

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 youTube video about this demo: https://www.youtube.com/watch?v=5_lhZyqCs8

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:

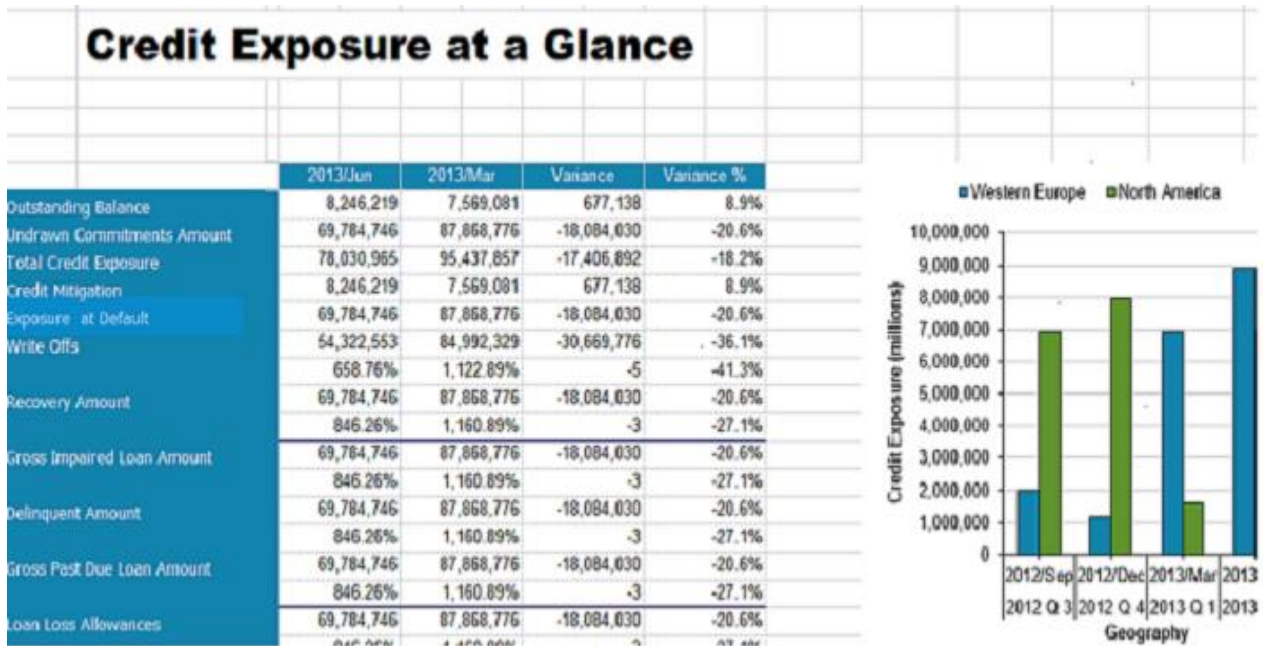
- Explore business terms, governance policies, and rules in Information Governance Catalog
- Generate and review lineage analysis to validate and raise confidence in business intelligence reports
- Examine the rules that have been applied to the data used in the risk data aggregation process
- Follow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

InfoSphere Information Governance Catalog

 Catalog ▾

Administrator IIS ▾

 ▾

IBM.

Search

Glossary ▾


Information Assets ▾

Labels

Queries

Quick Term Finder

Welcome to InfoSphere Information Governance Catalog



IBM InfoSphere Information Governance Catalog enables the enterprise to expose a central catalog of glossary assets and information assets to end users. The meaning of those assets can be broadened by adding technical descriptors and business context.

InfoSphere Information Governance Catalog provides search, browse, and query capabilities. In addition, you can establish asset collections and run lineage reports to examine data flow between assets.

Search

?

Exposure at Default

Search [Options](#)

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

Search

Exposure at Default

SearchOptions

Search Results

Select... (0)

Add to Collection

1-9 of 9

List Options

☐

Exposure At Default

JK Loans » Risk Reporting

A measure that identifies the expected gross exposure including partial write-offs, of the Financial Institution upon the default of the obligation, prior to recognition of any credit risk mitigants with the exclusion of netting agreement S.

STATUS: Standard

☐

ATM Card

JK Wealth » Account

Bank card for JKLW account access

STATUS: Standard

☐

Credit Exposure

JK Loans » Basel Framework

The total amount of credit extended to a borrower by a lender. The magnitude of credit exposure indicates the extent to which the lender is exposed to the risk of loss in the event of the borrower's default.

STATUS: Candidate

- 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.
- You are interested in the data steward assigned to this term, so **right-click Data Analyst Pete Hornberger** to learn more.

InfoSphere Information Governance Catalog | **Catalog** | Administrator IIS | ?

Search | Glossary | Information Assets | Labels | Queries | [Quick Term Finder](#)

Term Details

[Add to Collection...](#)


Long Description
A meas
offs, of t
recognit
agreem

Parent Category

Labels (2)

Stewards (2)

Status Standard


Data Analyst Pete Hornberger

Email Address	pete@iklw.com
Office Phone Number	+1 617 426-4968
Mobile Phone Number	+1 818 232 9893
User Name	pete

[Business Analyst Jack Donaghy](#) , [Data Analyst Pete Hornberger](#)

[General Information](#)

(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.**



[Data Analyst Pete Hornberger](#)

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 upper-left corner of the screen.

IBM Sphere Information Governance Catalog

Search Glossary Information Assets Labels Queries Quick Term Finder

Steward Details

Pete Hornberger

Email Address pete@jklw.com

Office Phone Number +1 617 426-4968

Mobile Phone Number +1 818 232 8893

User Name pete

▶ More Information

▼ Managed Assets (51)

Managed Assets (51) 1-10 of 51 Page 1 of 6 List Options

- [Account](#) / [JK Wealth](#)
- [Address Information](#) / [JK Life](#) » [Insurance Customer Details](#)
- [BANK ACCOUNTS](#) / [IS-SERVER.IBM.COM](#) » [JKLW_DBS](#) » [K BANK1](#)

- 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.

Term Details

Add to Collection...

▼ General Information

Link to more information on the Term ? [Exposure Calculation Examples](#)

Abbreviation EaD

Additional Abbreviation EAD

Is Modifier False

Type None

▼ Associated Terms (4)

Related Terms (3)

- [Involved Party Risk Exposure Type](#) / [JK Loans](#) » [Risk Reporting](#)
- [Risk weighted assets](#) / [JK Loans](#) » [Risk Reporting](#)
- [Value at Risk](#) / [JK Loans](#) » [Basel Framework](#)

Assigned Terms (1)

- [Probability of default](#) / [CCAR Terms](#)

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.



Involved Party Risk Exposure Type

Distinguishes between Involved Party exposures according to the type of counterparty to whom the Financial Institution would sustain a loss in the event of an exposure risk being realized.

Parent Category

[JK Loans](#) » [Risk Reporting](#)

Status

Standard

► General Information

▼ Associated Terms (2)

Related Terms (2)

[Asset Class](#) / [JK Loans](#) » [Basel Framework](#)

[Exposure At Default](#) / [JK Loans](#) » [Risk Reporting](#)

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**.

Term Details



Add to Collection...

▼ [Involved Party Risk Exposure Type](#)

► In Collections (1)

► Notes (1)

▼ History

Select a property to add to the table ▼

Select a property to add to the table

Link to more information on the Term

Long Description

Parent Category

Steward

Jun 27, 2015 8:03:23 AM

A term property or relationship was edited

Administrator IIS

Comment



Property or relationship was edited

Property or relationship was edited

Property was edited when the glossary was

Property or relationship was edited

Edited By



Administrator IIS

Administrator IIS

Administrator IIS

Administrator IIS

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

The screenshot shows a web application interface for 'Term Details'. At the top is a blue navigation bar with links: Search, Glossary, Information Assets, Labels, and Queries. A 'Quick Term Finder' search box is on the right. Below the navigation bar, the page title 'Term Details' is on the left, and icons for print, email, and help are on the right. A button 'Add to Collection...' is below the title. The main content area features a large heading 'Exposure At Default' with a brief description: 'A measure that identifies the expected gross exposure including partial write-offs, of the Financial Institution upon the default of the obligation, prior to recognition of any credit risk mitigants with the exclusion of netting agreements.' Below this is a 'Long Description' section with a detailed paragraph and a 'Show More' link. Further down are sections for 'Parent Category' (JK Loans > Risk Reporting), 'Labels' (2) (BCBS 239, IRP), 'Stewards' (2) (Business Analyst Jack Donaghy, Data Analyst Pete Homberger), and 'Status' (Standard). A vertical scroll bar is on the right side of the content area.

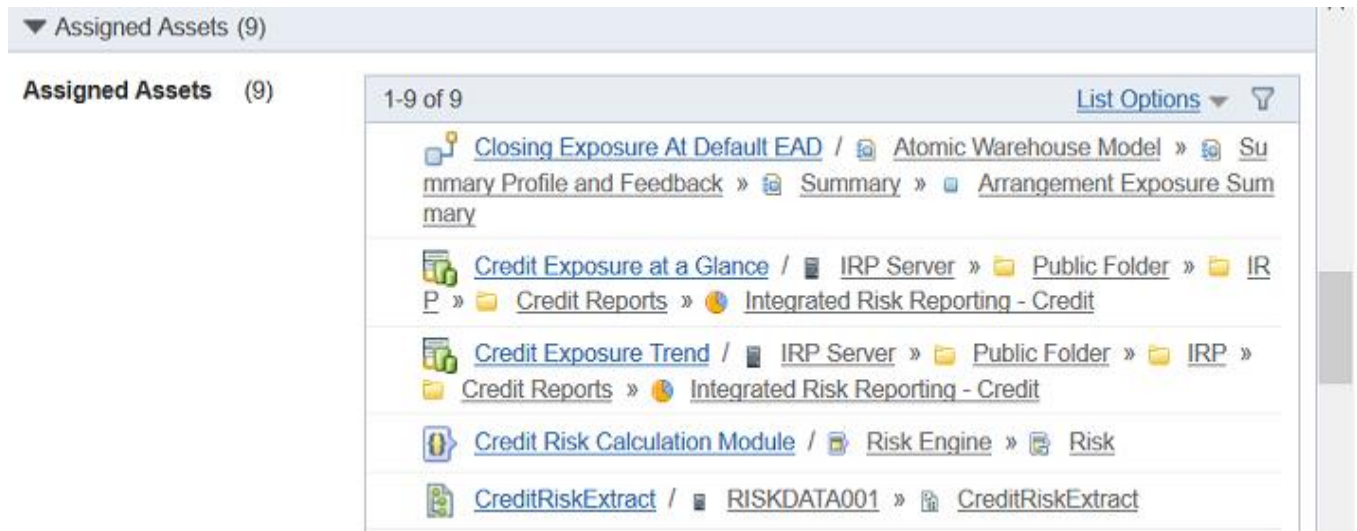
After scrolling down and seeing the changes, **click the arrow at the top of the scroll bar** to return to the top of the Term Details page.

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

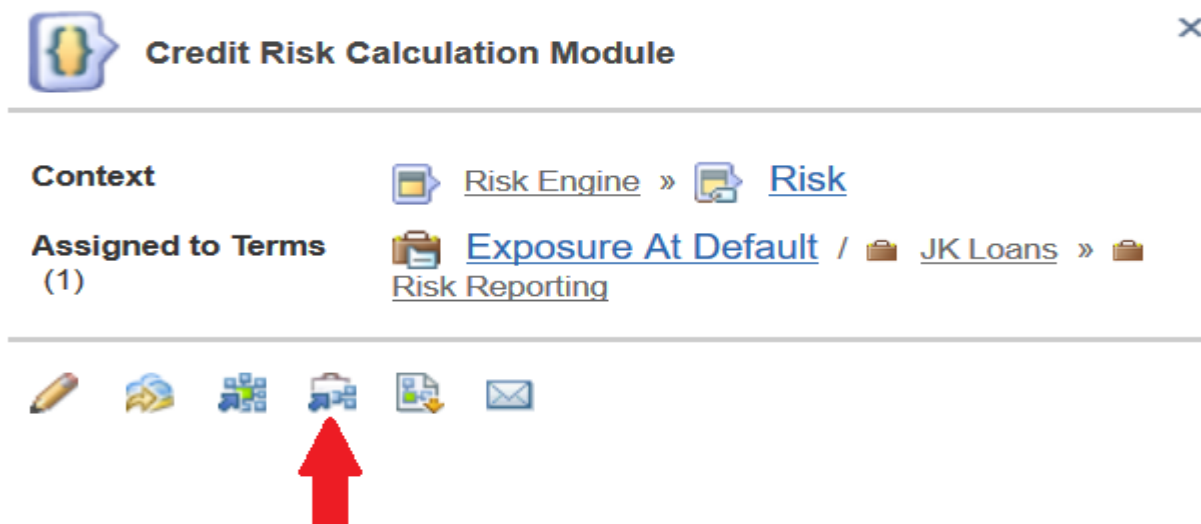
You will be using Information Governance Catalog to see which data source feeds the bank's Credit Risk Calculation Module, and also to learn what reports and other repositories are fed by the output of that module. This is called *lineage analysis*. IGC produces both business and data lineage reports 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 capabilities 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 Analytics 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.

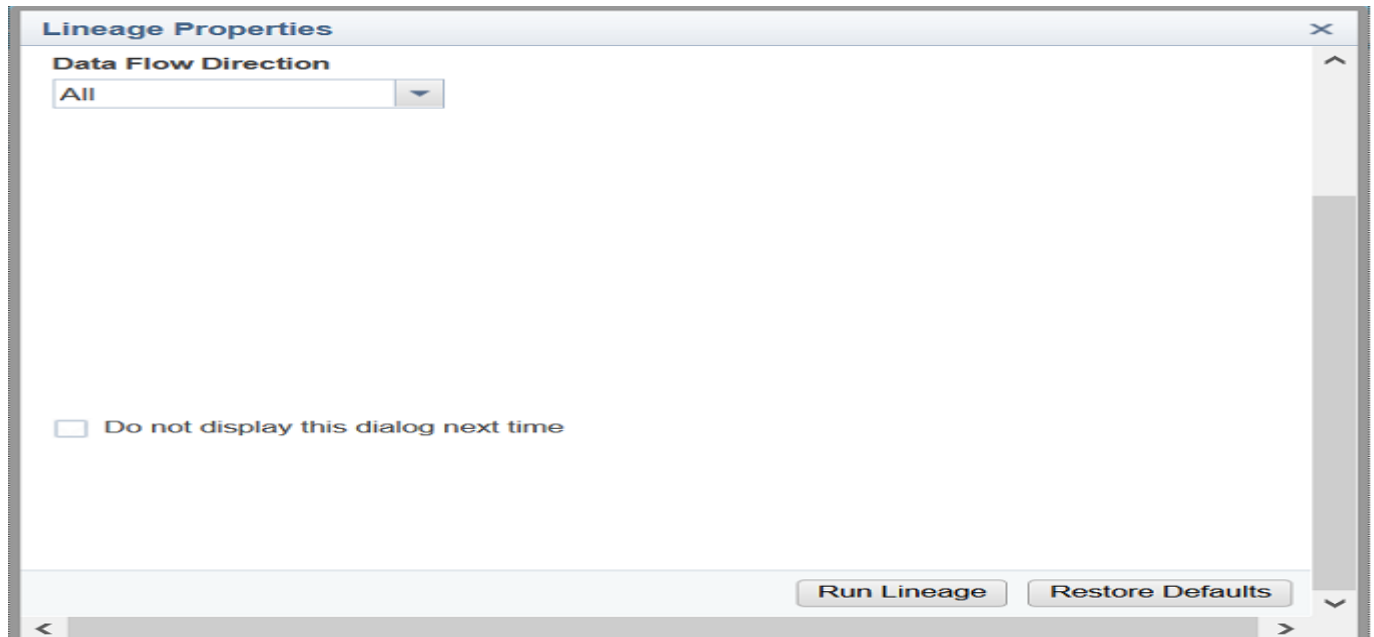


The pop-up window shows brief information and links. You want to view the business lineage for the module, so click the clipboard icon.

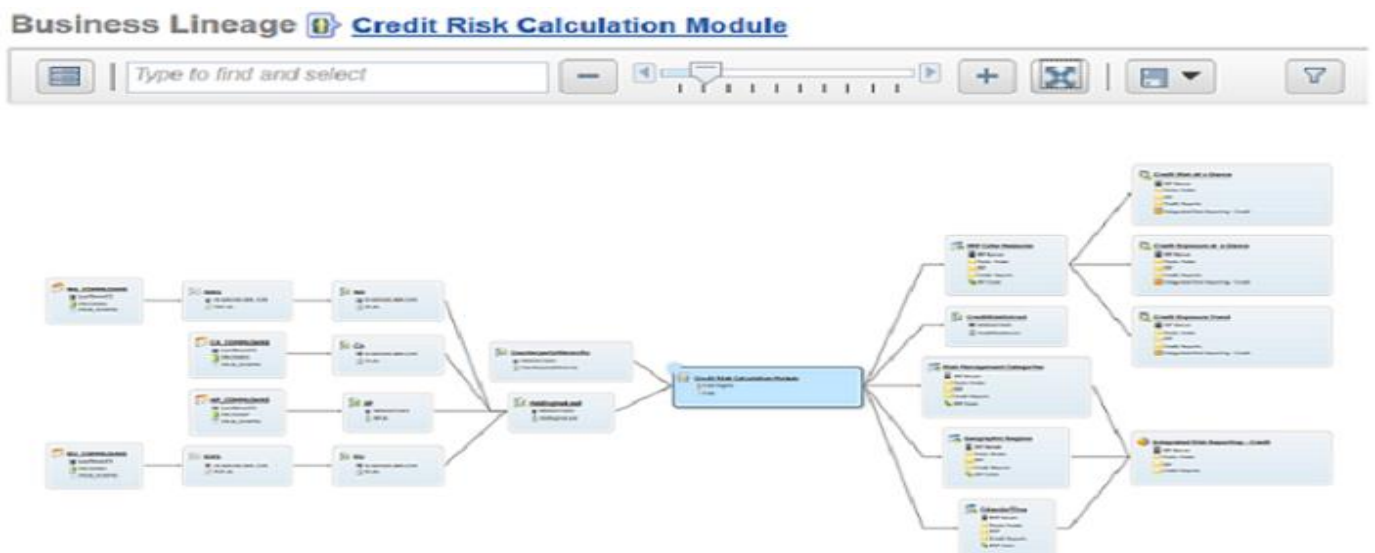


3. The Lineage Properties dialog box is displayed. Scroll down by clicking the arrow at the bottom of the scroll bar.

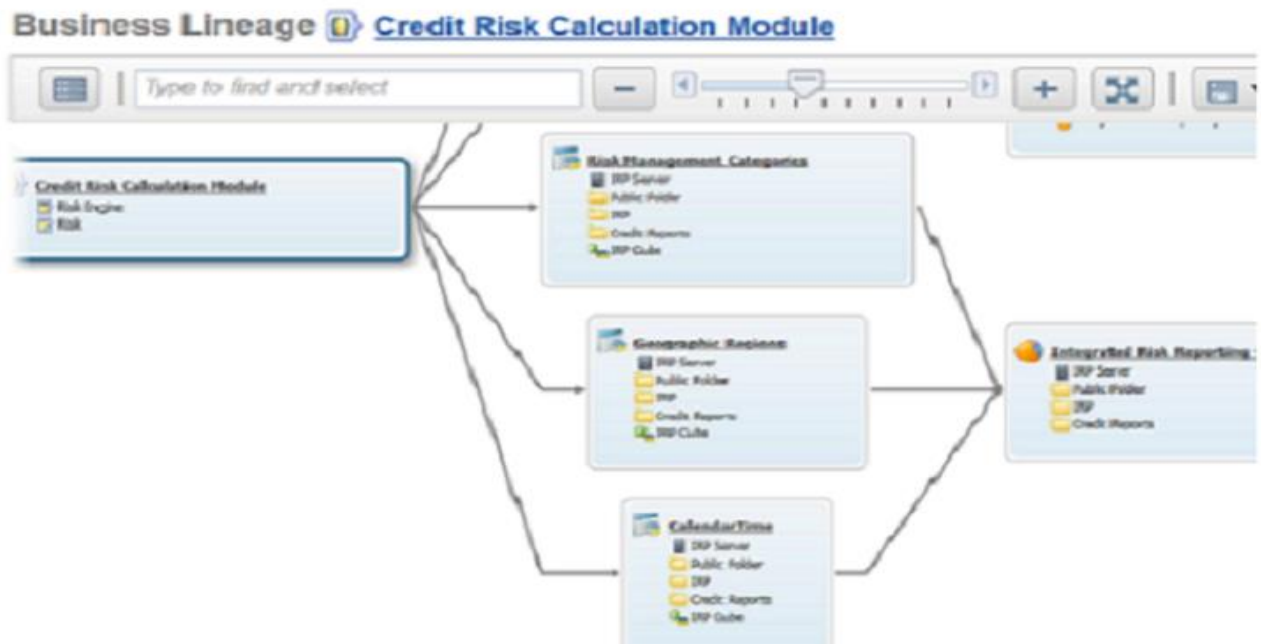
Click the **Run Lineage** button.



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.



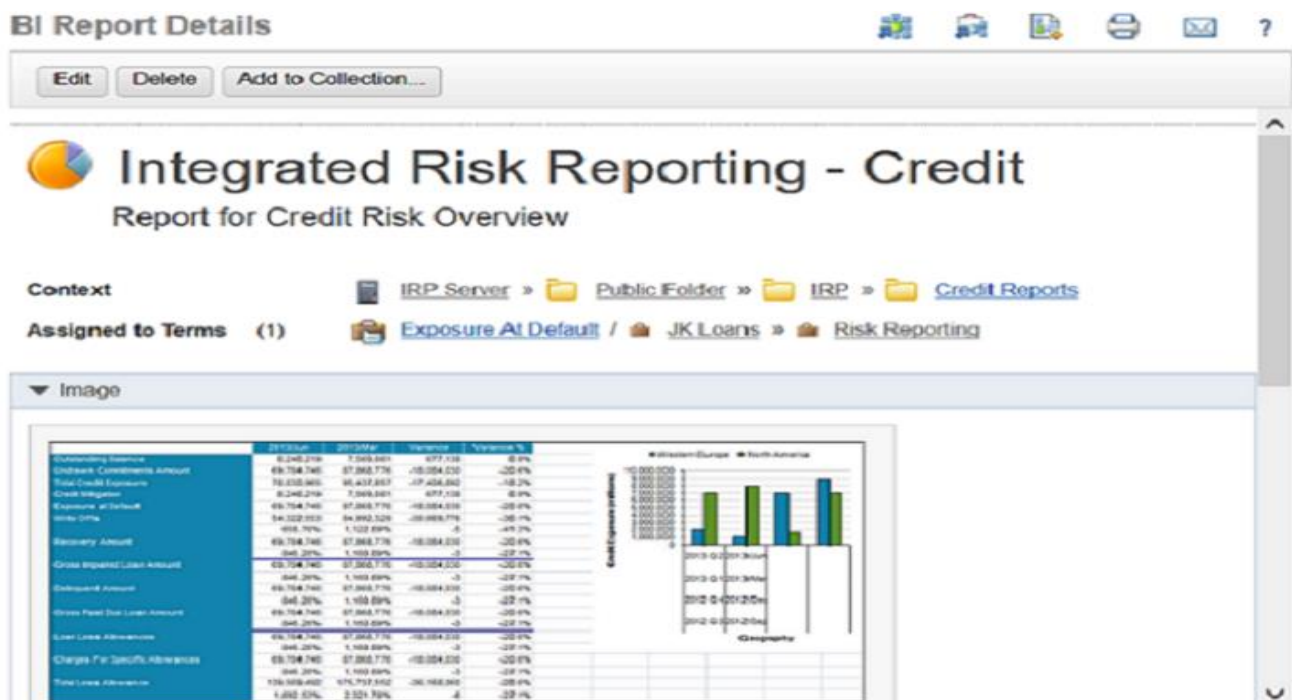
7. You will see that the data lands on a business intelligence report called Integrated Risk Reporting - Credit. **Right-click the report name** to see the pop-up window.



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.

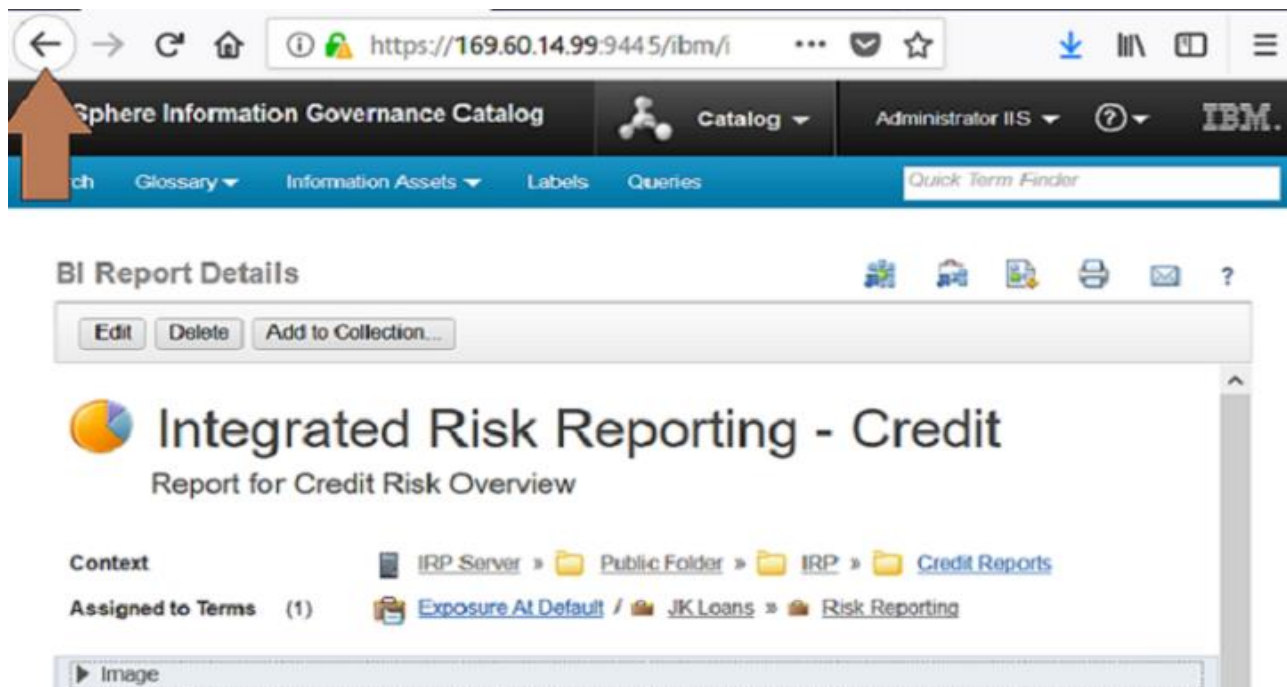


The BI Report Details page opens and the image of the report is displayed, along with its context and what business terms are assigned to it.

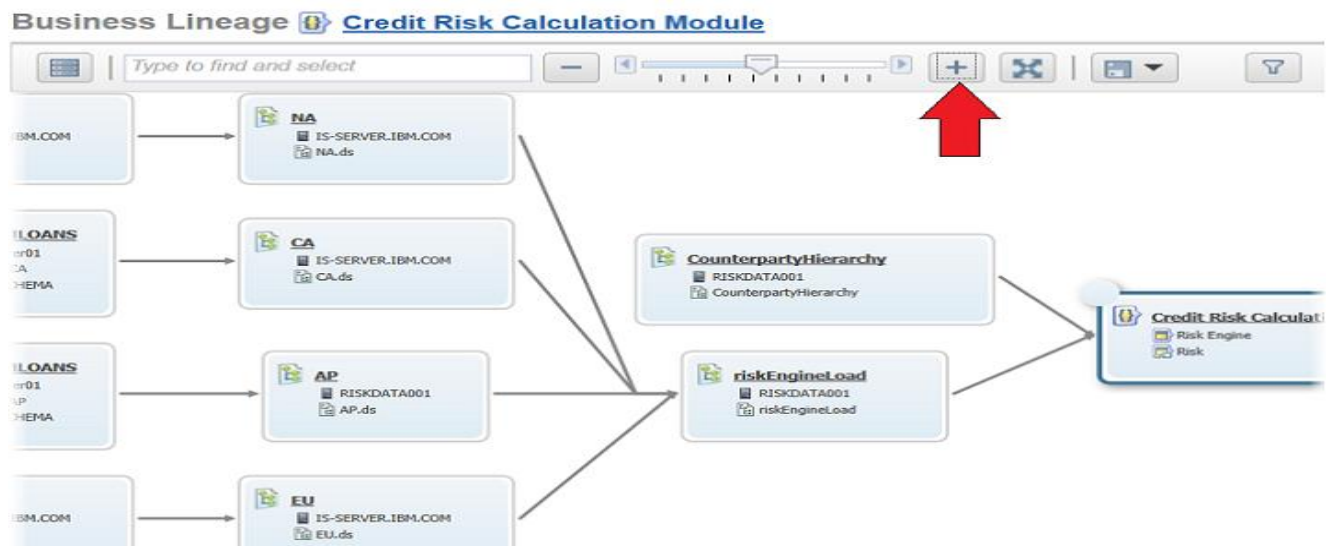


9. You can see by the picture of the report, and the fact that it is assigned to the Exposure at Default term, that this is the same report. Close the image of the report by clicking the arrow next to **Image** section heading.

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

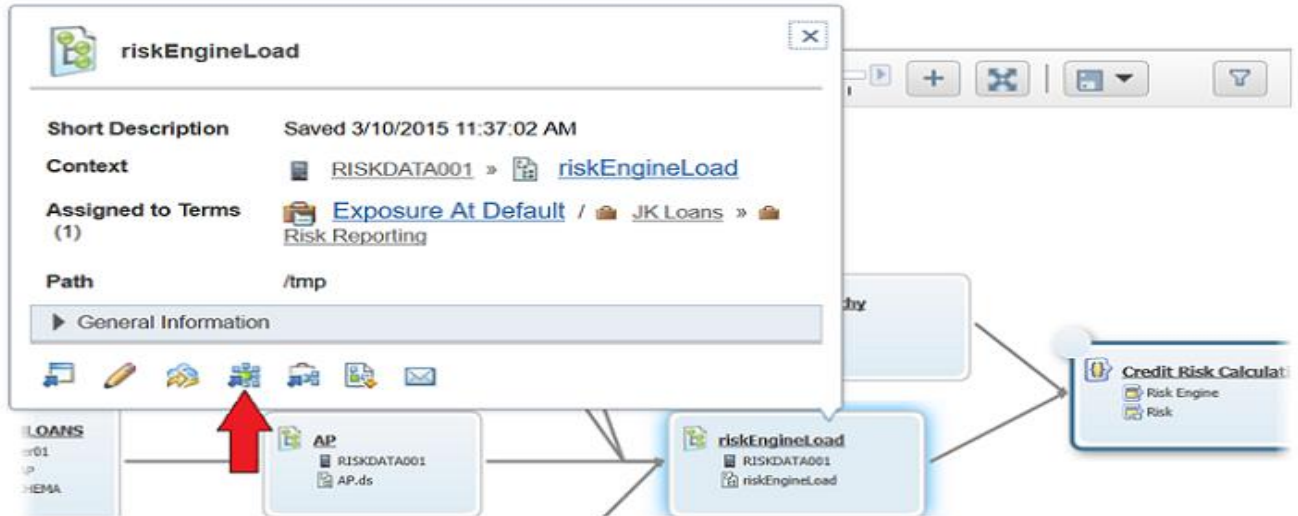


11. Click the plus (+) button to zoom in on the lineage view again.



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.

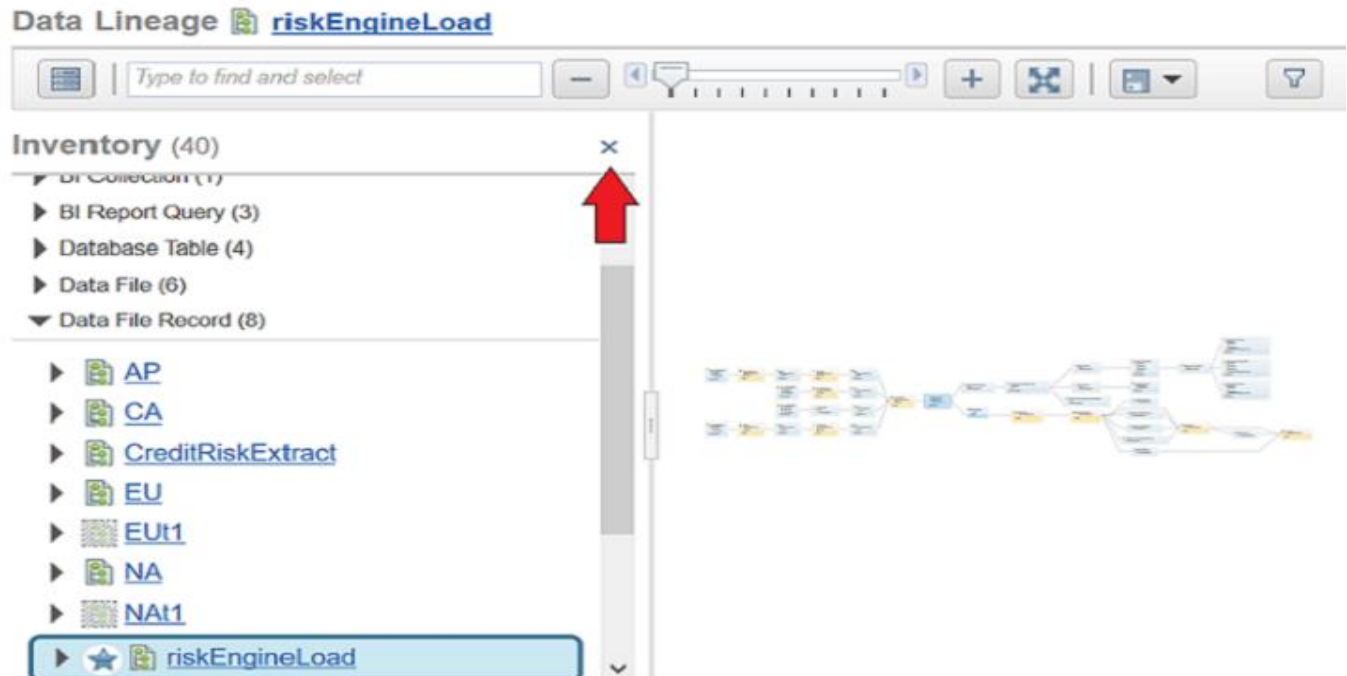
12. **Right-click riskEngineLoad**, and then **click the data lineage icon** at the bottom of the pop-up window. Note: When using the actual software instead of a guided demo, you would hover over the name.



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.

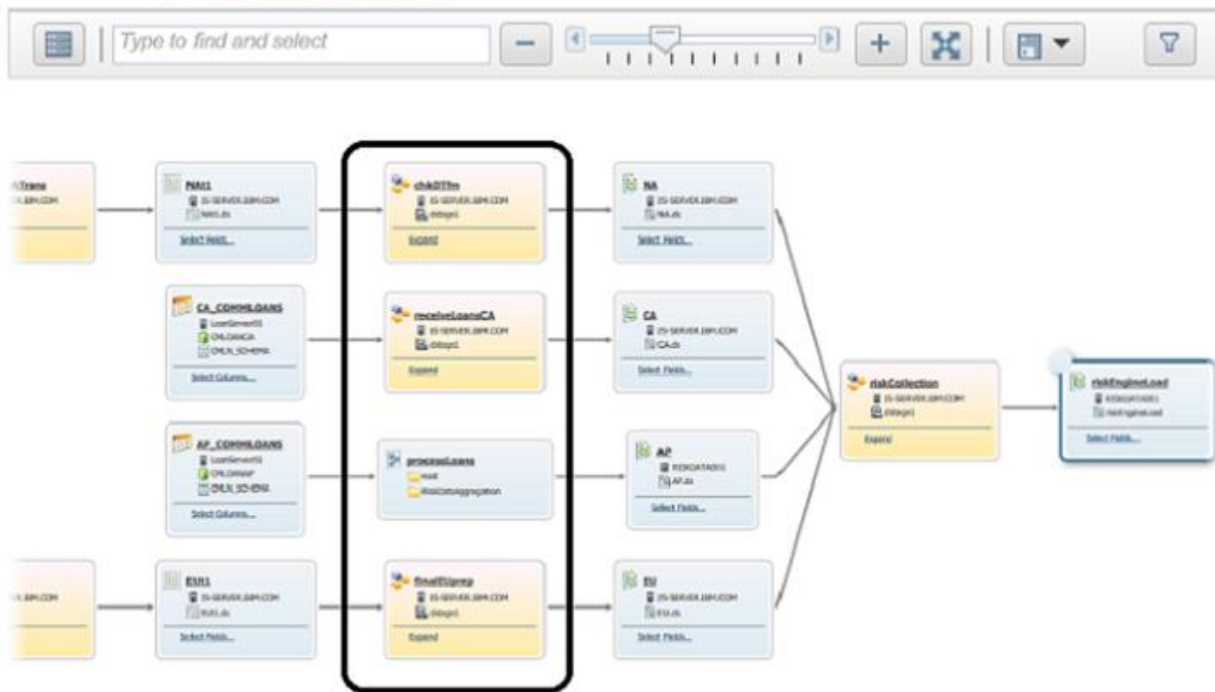


15. Now center the diagram on the screen by clicking the X-shaped icon near the zoom control, and then click the plus (+) button to zoom in.



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.

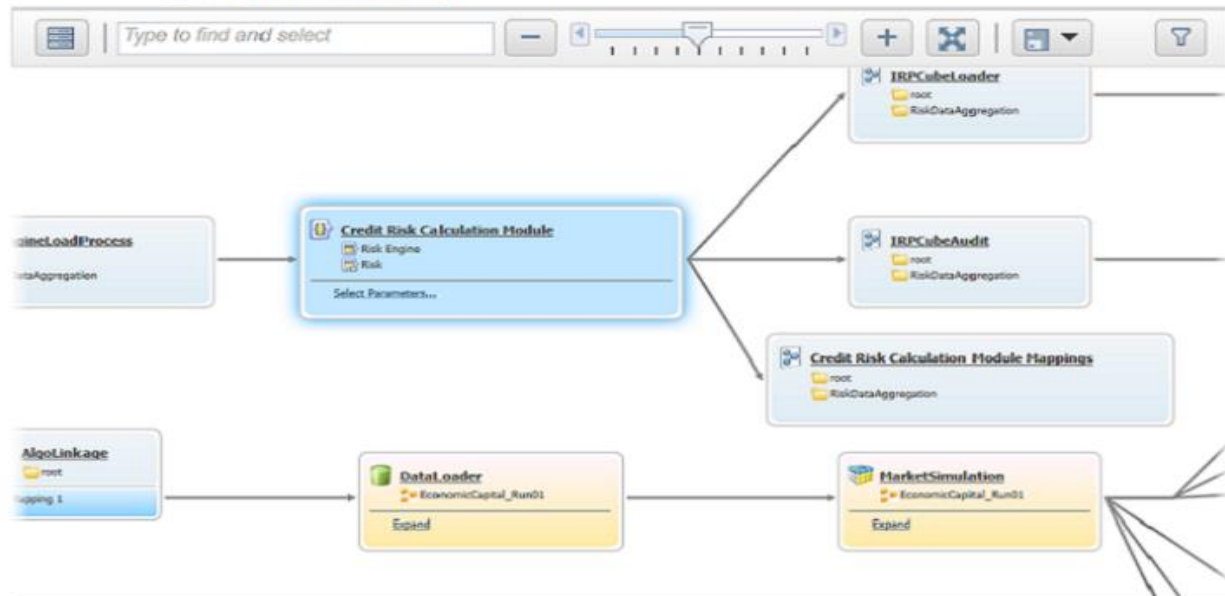
Data Lineage riskEngineLoad



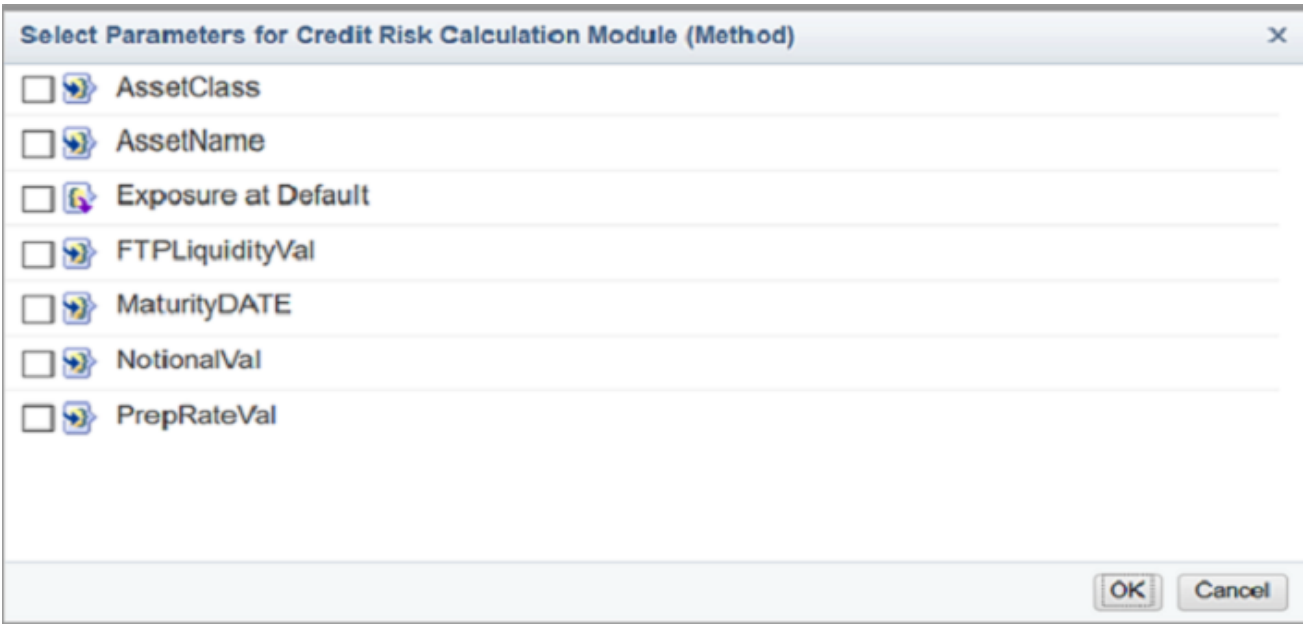
Click the plus (+) button again to zoom into the Credit Risk Calculation Module box.

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.

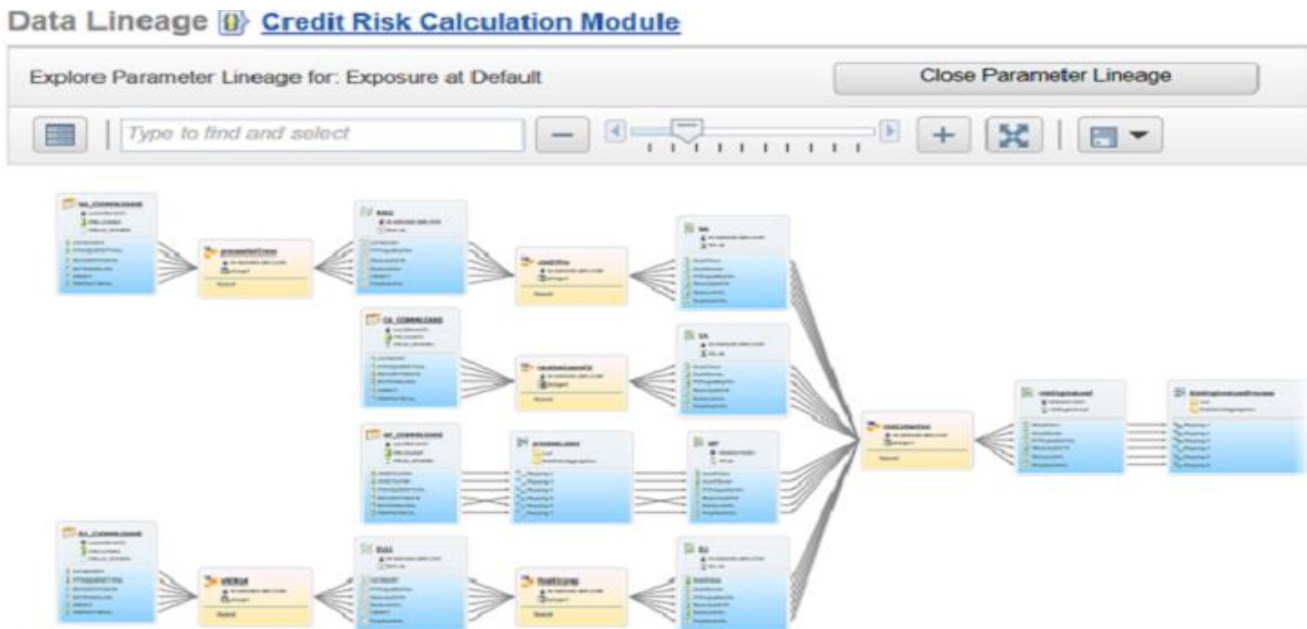
Data Lineage riskEngineLoad



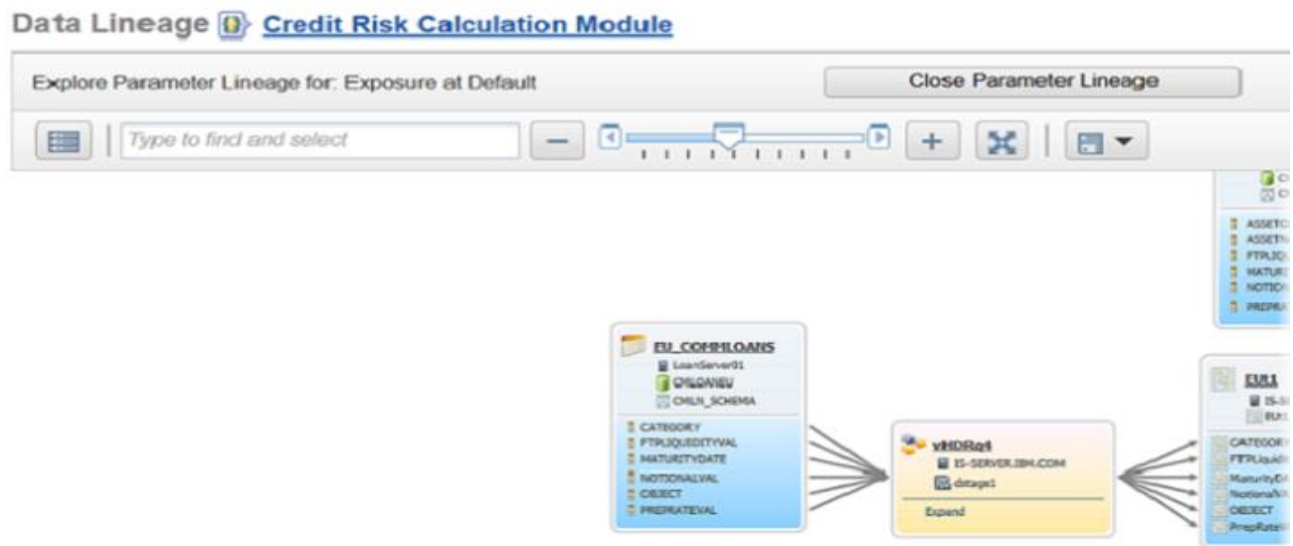
18. In the Select Parameters dialog box, select **Exposure at Default**, and then click **OK**.



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.



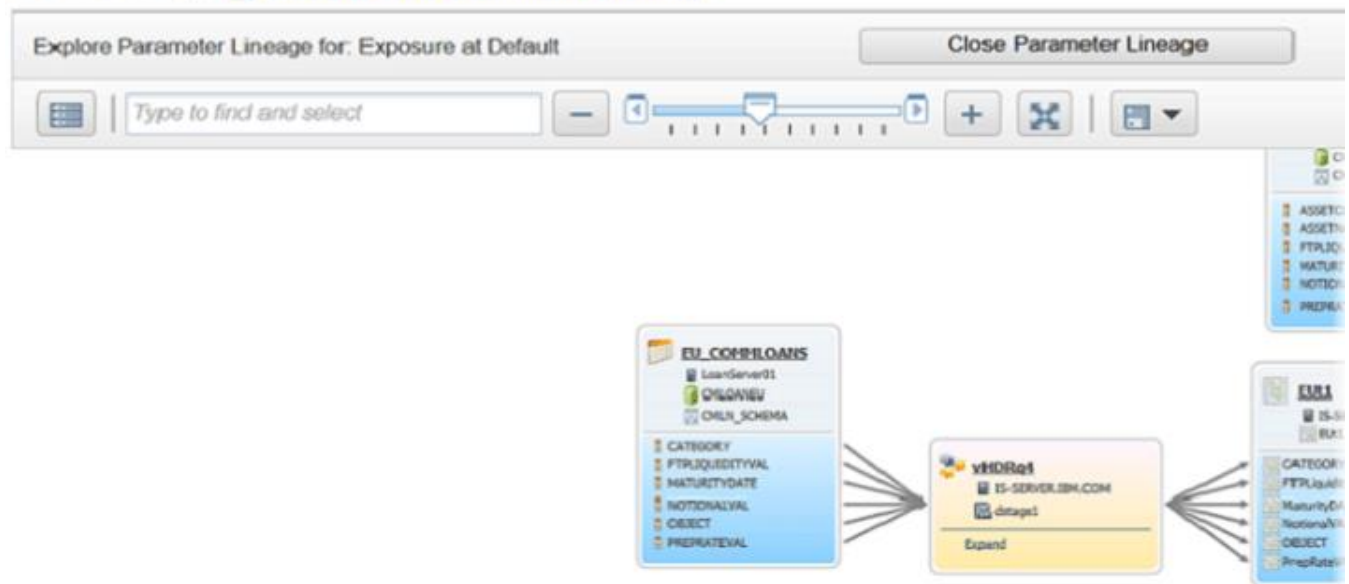
Examine the data rules that have been applied to the data being used in our Risk Data Aggregation process

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.

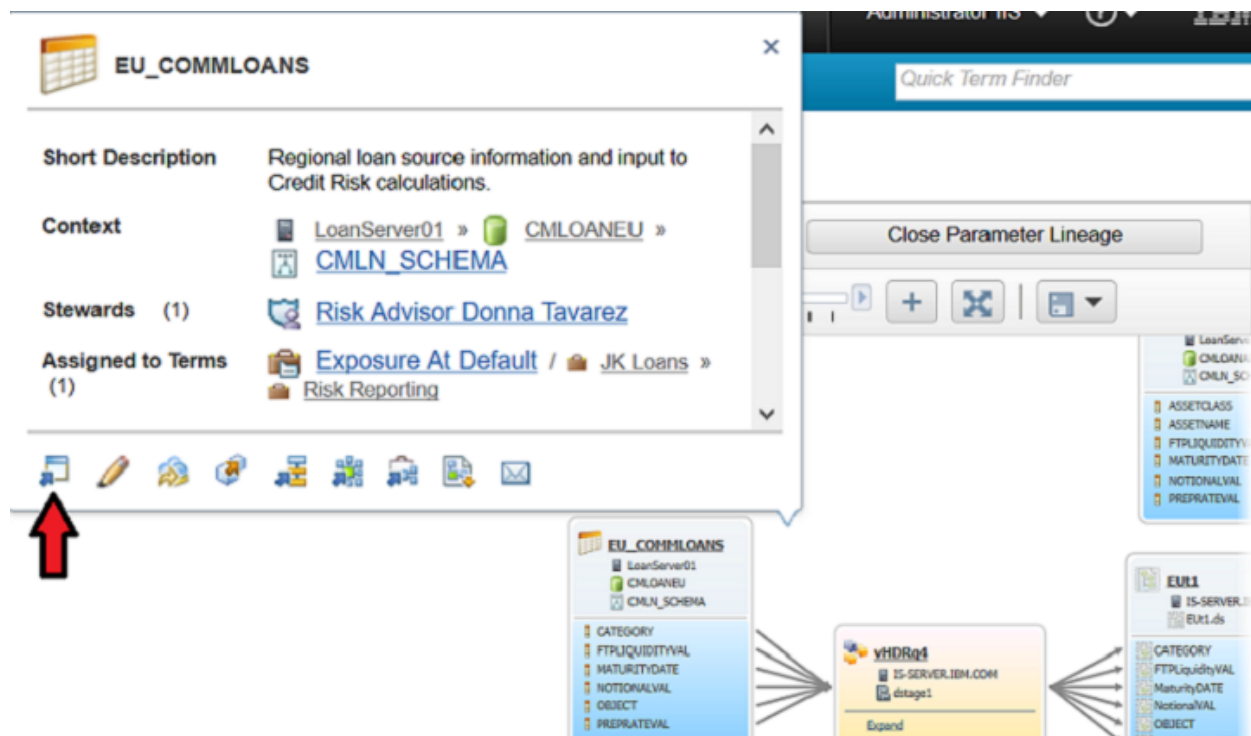
You are going to see if the input data has gone through the necessary data governance and quality rules.

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

Data Lineage Credit Risk Calculation Module



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.

Database Table Details

Context: LoanServer01 » CMLOANEU » CMLN_SCHEMA

Stewards (1): Risk Advisor Donna Tavaroz

Assigned to Terms (1): Exposure At Default / JK Loans » Risk Reporting

Governed by Rules (1): Commercial Loan Maturity Date Cannot be Null

Database Columns (49)

1-10 of 49 Page 1 of 5 List Options

Asset Name	Native Type	Position	Length	Allow Null Values	ODBC Type
ACCOEARNINGSMETHODENUM	VARCHAR	46	255	True	VARCHAR
ACCRUALDCBASISDAYC	VARCHAR	7	255	True	VARCHAR
AMORRULEENUM	VARCHAR	8	255	True	VARCHAR
APPROVEDCALCULATIONMETHODNAME	VARCHAR	41	255	True	VARCHAR
BALSHEETGROUPENUM	VARCHAR	9	255	True	VARCHAR
BALSHEETTYPEENUM	VARCHAR	10	255	True	VARCHAR

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

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

Database Table Details



Edit Delete Add to Collection... Copy

Assigned to Terms (1) [Exposure At Default](#) / [JK Loans](#) » [Risk Reporting](#)

Governed by Rules (1) [Commercial Loan Maturity Date Cannot be Null](#)

▶ Database Columns (49)

▶ Implementation Details

▶ General Information

▼ Keys, Indexes and Analysis (1)

Analysis (1) [EU_COMMLOANS \(Jun 24, 2015 11:18:17 AM CDT\)](#)

▶ Database Table Usage Information (2)

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**.

Database Table Details



Edit Delete Add to Collection... Copy



EU_COMMLOANS

Regional loan source information and input to Credit Risk calculations.

Context

[LoanServer01](#) » [CMLOANEU](#) » [CMLN_SCHEMA](#)

Stewards (1)

[Risk Advisor Donna Tavares](#)

Assigned to Terms (1)




[Exposure At Default](#) / [JK Loans](#) » [Risk Reporting](#)

Governed by Rules (1)


[Commercial Loan Maturity Date Cannot be Null](#)

The details window for this governance rule provides a short and long description, the governance policies that reference 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**.

Information Governance Rule Details



Add to Collection...



Commercial Loan Maturity Date Cannot be Null




Commercial loan maturity dates cannot be blank, null, or void.

Long Description

This is one of several critical validation checks for dates (such as checking to be certain that the maturity date is not less than the current run date for these transactions).



Referencing Policies

(1)

 [Global Insurance Information Governance Policy](#) »  [Data Quality and Data Quality Assessment Policy](#) »  [Data Verification](#)


Labels

(2)

 [BCBS 239](#) ,  [IRP](#)

Stewards

(1)

 [Business Analyst Jack Donaghy](#)

► General Information

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 CaannotBeNull** link.

Information Governance Rule Details



Add to Collection...

Labels (2)

[BCBS 239](#), [IRP](#)

Stewards (1)

[Business Analyst Jack Donaghy](#)

▼ General Information

Link to more Governance
Rule information ?

[IBM Open Pages: Regulatory Compliance Analytics](#)

▶ Related Rules

▼ Implemented By (1)

Implemented by Assets
(1)

[MaturityDATE Cannot Be Null](#)

▶ Governs (3)

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 **Output Results**.

Data Rule Details



Edit

Add to Collection...



MaturityDATE Cannot Be Null

Implements Rules (1)

[Commercial Loan Maturity Date Cannot be Null](#)

▶ Implemented Bindings (1)

▼ General Information

Data Rule Definitions

[FieldExists](#)

Project

RiskDataAggregation

Status

CANDIDATE




Expression

Field1 EXISTS

▶ Output Results (11)


▶ Data Definition

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.






Data Rule Details   

[Edit](#) [Add to Collection...](#)

MaturityDATE Cannot Be Null

Implements Rules (1)  [Commercial Loan Maturity Date Cannot be Null](#)

▼ **Implemented Bindings** (1)






 [MATURITYDATE](#) /  [LoanServer01](#) »  [CMLOANEU](#) »  [CMLN_SCHEMA](#) »  [EU_COMMLOANS](#)





► **General Information**

▼ **Output Results** (11)

Benchmark % Not Met <= 0.05



Execution History (11)

1-10 of 11   Page of 2   [List Options](#) ▼ 


	MaturityDATE Cannot Be Null
	MaturityDATE Cannot Be Null
	MaturityDATE Cannot Be Null
	MaturityDATE Cannot Be Null

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.

 **MaturityDATE Cannot Be Null** 

Start Time	Feb 4, 2016 11:28:26 AM
End Time	Feb 4, 2016 11:29:16 AM
Number of Records Tested	4,824
Number of Records Met	4,531
Number of Records Not Met	293



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.