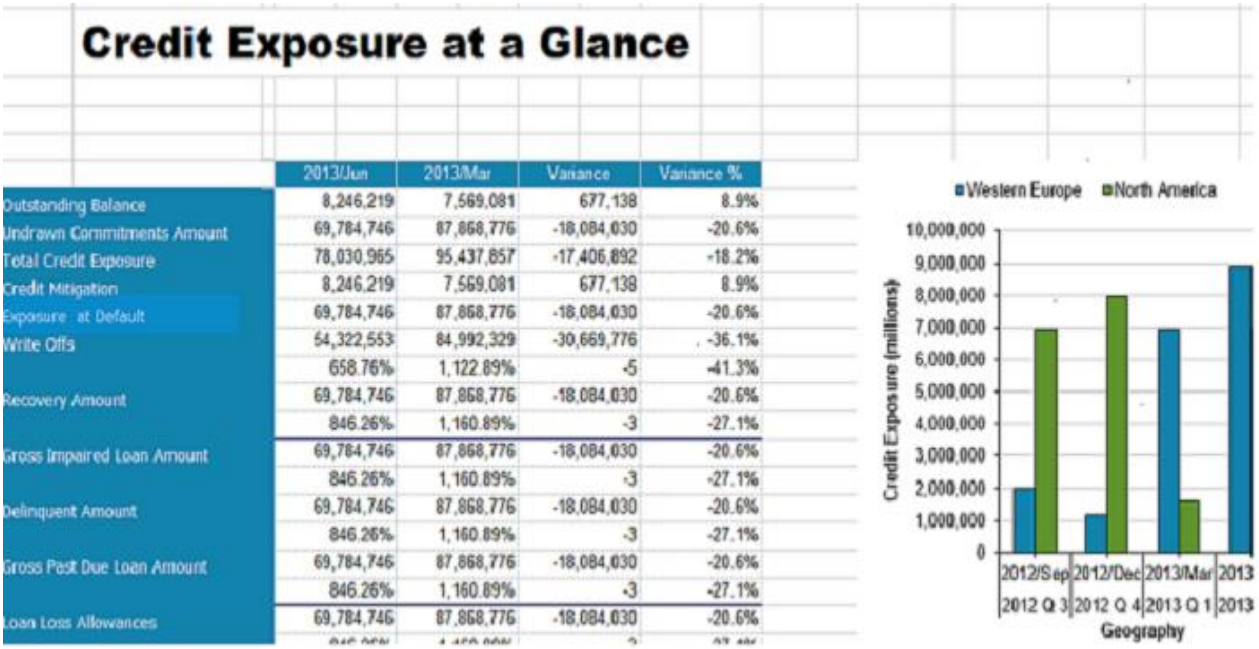
- Explore business terms, governance policies, and rules in Information Governance Catalog
- Generate and review lineage analysis to validate and raise confidence in business intelligence reports
- Examine the rules that have been applied to the data used in the risk data aggregation process
- Follow the instructions in this pane to walk through the demo in the left pane.

Explore business terms, governance policies, and rules in Information Governance Catalog

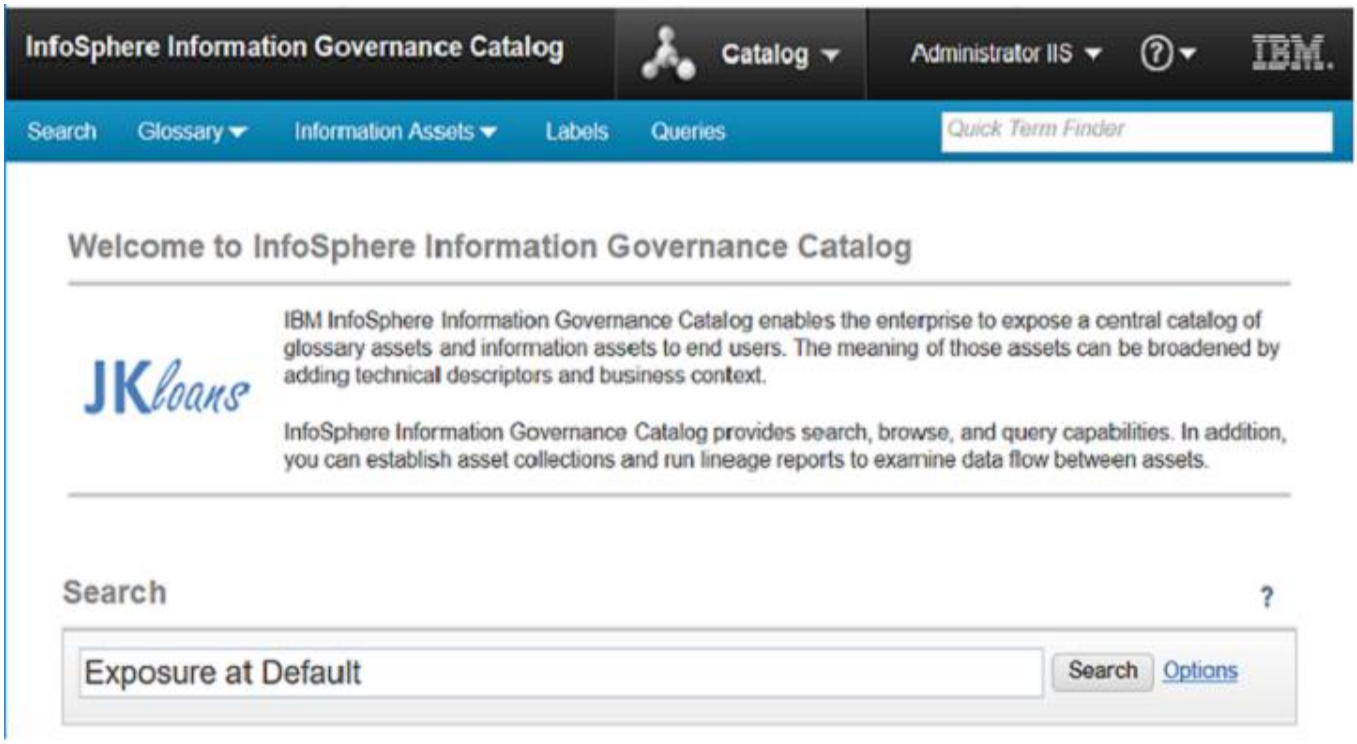
You are working in the Governance and Compliance department of a bank, JK Loans. You are currently helping the Chief Risk Officer prepare for a meeting with industry regulators by reviewing business intelligence reports related to key risk metrics. Your goal is to validate that the reports are complete and trusted, and that the bank is meeting the requirements imposed by banking regulatory bodies.

You will be using Information Governance Catalog to see how the bank defines and governs its business terminology related to risk data management. Viewing the credit exposure report, you see something called Exposure at Default, and you want to understand what it means and how it relates to this report.

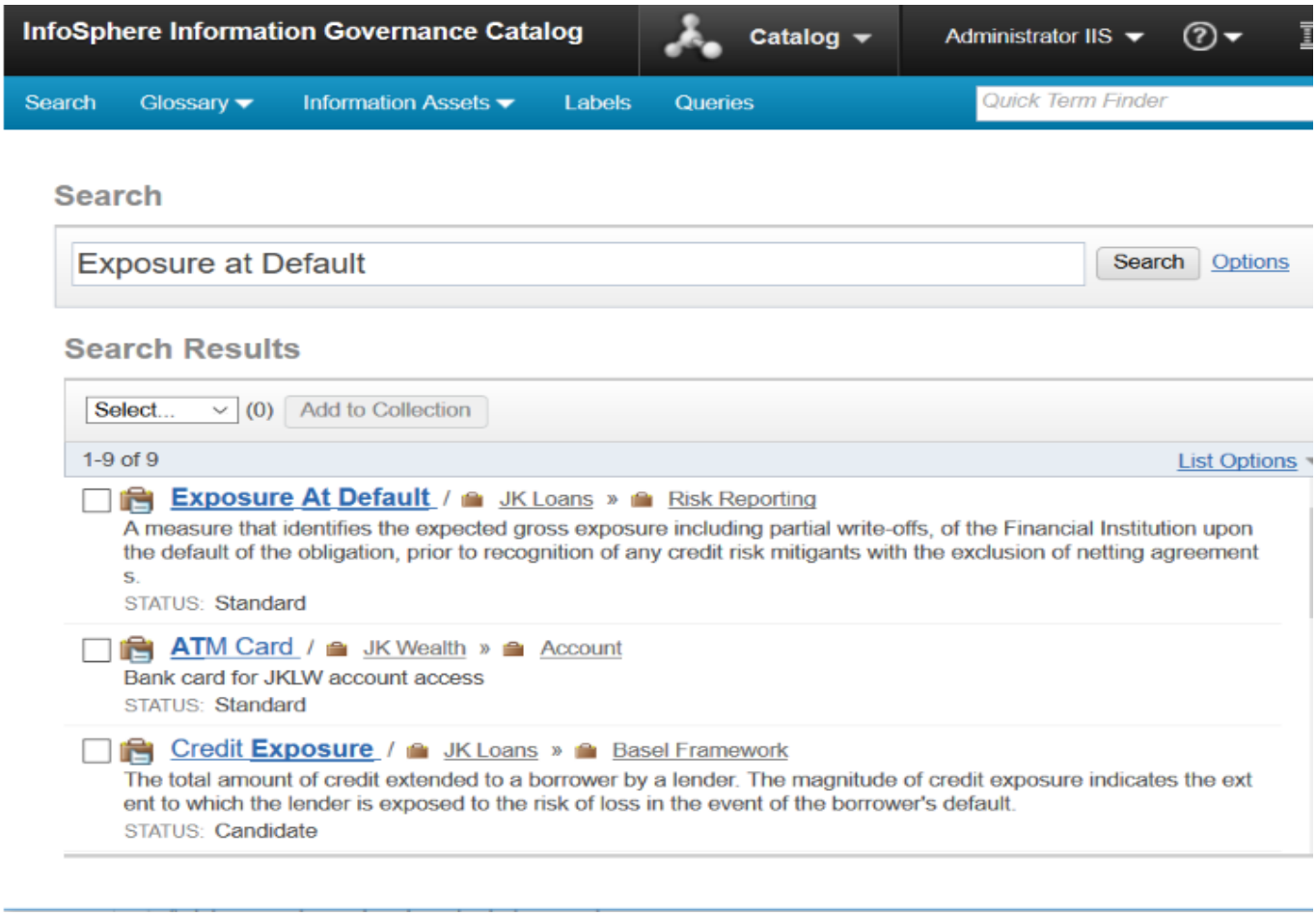
1. Click **Start demo now!**
2. From the left column in the spreadsheet, **right-click** the words **Exposure at Default**.



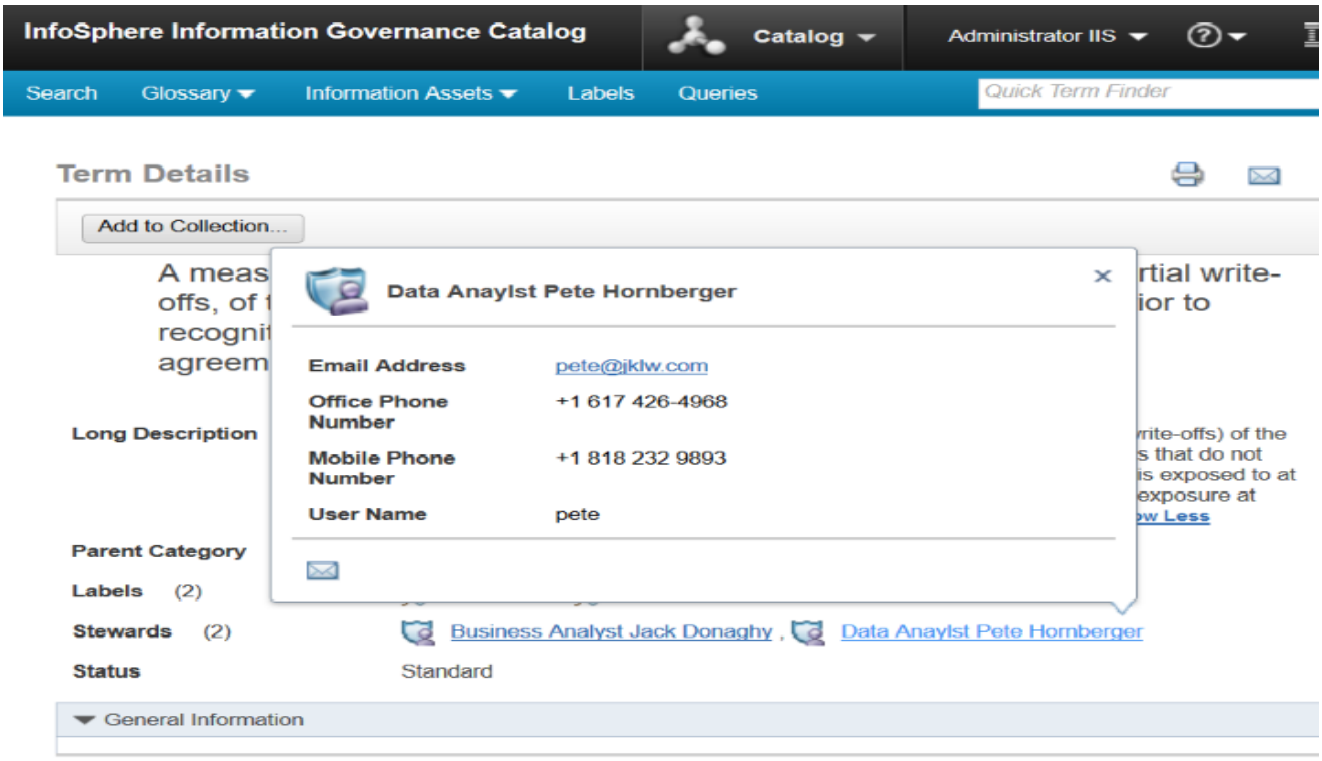
3. The Information Governance Catalog is displayed, and the **Search** field is populated with "Exposure at Default." Click **Search**.



4. The search result is a list of business terms. Click the first result, **Exposure at Default**.



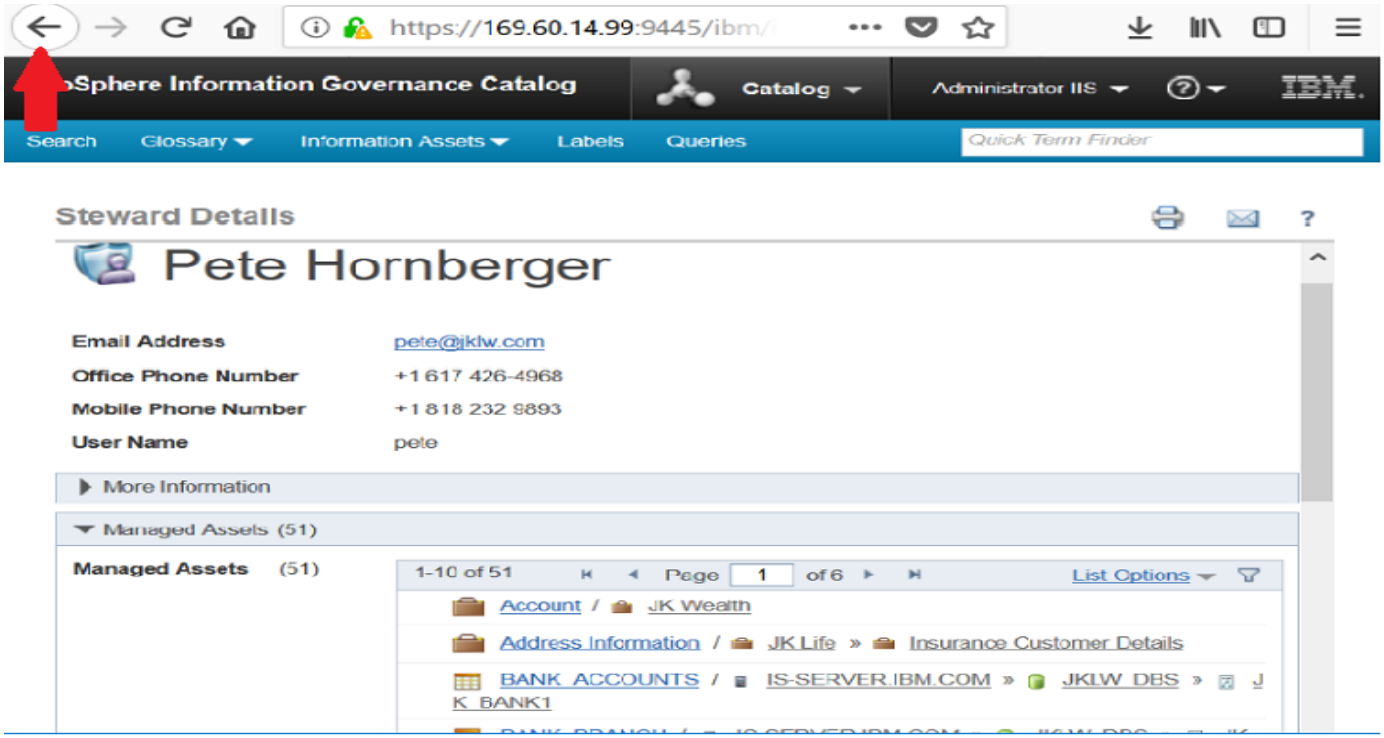
5. The Term Details page is displayed, providing a description and other information. To see the full description, click **Show More**. After reading, click the **Show Less** link.
6. You are interested in the data steward assigned to this term, so **right-click Data Analyst Pete Hornberger** to learn more.



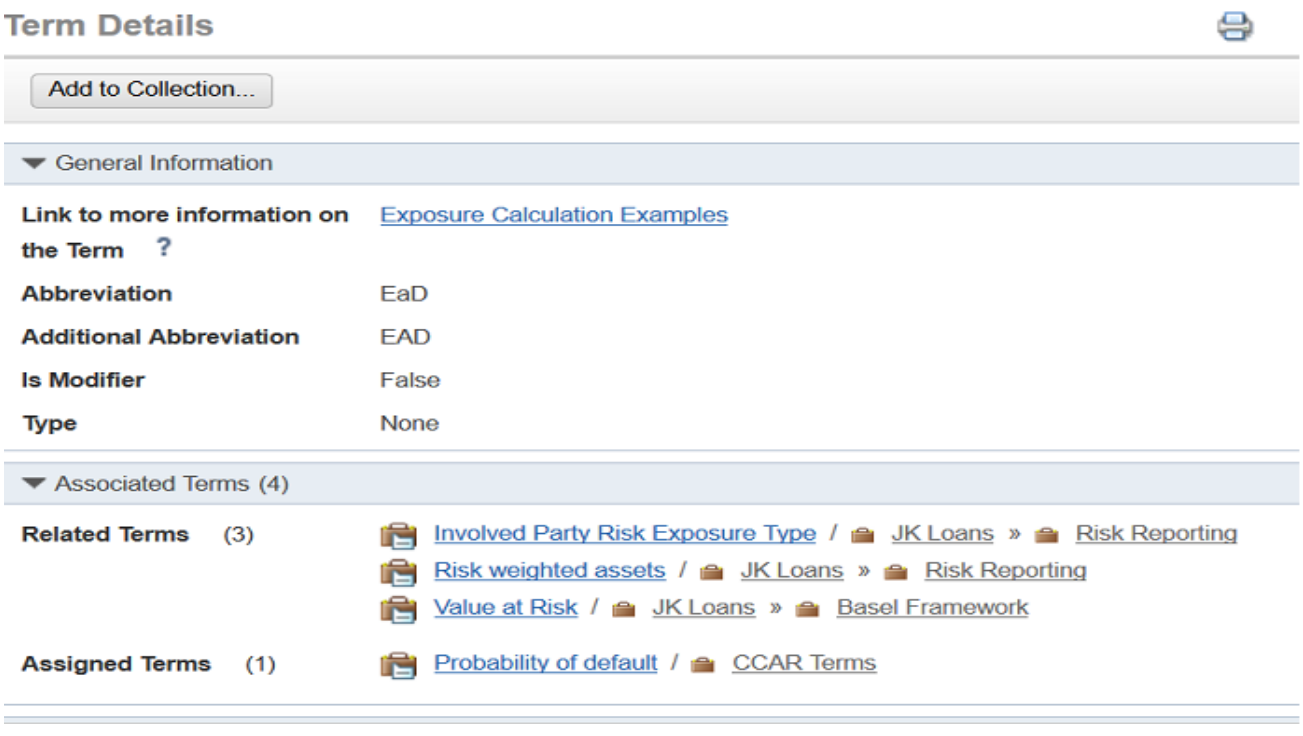
(*Note: When using the actual software instead of a guided demo, you would hover over the name to see this information*). Close the pop-up window by clicking the X in the top-right corner.

1. To see more details about Pete Hornberger, including his work location and other assets he manages, **click his title and name**.

2. The Steward Details page is displayed. Notice that the page shows the steward's contact information and address. To see the other assets this steward manages, scroll down by **clicking the arrow in the scroll bar.**
3. You can see the different business term categories and database tables that Pete Hornberger also manages. Visibility into who is responsible for the governance and correctness of these assets is very valuable to companies in large organizations where people work in different areas. Go back to the top of the Steward Details page by **clicking the arrow at the top of the scroll bar**.
4. Go back to the Term Details page by clicking the browser back arrow at the uppper-left corner of the screen.



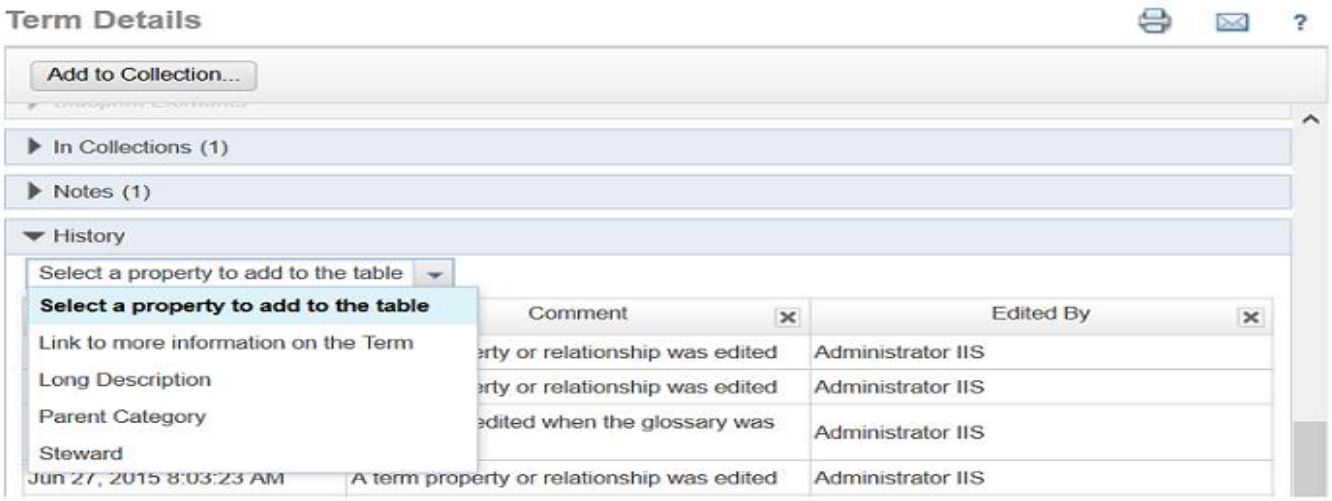
1. To get a better understanding of the term, examine the other related business terms. Scroll down by **clicking the arrow at the bottom of the scroll bar**. This will bring you to the Associated Terms section.



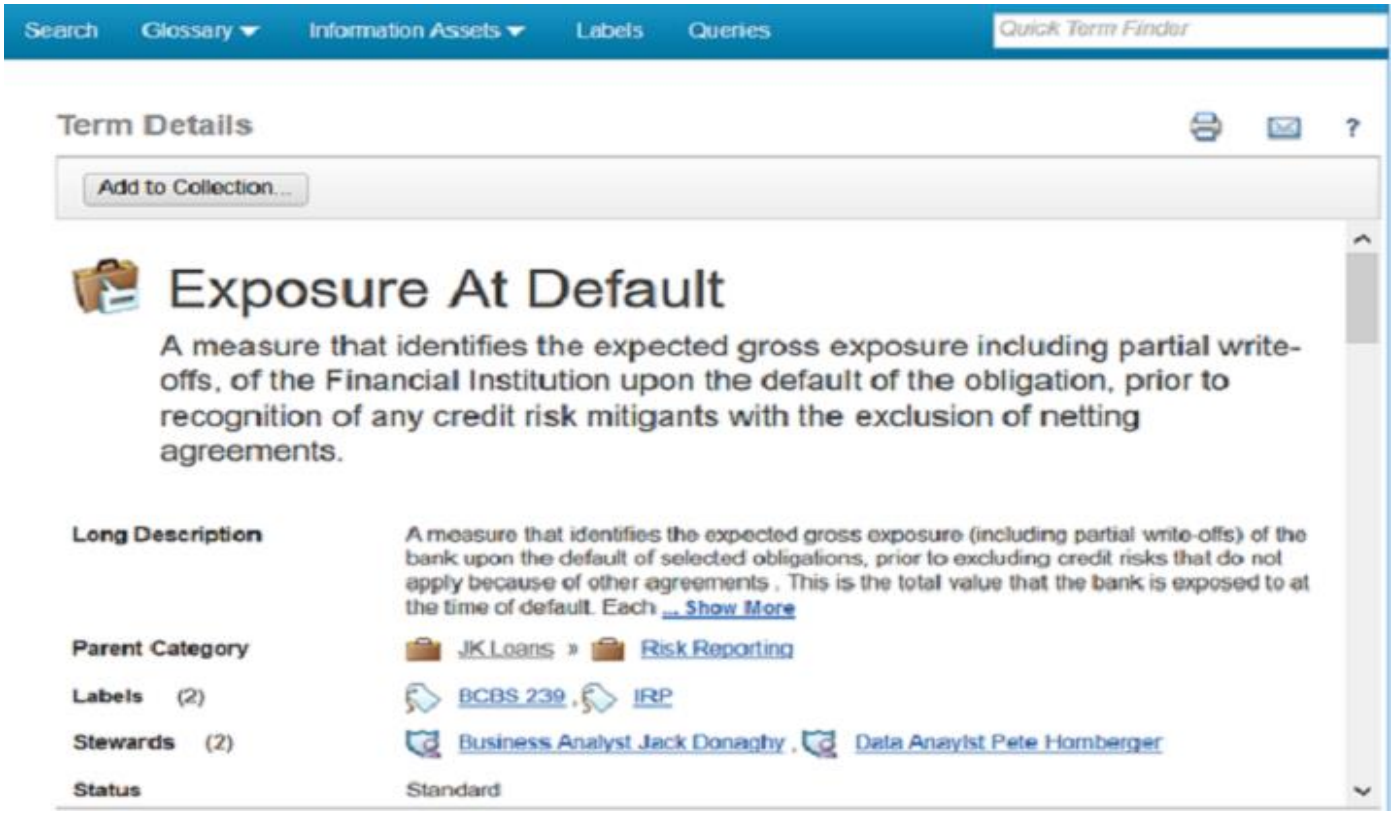
2. Click the term **Involved Party Risk Exposure Type** to see its definition and related terms. Browsing through the terms and definitions in this way provides a better common understanding of the terminology used in the bank's business processes. Go back by clicking on the **Exposure at Default** term.

3. On the Term Details page for Exposure at Default, you want to view the history of this term. **Click the arrow at the bottom of the scroll bar** to view the History section.

4. Here, you can learn what changes were made, who made the changes, and when. To see more details, such as the changes to the description, add that property to the History table. Click the arrow on the **Select a property to add to the table** drop-down list, and select **Long Description**.



5. Now that the new column is added to the table, scroll down by **clicking the down arrow in the scroll bar**.



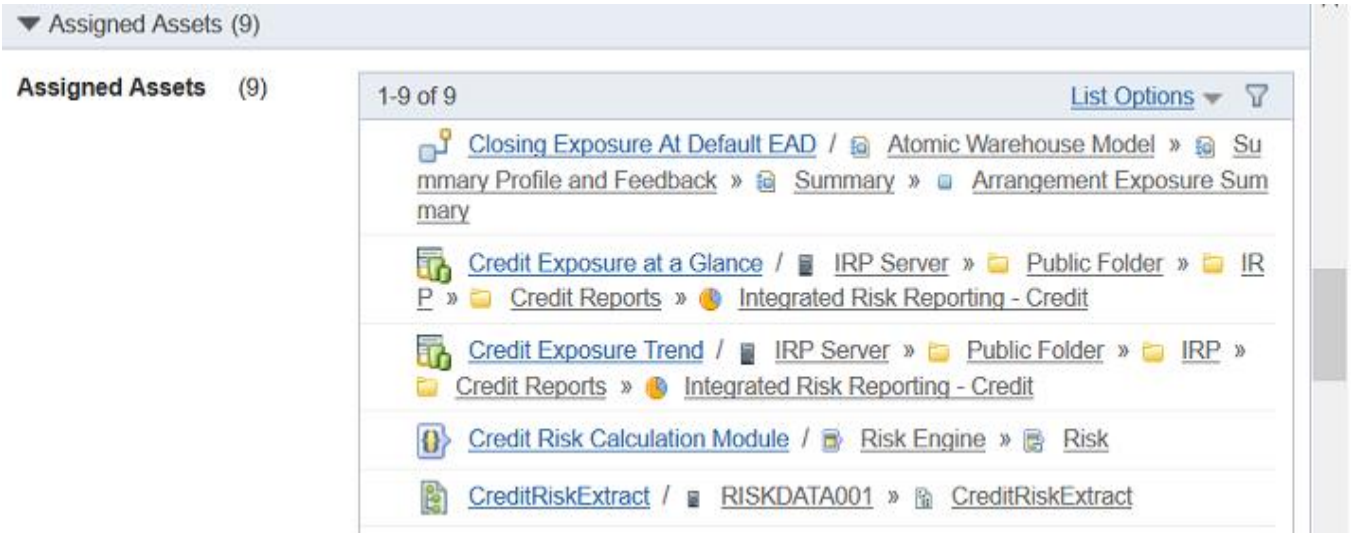
After scrolling down and seeing the changes, **click the arrow at the top of the scroll bar** to return to the top of the Term Details page.

Generate and review lineage analysis using IGC to validate and raise confidence in business intelligence reports

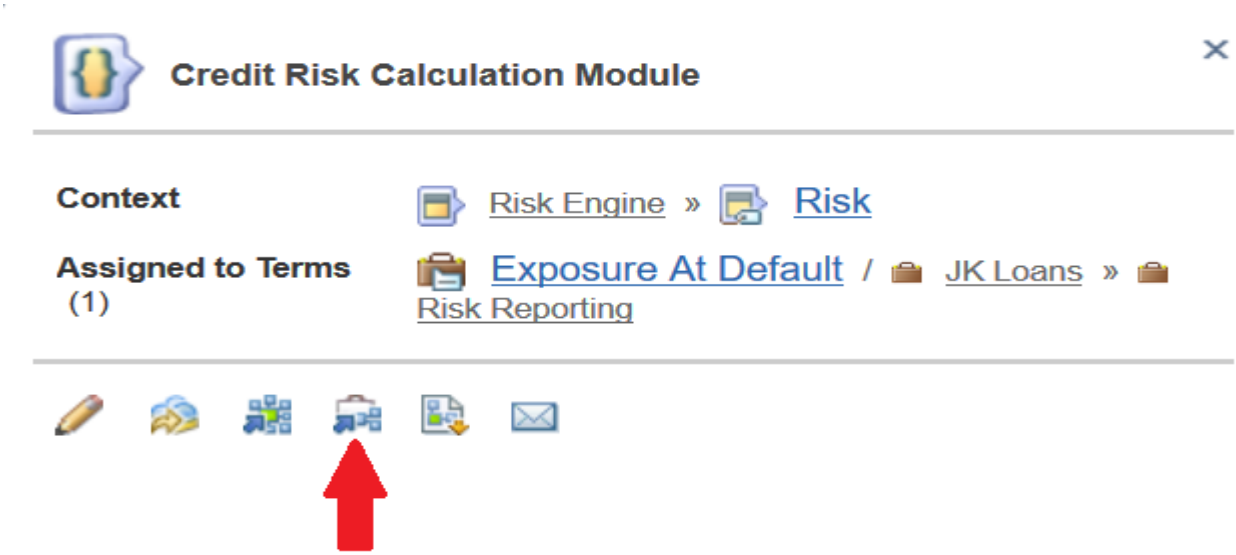
You will be using Information Governance Catalog to see which data source feeds the bank's Credit Risk Calculation Module, and also to learn what reports and other repositories are fed by the output of that module. This is called *lineage analysis*. IGC produces both business and data lineage reports for any assets in the catalog that are part of a data flow or process. Being able to track where data comes from, how it was derived, and how it gets used is crucial for governance. It helps to ensure trust and confidence in reports and applications that use the data. Certain industry regulatory bodies require that companies can provide a repeatable, proven method to do this, and IGC lineage capabilites solve this requirement.

1. While viewing the Term Details page, you can see what data assets the term is assigned to. Scroll down the page by **clicking the arrow at the bottom of the scroll bar**.

2. In the Assigned Assets section, you find a number of asset types assigned to this term, such as a logical model for banking data warehousing, business intelligence elements, database tables and columns, and the important Credit Risk Calculation Module, which is an IBM Algorithmics Risk Analytices Engine. **Right-click the Credit Risk Calculation Module** link. Note: When using the actual software, you would hover over the asset instead of clicking it.

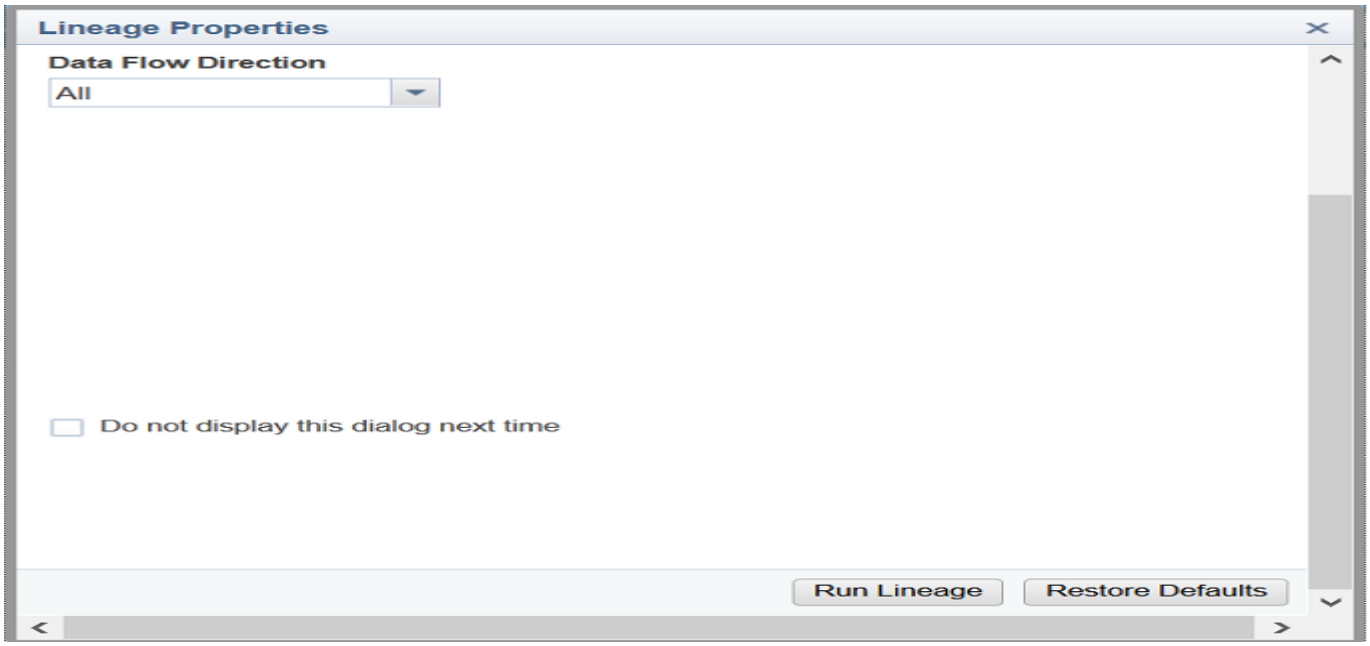


The pop-up window shows brief information and links. You want to view the business lineage for the module, so click the clipboard icon.



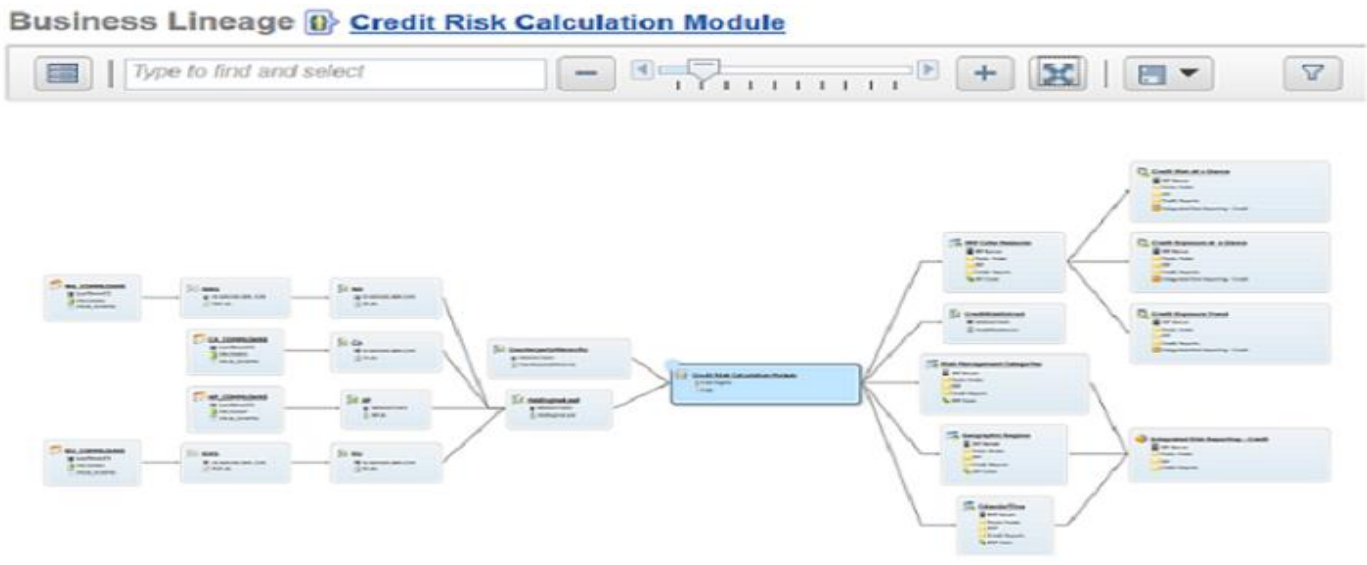
3. The Lineage Properties dialog box is displayed. Scroll down by clicking the arrow at the bottom of the scroll bar.

Click the **Run Lineage** button.

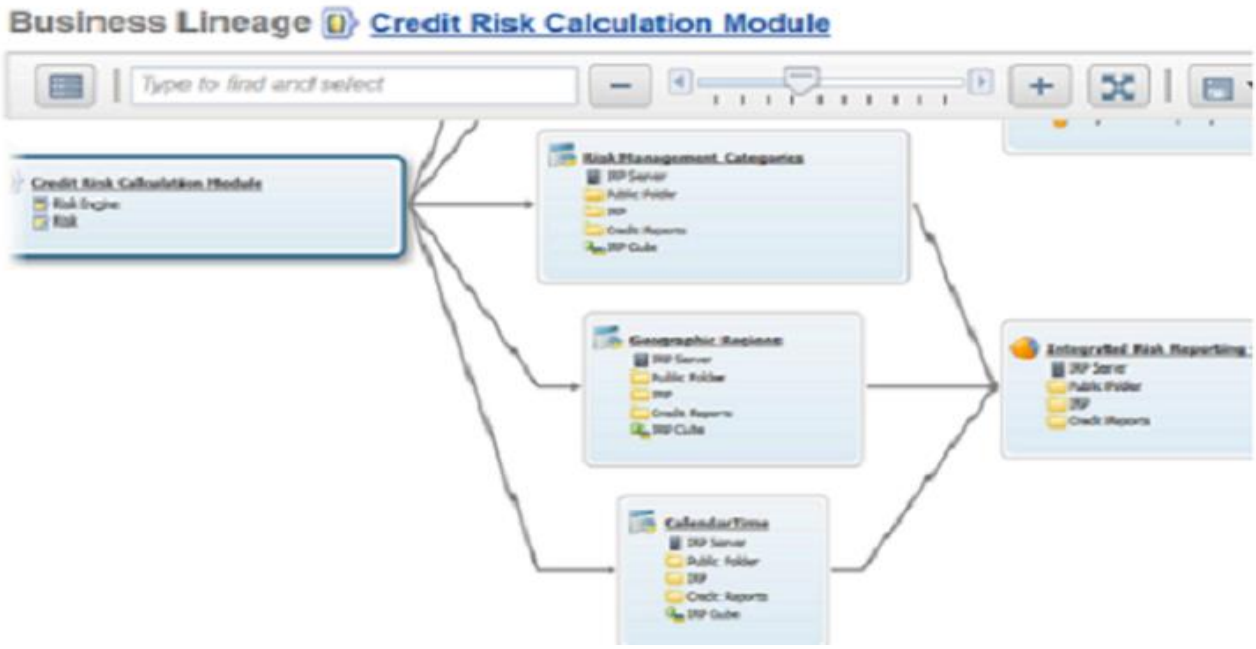


4. The Business Lineage window shows a diagram and inventory of assets. To drill into the diagram, click the **X** to the right of the Inventory heading, closing that portion of the screen.

5. Click the plus **(+)** button at the top to zoom in the view of the diagram. You can see all the business intelligence reporting elements, database tables and columns, and applications or defined hierarchies that the Credit Risk Calculation Module works with, in one flow, with sources on the left and targets on the right.



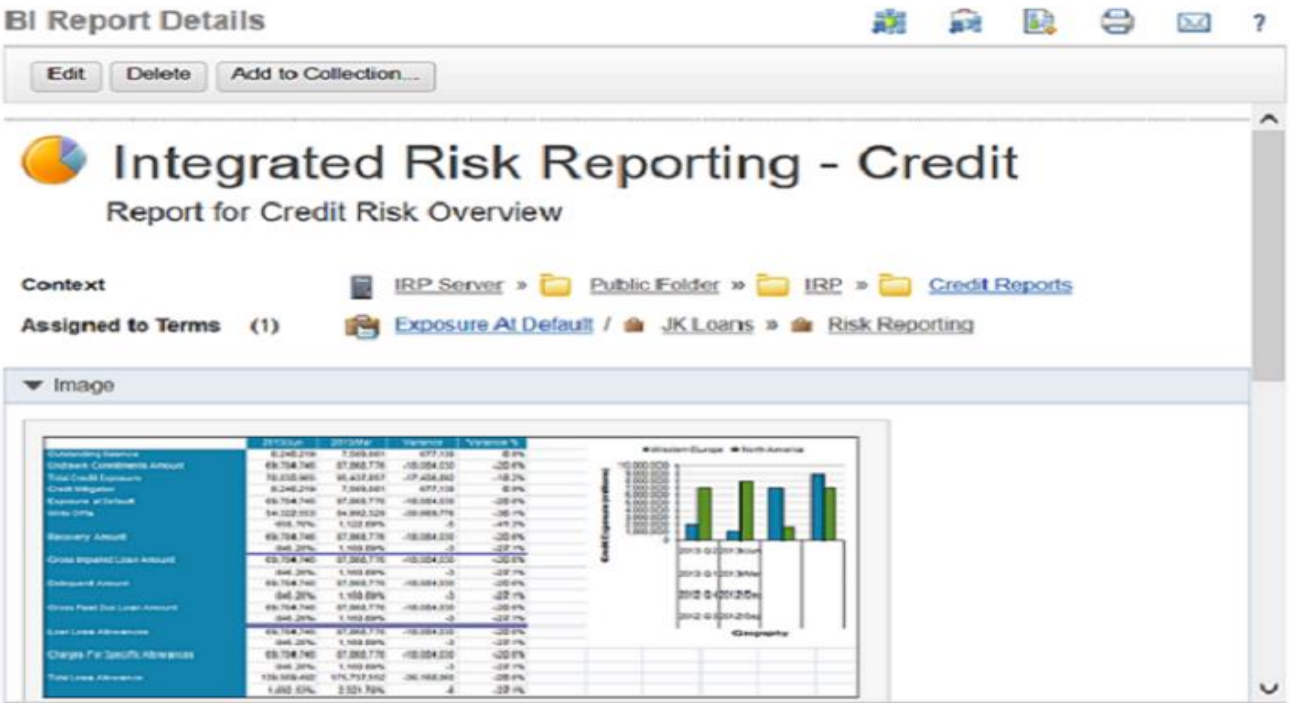
6. Click the plus **(+)** button again to zoom in further and focus on where the data goes after being processed in the module.



7. You will see that the data lands on a business intelligence report called Integrated Risk Reporting - Credit. **Right-click the report name** to see the pop-up window.

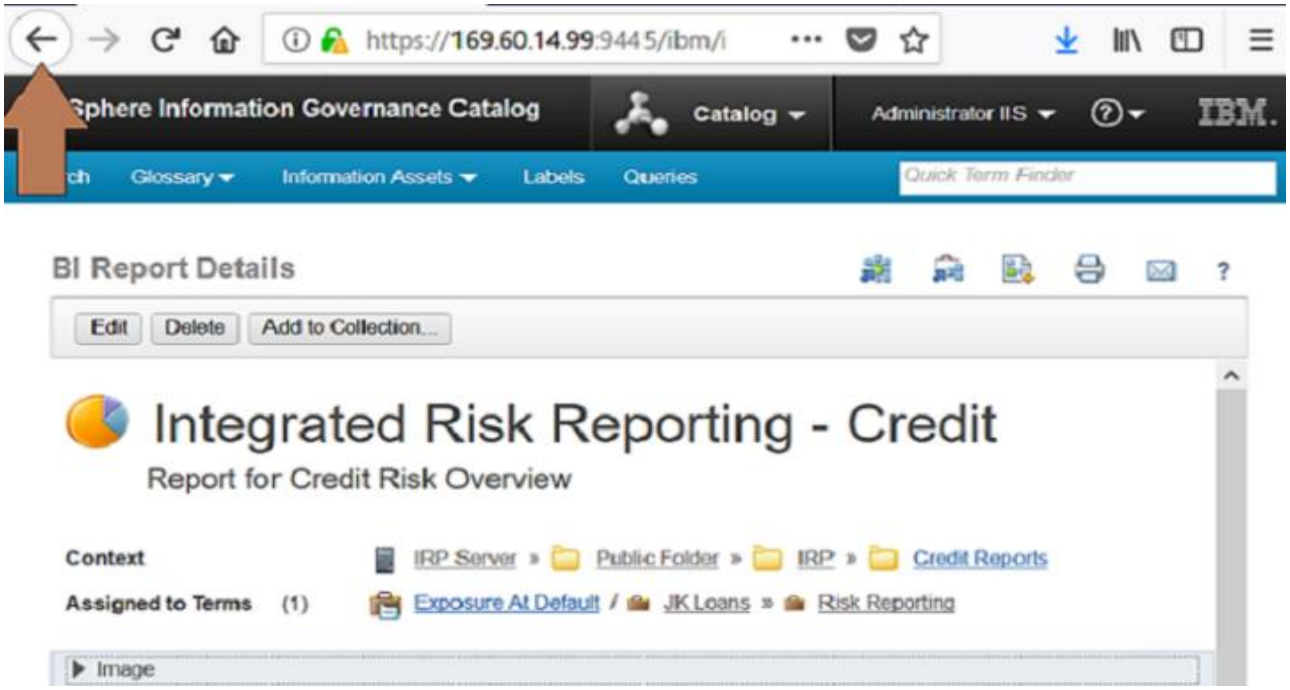
8. This report seems to be similar to the report you looked at earlier in the demo. To be sure, click the **View Details** icon.

The BI Report Details page opens and the image of the report is displayed, along with its context and what business terms are assigned to it.

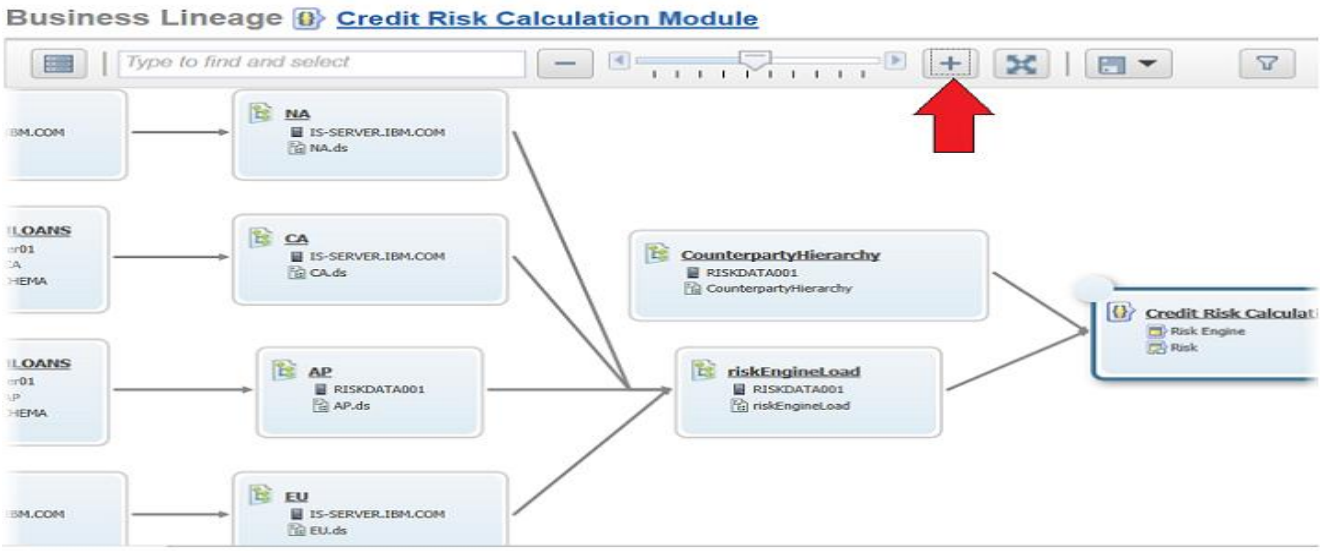


9. You can see by the picture of the report, and the fact that it is assigned to the Exposure at Default term, that this is the same report. Close the image of the report by clicking the arrow next to **Image** section heading.

10. Go back to the Business Lineage page by clicking the browser back arrow at the upper-left corner of the screen.

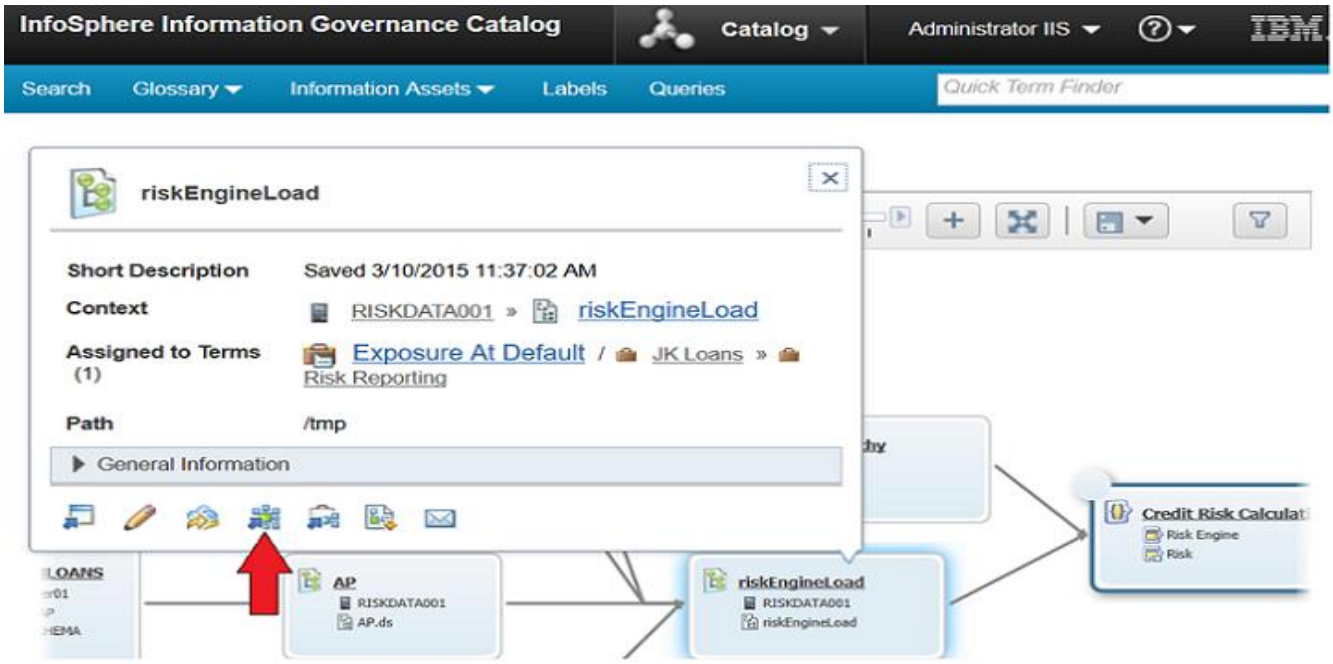


11. Click the plus **(+)** button to zoom in on the lineage view again.

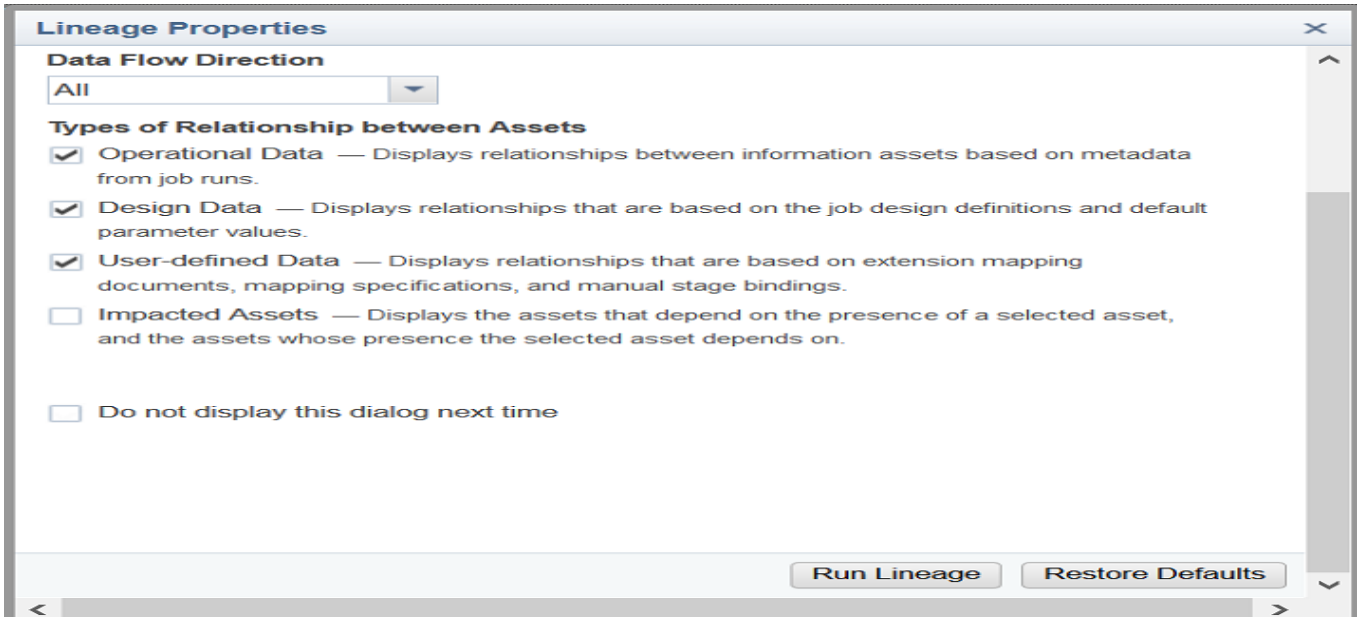


You see centered in the lineage diagram the riskEngineLoad file that feeds the Credit Risk Calculation Module. You want to understand how that data was derived and all the processes that it goes through before being used by the module. You will now run a *data lineage* analysis.

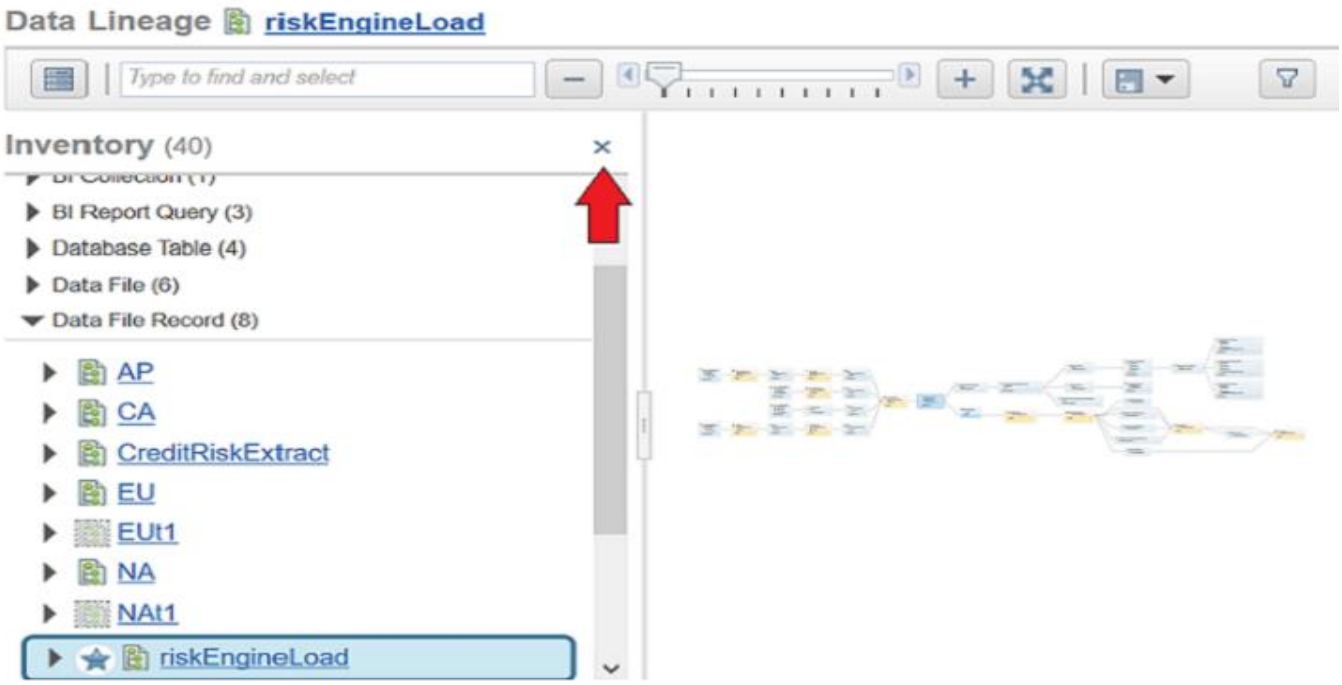
12. **Right-click riskEngineLoad**, and then **click the data lineage icon** at the bottom of the pop-up window. Note: When using the actual software instead of a guided demo, you would hover over the name.



13. In the Lineage Properties dialog box, click the **Run Lineage** button.

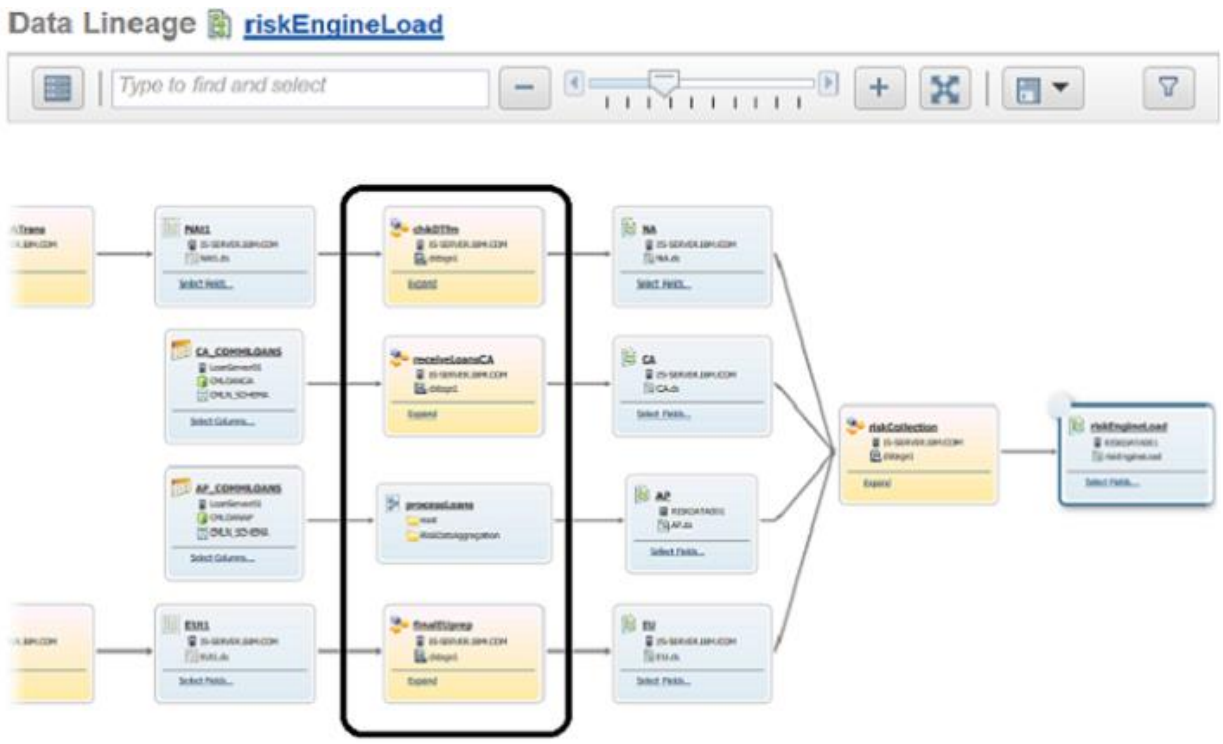


14. The Data Lineage window is displayed. **Click the X** to the right of the Inventory heading to close that portion of the screen.



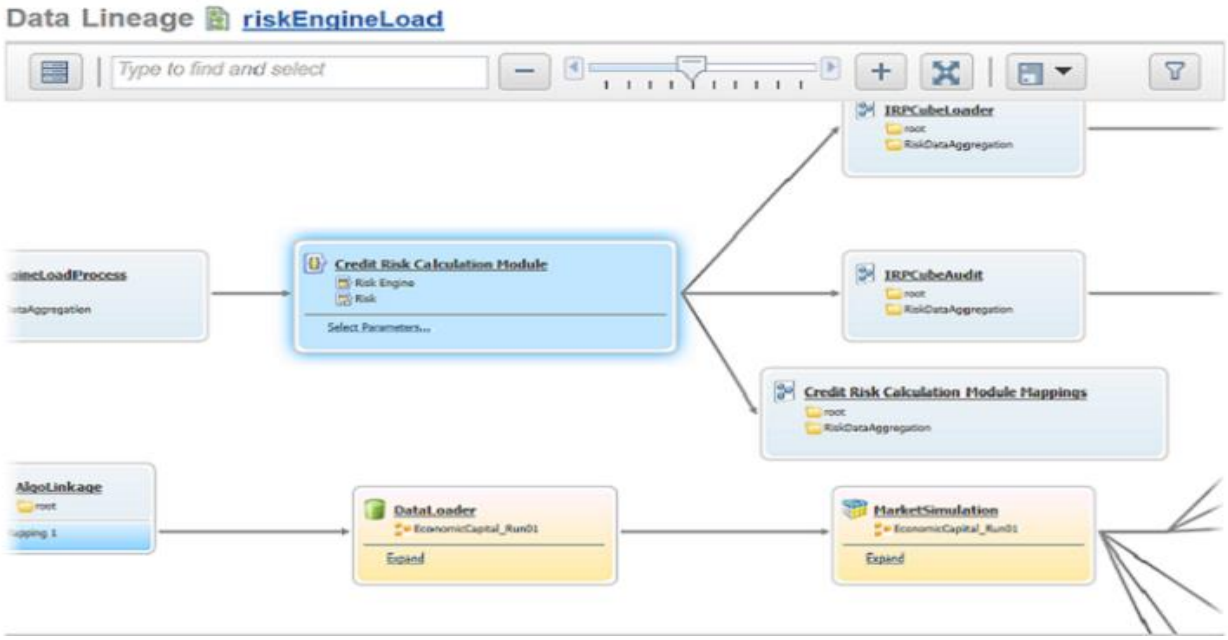
15. Now center the diagram on the screen by clicking the X-shaped icon near the zoom control, and then click the plus **(+)** button to zoom in.

16. You see now more objects involved in the lineage, including ETL or data transformation jobs that the data passes through. If you wanted to, you could expand those boxes within the lineage flow to see what stages and types of business logic and mappings are being applied to the data before it reaches the module.

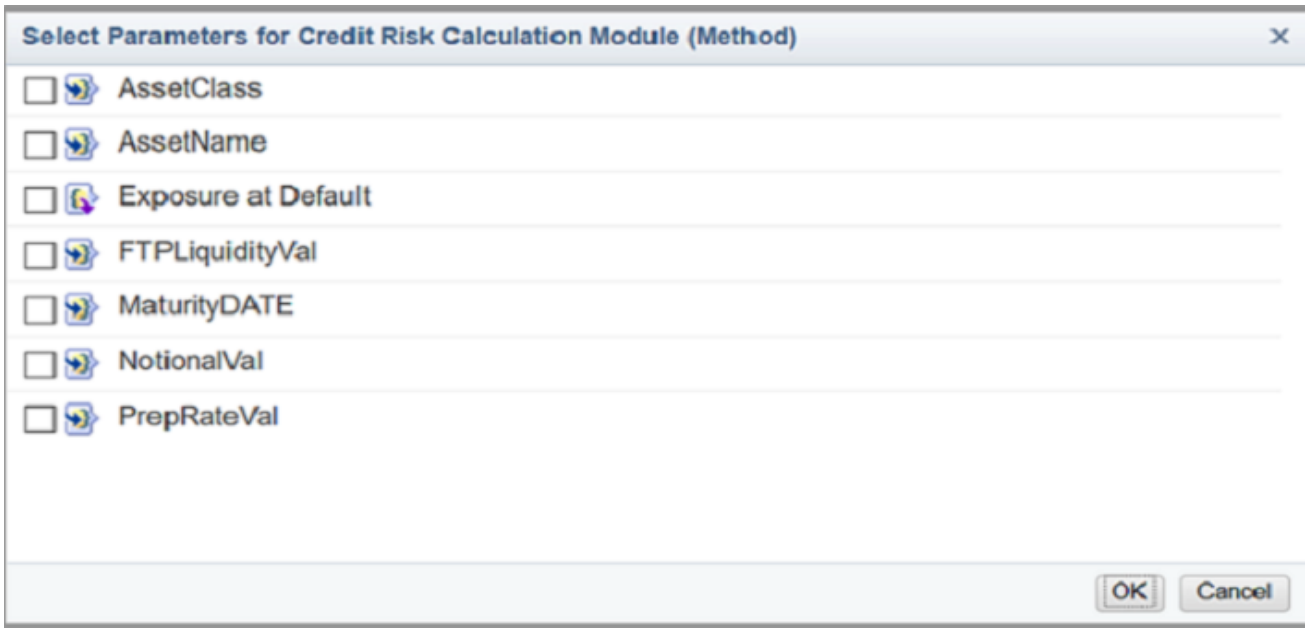


Click the plus (+) button again to zoom into the Credit Risk Calcualation Module box.

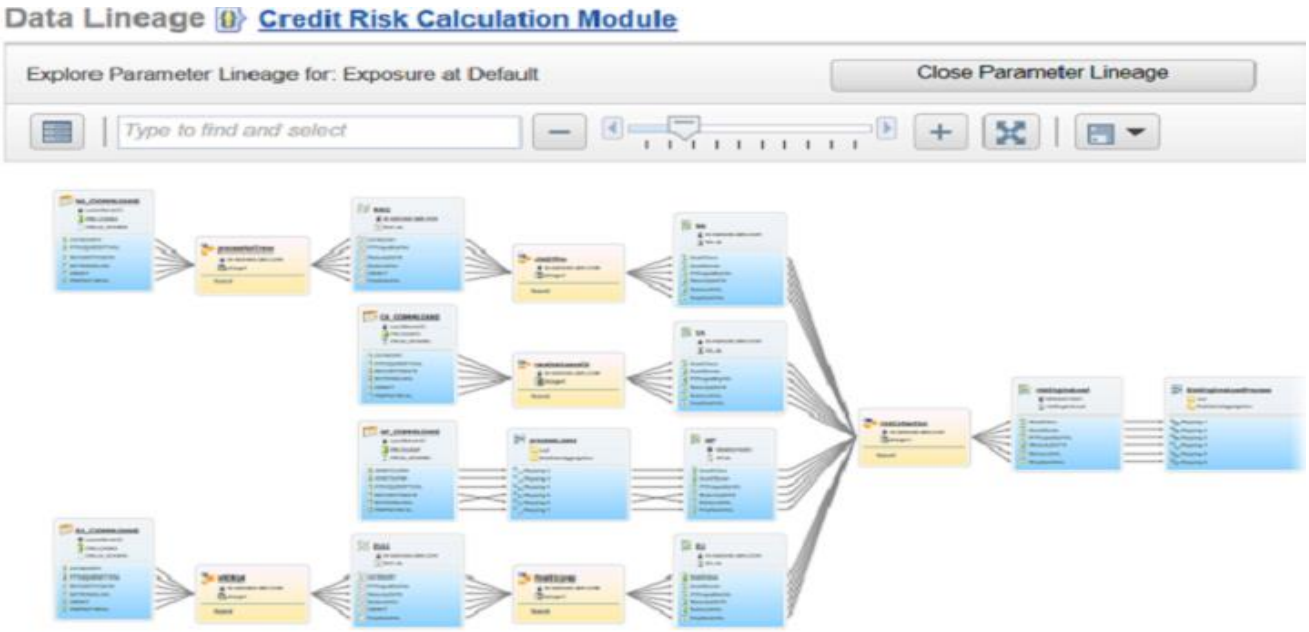
17. Within the Credit Risk Calculation Module box, note the **Select Parameters** link. Click this for a more granular view of data lineage, called Parameter Lineage in this case.



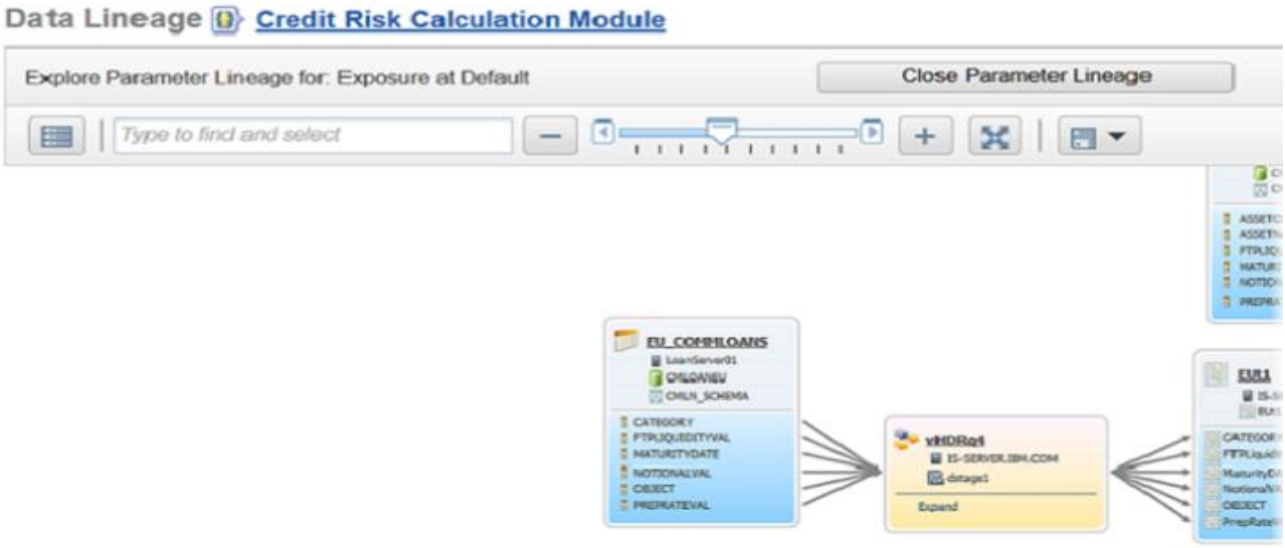
18. In the Select Parameters dialog box, select **Exposure at Default**, and then click **OK**.



19. Now you see much more detailed lineage paths for each column flowing from the database tables on the left part of the diagram to the individual input parameters of the Credit Risk Calculation Module.



Click the plus **(+)** button to zoom in and see the original source table.

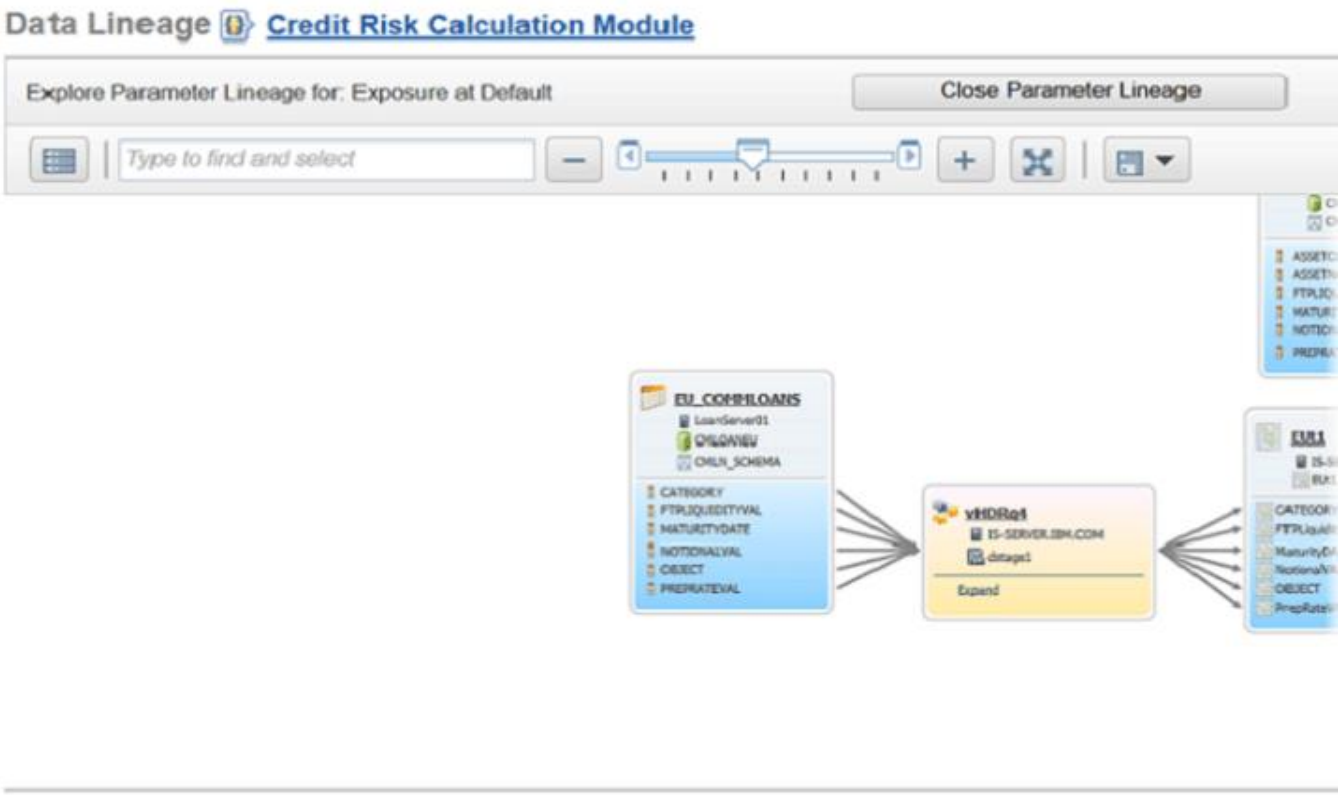


Examine the data rules that have been applied to the data being used in our Risk Data Aggregation process

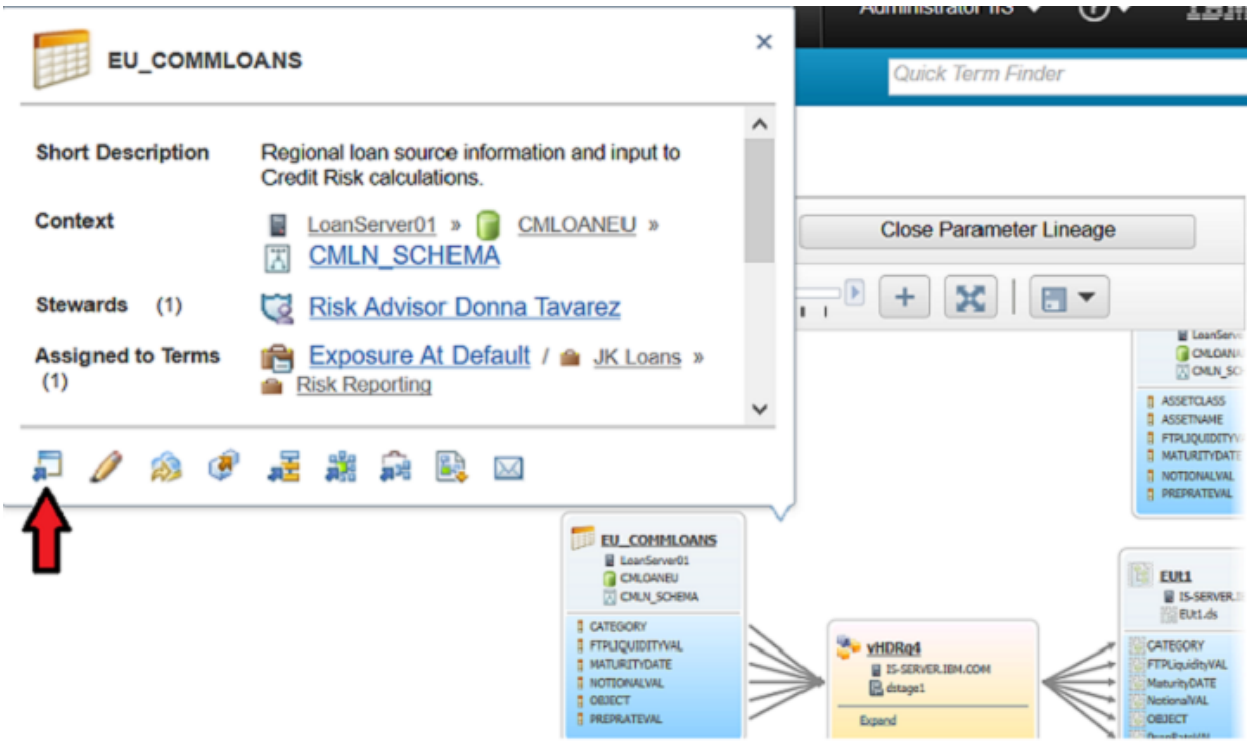
To ensure accurate and complete calculation of the bank's risk exposure, you must start with clean data that has gone through the bank's rigorous data governance rules and data quality checks. Information Governance Catalog is tightly integrated with the data quality capabilities of Information Server, and it displays this information in context when you view data assets in the catalog. This all helps legal and compliance teams have more confidence that the data used can be trusted.

You are going to see if the input data has gone through the necessary data governance and quality rules.

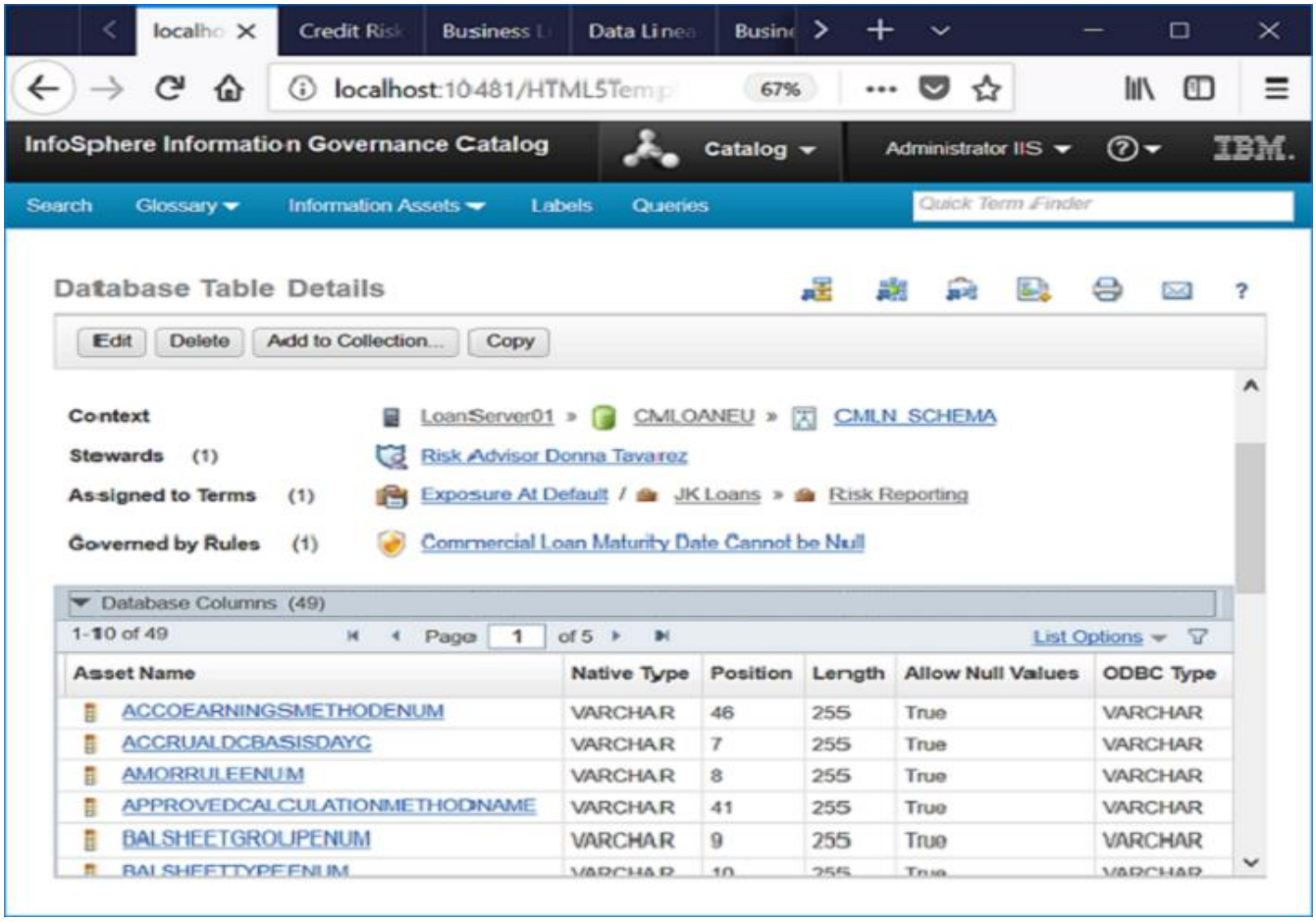
1. In the Data Lineage window, right-click the **EU_COMMLOANS** database table link.



In the EU_COMMLOANS pop-up window, click the first icon on the bottom.

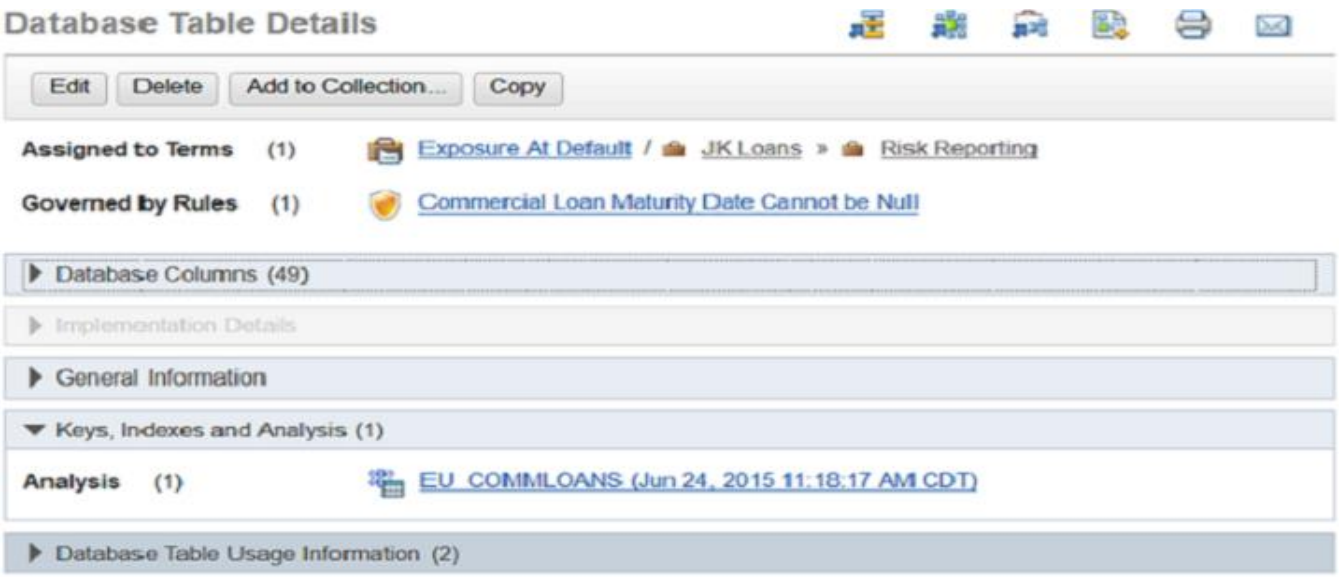


In the Database Table Details window, you can see a lot of useful information about this table. Click **Database Columns** to expand that section and show its metadata.



Click **Database Columns** again to close the section.

To see the data profiling analysis, click **Keys, Indexes and Analysis**.



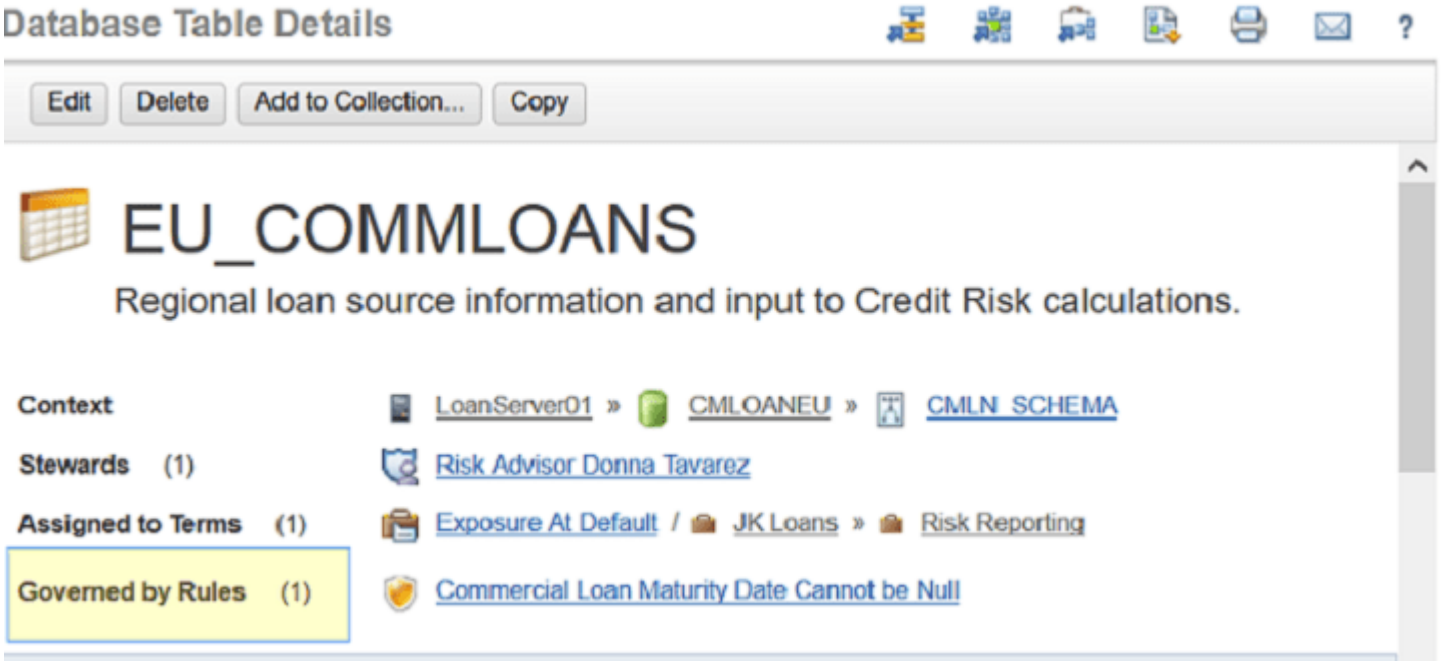
This section shows you that there has been profiling performed on the table.

Right-click the link displayed for a brief summary about the profiling results. Note: In the actual software, you would hover over the link instead of clicking it.

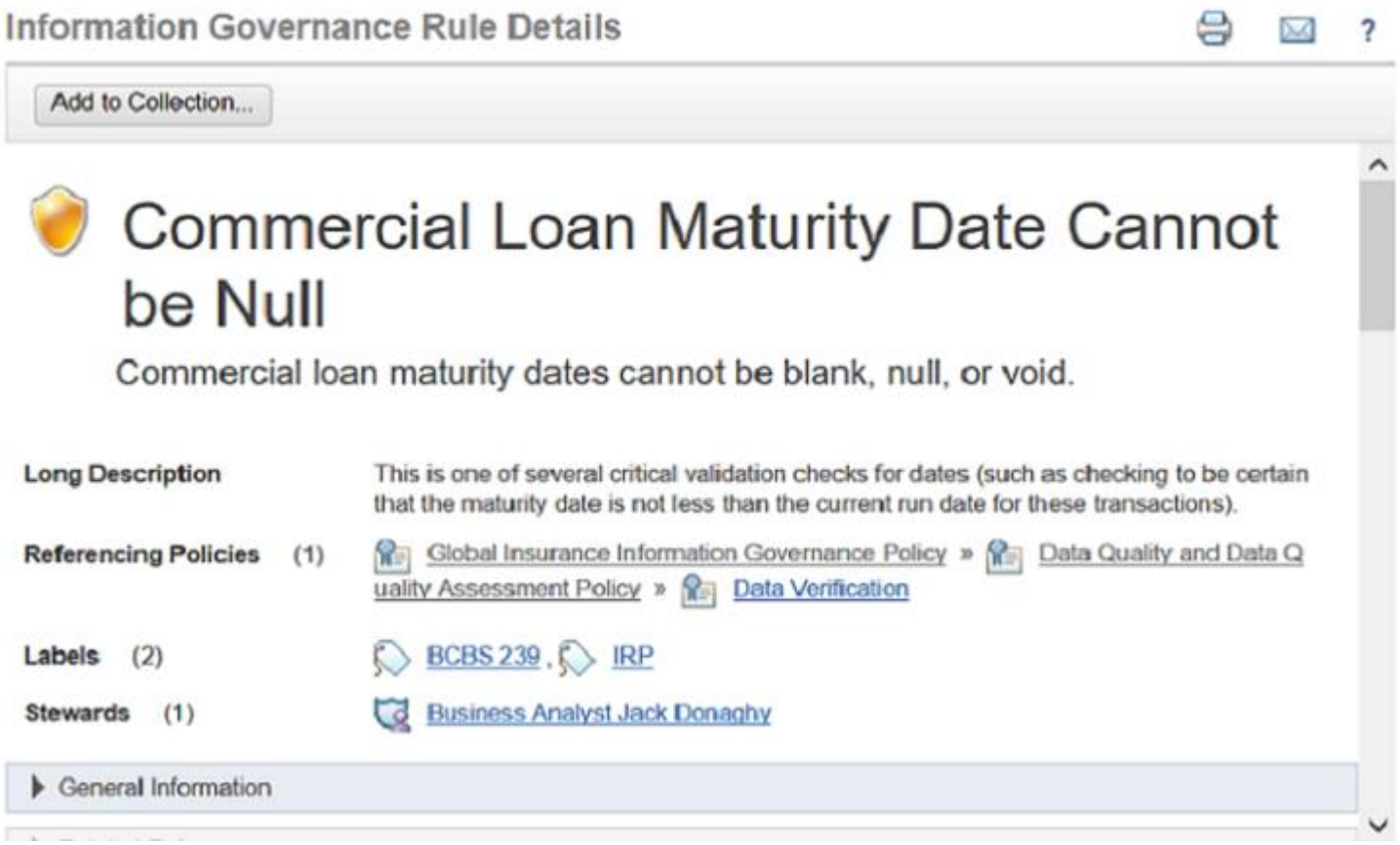
The pop-up window shows when the analysis was run, how many records were processed, the number of rows, and if any duplicate keys were detected.

Close the pop-up window by **clicking the X in the upper-right corner**. Next, **click the arrow at the top of the scroll bar**.

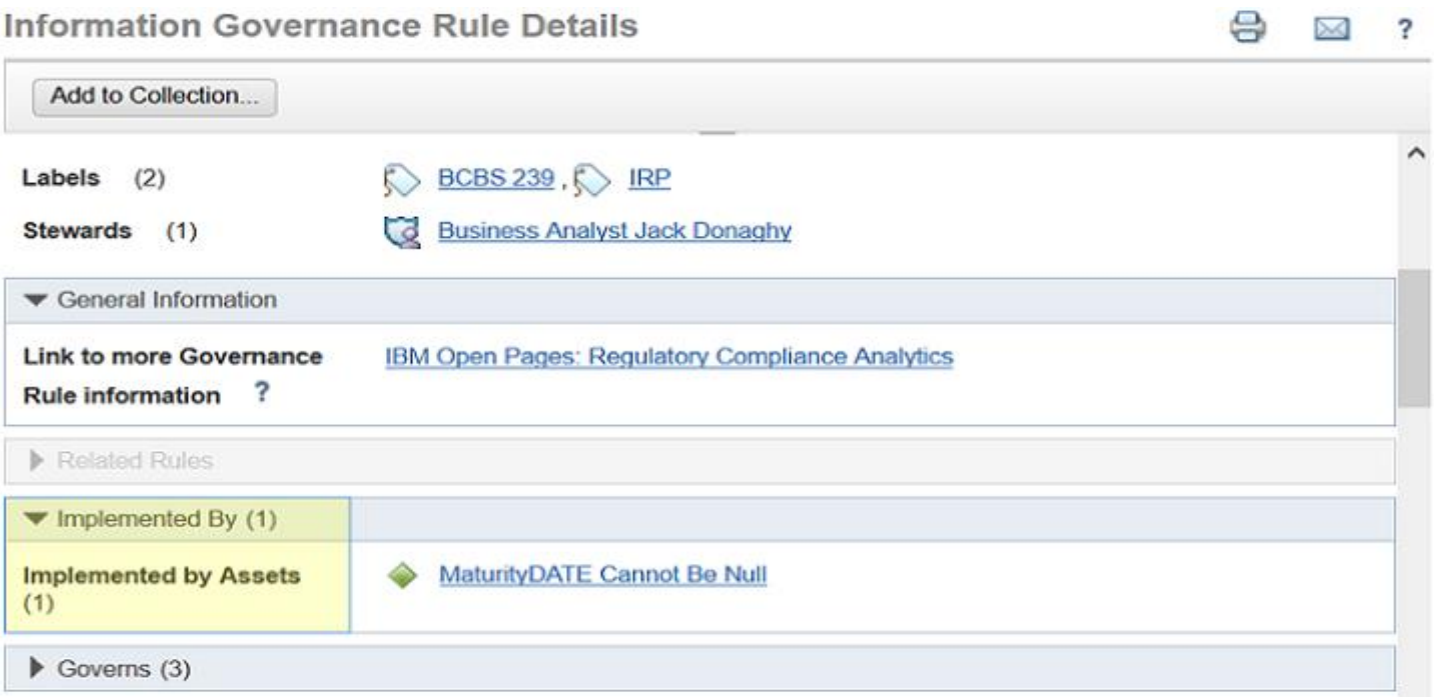
Back in the Database Table Details window, you can look for the governance rules applied to this table. Note the Governed by Rules property. Nearby, click the rule **Commercial Loan Maturity Data Cannot be Null**.



The details window for this governance rule provides a short and long description, the governance policies that referfence this governance rule, any labels that have been applied to it, and who the steward is. To see more, **click the arrow at the bottom of the scroll bar**.

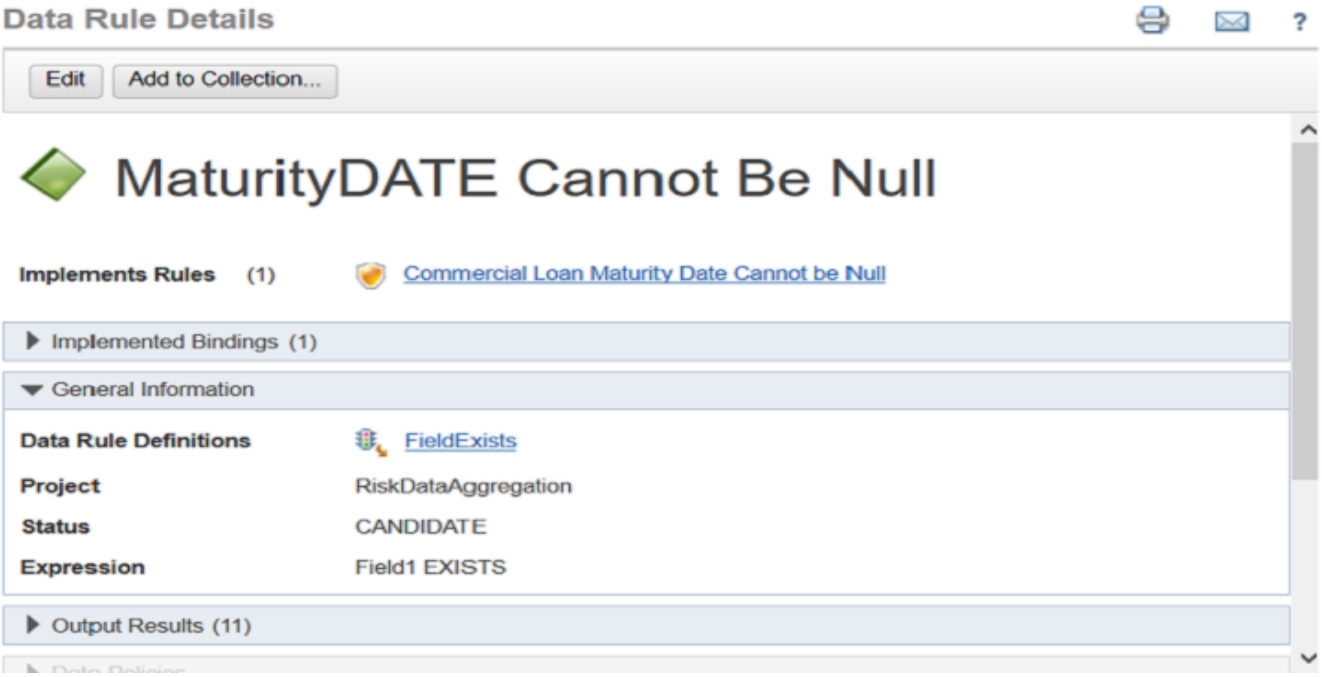


You notice the Implemented By section, which points to the data rule that carries out the actual check on the physical data for this governance rule. To see more, click the **MaturityDATE CaonnotBeNull** link.

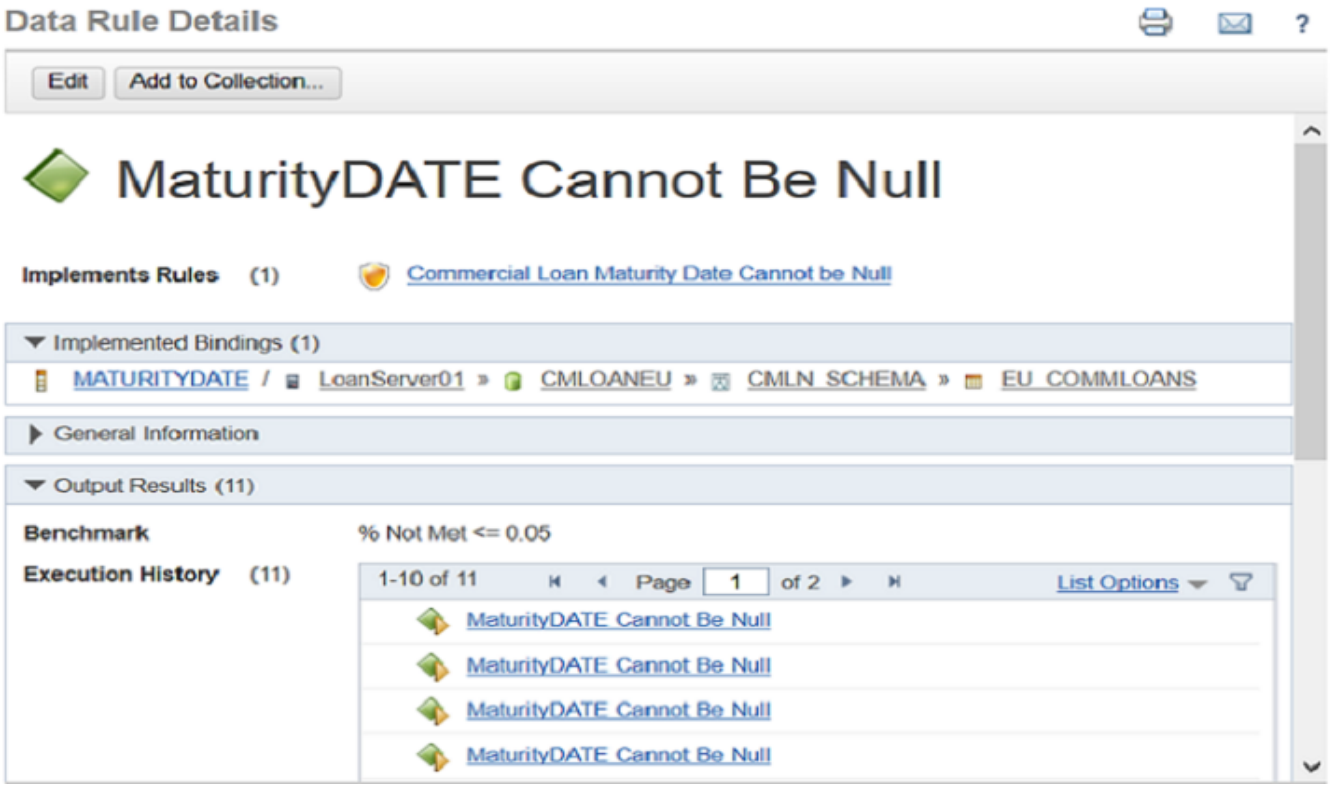


The Data Rule Details window opens. In the General Information section, you see the rule definitions, the status, and the actual expression. All this information in a single interface makes it more efficient to govern data and business processes.

Now you want to see the results from the data rule being run against the EU_COMMLOANS table, so you click **Ouput Results**.

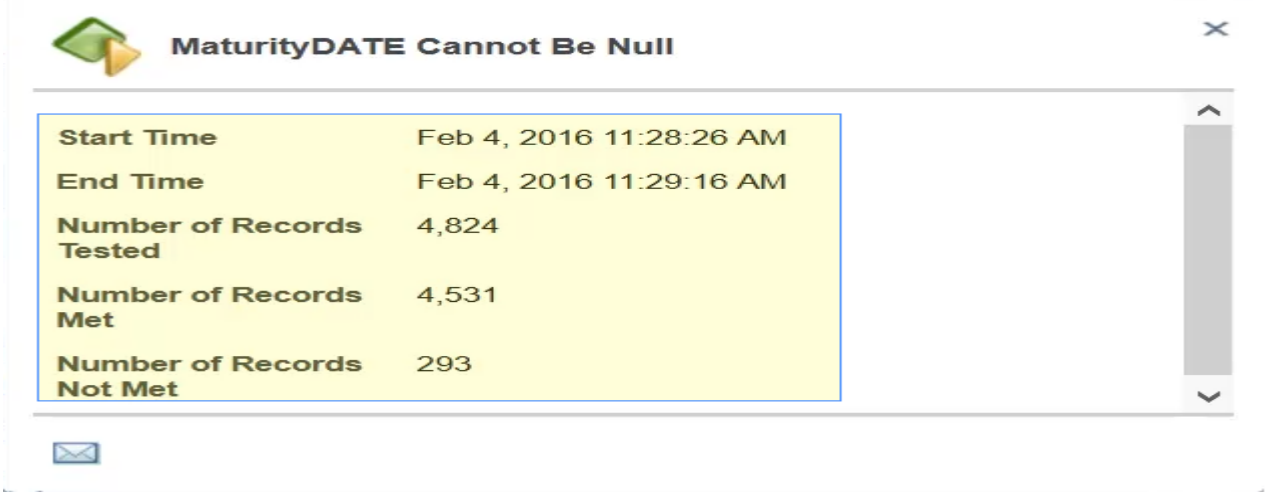


The last four executions of the data rule are shown in chronological order. **Right-click the lowest or earliest run** to show the pop-up window with results of that run.



Notice how 293 records did not meet the requirements, or pass the rule. Now close the pop-up window by ***clicking the X in the upper-right corner***.

Right-click the two most recent executions to see if later runs had better results. You should have noticed that the data quality improved, and the most recent run had no failures. Close any pop-up windows.



End the demo by right-clicking **Administrator IIS** at the top of the pane, and then clicking **Log Out**.

Summary

You completed the guided demo. Congratulations! During this demo, you used Information Governance Catalog to gain a deep understanding of a specific business process. In this case, you examined the calculation of risk exposure, and how all the data, ETL jobs, and business intelligence reports used in this process are governed, and by whom. You were able to trace where data that feeds this critical process comes from, and how it was derived, and then where it was used after being calculated. Finally, you were able to monitor the type of data analysis and rules it went through to ensure all the company's governance policies and rules are being adhered to.