Oracle Insurance Loss Modeller

User Guide

Release 8.1.2.1.0

July 2022





Oracle Insurance Loss Modeller

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Document Control

Version Number	Revision Date	Change Log
1	July 2022	This is the first version of the document.

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1 About the Guide

This section provides release information for the Oracle Insurance Loss Modeller Application Pack and includes the following topics:

- Intended Audience
- <u>Access to Oracle Support</u>
- <u>Related Information Sources</u>
- What is new in this Release

1.1 Intended Audience

This document is intended for users of the Oracle Insurance Loss Modeller Application Pack.

1.2 Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <u>http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info</u> Or, or visit <u>http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs</u> if you are hearing impaired.

1.3 Related Information Sources

You can access the following online documents from the Oracle Help Center (OHC) Documentation Library for <u>Oracle Insurance Loss Modeller Application Pack</u>:

- Oracle Insurance Loss Modeller Release Notes
- Oracle Insurance Loss Modeller Installation Guide
- Oracle Insurance Loss Modeller User Guide

You can access the OFS AAI documentation online from the OHC Documentation Library for <u>Oracle</u> <u>Financial Services Analytical Applications Infrastructure</u>:

- Oracle Financial Services Analytical Applications Infrastructure Installation and Configuration Guide
- Oracle Financial Services Analytical Applications Infrastructure User Guide

The additional documents are:

- OFSAA Licensing Information User Manual Version 8.1.2.0.0
- OFS Analytical Applications Infrastructure Security Guide
- OFSAAI FAQ Document
- OFS Analytical Applications Technology Matrix
- Oracle Insurance Loss Modeller Security Guide Release 8.1.x
- Oracle Insurance Loss Modeller Cloning Guide Release 8.1.x

Oracle Insurance Loss Modeller Technical Documents

1.4 What is New in this Release

Oracle Insurance Loss Modeller bundles the following new features in version 8.1.1.1.0. For detailed information about the usage of the listed features, see the respective product User Guides on <u>OHC</u> <u>Documentation Library</u>:

- OILM Configuration
 - Added the **OILM Configuration** Screen to enable the configuration of the display settings.
- <u>Dashboards</u>
 - On the **Dashboards** Page, the Loss Ratio Multi-Line Graph now contains a filter to select each Line-of-Business for enhanced clarity when viewing the Average Loss Ratio.
 - The Box Plot Chart has been added to enable the analysis of Claims.
- <u>Triangles</u>
 - Added the Projection Factor Triangle to display the selected Development Factors.
 - Added the Projection Triangle to display the Calculated Reserves.
 - The **Triangles Summary** Page has been enhanced with the Dashboard Filters.
 - Added the Triangle Comparison feature to enable the comparison between two Triangles for the same Development Period.
 - Triangle developments for the Yearly, Monthly, Quarterly, and Half-Yearly Development Periods are supported in the application.
 - The **Triangle** Section has been enhanced with the Under Writing and Reporting Cohort.
- <u>Methods</u>
 - Added four new methods to calculate the Reserves:
 - o <u>Custom Method</u>
 - Expected Claim Method
 - o <u>BF Method</u>
 - o <u>Cape Code Method</u>
 - Added the Methods Comparison feature to enable the Comparison Loss Results between different Methods.
- Patterns
 - Added Patterns for Premiums and Claims.
- <u>Miscellaneous</u>
 - Added the Export functionality that enables the download of Methods, Triangles, and Patterns in an Excel format. Additionally, the Export functionality is also available for the Top 10 Premiums and Top 10 Losses Charts on the **Dashboards** Page.

2 About OFSAA and OFSAA Application Packs

This section contains information about the OFSAA Application Packs.

Topics:

- <u>About Oracle Financial Services Analytical Applications (OFSAA)</u>
- <u>About Oracle Insurance Loss Modeller Application Pack</u>
- <u>About Oracle Financial Services Analytical Applications Infrastructure (OFS AAI)</u>

2.1 About Oracle Financial Services Analytical Applications (OFSAA)

In turbulent markets today, financial institutions require a better understanding of their risk-return while strengthening their competitive advantage and enhancing long-term customer value. Oracle Financial Services Analytical Applications (OFSAA) enable financial institutions to measure and meet risk-adjusted performance objectives, cultivate a risk management culture through transparency, lower the costs of compliance and regulation, and improve insight into customer behavior.

OFSAA uses industry-leading analytical methods, shared data models, and application architecture to enable integrated risk management, performance management, customer insight, and compliance management. OFSAA actively incorporates risk into decision-making, enables you to achieve a consistent view of performance, promotes a transparent risk management culture, and provides pervasive intelligence.

Oracle Financial Services Analytical Applications delivers a comprehensive, integrated suite of financial services analytical applications for both banking and insurance domains.

2.2 About Oracle Insurance Loss Modeller Application Pack

The application projects future cash flows based on the various actuarial methods. The output of the application is useful in different processes such as Capital Modeling, Business Planning, Reserving, AvE, IFRS17 computation, and so on.

The overall application is segregated into two parts; the Landing Page and the Projection Page. The Landing Page is a dashboard that summarizes the Key Performance Indicators such as GWP, Exposure, Losses, Loss Ratios, Major Drivers, Incurred Loss Frequency and severity, etc. with an option to customize and view them at Business Unit, Line of Business, Product, Sub Product, and further coverage levels.

The Projection Page facilitates the working space for the Projection Calculation under various approaches such as Chain Ladder, BF, etc. at Business Unit, Line of Business, Product, Sub Product, and further coverage levels.

2.3 About Oracle Financial Services Analytical Applications Infrastructure (OFS AAI)

Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) powers the Oracle Financial Services Analytical Applications family of products to perform the processing, categorizing, selection, and manipulation of data and information required to analyze, understand and report on specific

performance, risk, compliance, and customer insight issues by providing a strong foundation for the entire family of Oracle Financial Services Analytical Applications across the domains of Risk, Performance, Compliance and Customer Insight.

3 Understanding Oracle Insurance Loss Modeller (OILM) Application

This section provides information and the functional flow of the Oracle Insurance Loss Modeller Application.

Topics:

- Logging in to the OILM Application
- Functional Flow

3.1 Logging in to the OILM Application

To log in to the OILM Application, perform the following steps:

- 1. Access the OILM Application by using the login credentials (User ID and Password) provided and select the preferred language to navigate. The built-in security system ensures that you are only permitted to access the window and actions based on the authorization.
- 2. After logging in to the OFSAA Home screen, the Landing Page is displayed.

Figure 1: The OILM Landing Page

	ORACLE [*] Financial Services Analytical Applications		 ħ	US-English 🔻	C	DILMUSER 🔻	80	0
APPLICA	ATIONS							
		Oracle Insurance Loss Modeller Get insight into Projected triangles and claims statistics						

3. Use the information provided in the following table to set the application preferences.

Field		Description
User Menu	OILMUSER 🔻	 The following options are available in this drop-down: Preferences About Change Password Logout.
Application		Click this icon to view all the applications installed in your environment.

Table 1: The Application Preferences

Field	Description
US-English v	This menu displays the language you selected in the OFSAA Login Window. The language options displayed in the Language Menu are based on the language packs installed in your OFSAA instance. Using this menu, you can change the language at any point in time.
Administration	 Click this icon to navigate to the Administration window. The Administration window displays modules such as: Translation Tools Object Administration Utilities.
Last Failed Login Date & Time	Click this icon to view the details of the last login and last failed login.
Object Administration	Object Administration is an integral part of the infrastructure and facilitates system administrators to define the security framework. See the <u>OFS Advanced</u> <u>Analytics Infrastructure User Guide</u> for details.
Common Object Maintenance	Common Object Maintenance is an integral part of the infrastructure system and facilitates system administrators to define the security framework with the capacity to restrict access to the data and metadata in the warehouse, based on a flexible, fine-grained access control mechanism. See the <u>OFS Advanced Analytics Infrastructure</u> <u>User Guide</u> for details.

- 4. Select Oracle Insurance Loss Modeller on the OFSAA Landing Page .
- 5. Select Oracle Insurance Loss Modeller in the Left-Hand Side (LHS) Pane.

3.2 Functional Flow

The following diagram depicts the functional flow of the Oracle Insurance Loss Modeller application:

Figure 2: The Functional Flow of the Oracle Insurance Loss Modeller Application



3.2.1 Source Data

The Source Data flows from the Policy Admin and Claim system into the Dashboards

The Policy Admin is a system that has records of all policies written by insurance companies. It performs and stores all the key elements for rating, quote generation, binding, issuing, reinsurance, endorsement, renewals, and so on.

The Claim System is a system that has records of all the claims and related details reported to an insurance company. It stores all the key elements of the claims such as, claim amount, lines of business, coverage details, reported claims, approved claims, declined claims, and so on.

3.2.2 Operations

The Operations UI contains the status of the Data Upload, displays the As of Date of Data, Reconciliation of the uploaded data, and maintains the logs of activities. For more information, see the <u>Oracle Financial</u> <u>Services Analytical Applications Infrastructure Administration and Configuration Guide</u>

3.2.3 Dashboards

When configuring the <u>OILM Configuration Tables</u>, the client field is mapped against the fields mentioned in **Dimension** Tab. The Flag(Y) column denotes all the fields the user would like to have displayed on the <u>Dashboard</u> Page as a filter. Additionally, two filters are fixed for every user with a different color in the first row. On the <u>Dashboard</u> Page, all KPIs about the Insurance industry are displayed in the form of graphs. The user has the option to refine them for the Business Unit (Towers), LOB, Product, Sub Product, and at the Coverage Level. For now, the application displays 4 different charts on the screen.

The first graph contains a double Y-axis, on which one Y-axis contains the amount and the other Y-axis contains the percentage. The line graph in this graph represents the loss reports across different timelines. The bar represents the Premium and Claim across the same timeline.

Figure 3: The Dashboard Page



3.2.4 Projects

Projects is a library that is used to store all the monthly or quarterly, or annual projection exercises in the Loss Modeller. For the first time, the default project will be stored in the Projects folder. This folder can be renamed and you can work on the default project after uploading the data. From the next term onwards the user needs to Roll-Forward the existing project to create the next term project. For more information on how to use the Methods feature in the application, see the <u>Projects Summary</u> Section.

is of Date : 01	/01/2021		Projects Su	mmary		e) (?)
ojects Summary	,						
shBoard Filters :	Legal Entity: Commercial Insurar	nce Development: Month	ly				
ers: 🗙 Name	e: X Description:	★ Folder: OILMSEG]	Sort By:	Project Id 🔹	↓ 🔳 🎟	X
λ							
λ ield Search				Page	1 of 1 (1-2 of 2 item:	s) < (1	► >
ک ield Search oject Id	Project Name 11	Folder 14	Created Date 1	Page Created by 1↓	1 of 1 (1-2 of 2 items Modified Date 1↓	s) < ∢ [1] Modified by 1↓	>>>
2 ield Search oject Id ↑↓ 00020	Project Name 11 Triangle 1	Folder 14 OILMSEG	Created Date 11 05/18/2022 18:13:12	Created by 11 OILMUSER	1 of 1 (1-2 of 2 items Modified Date 1↓ 05/18/2022 18:13:12	5) K 4 1 Modified by 11 OILMUSER	Action

Figure 4: The Projects Summary Page

3.2.5 Triangles

The **Triangles** Page displays the default Cumulative Triangle and it displays the Premium, Expenses, and Losses, on the <u>Dashboard</u> Page. For more information on how to use the Methods feature in the application, see the <u>Triangles</u> Section.

s of Date : 01/01/20	121			Т	Triangles					
blood S. Designs Su	ze i		4		lingies					?_
.egal Entity Com	evelopment early	summary > Trian <u>c</u>	lies					i	C Re	oply
Name	Triang	^{gle Type} dent Year	✓ Amoun Paid A	t/Number Amount	✓ Loss Typ Attritic	onal Loss	•			
Gross Net					Cumulat	ive Triangles	Development	Factor Proje	ction Factor	Projection Triangl
Gross Net	iental				Cumulat	ive Triangles	Development	Factor Proje	ction Factor	Projection Triang
Gross Net umulative Increm tritional Loss Triangl Accident Year	eental a 00	12	24	36	Cumulat 48	ive Triangles	Development	Factor Proje	ction Factor 96	Projection Triangl
Gross Net umulative Increm tritional Loss Triangl Accident Year 2012	o o o	12 0	24 0	36 130.377.368.000	Cumulat 48 130,377,368.000	60 130.377,368.000	Development 72 168,088,272.000	Factor Proje	96 168,088,272.000	Projection Triangl
Gross Net umulative Increm tritional Loss Triangl Accident Year 2012 2013	ental 000 0 29,184,628.000	12 0 34,621,928.000	24 0 457,860,568.000	36 130,377,368.000 836,835,956.000	Cumulat 48 130,377,368.000 846,702,340.000	60 130,377,368.000 897,880,720.000	Development 72 168,088,272.000 897,880,720.000	B4 168,088,272.000 918,347,540.000	96 96 168.088.272.000 975.897.516.000	Projection Triangl

The following section details the various triangles available in the application

3.2.5.1 Cumulative Triangle

The Cumulative Triangle is derived from the Incremental Triangle and is a standard way of displaying the subsequent development of Losses and Premium from their Start Dates, Accident, and UW Years in this case. Developments such as Yearly, Monthly, Quarterly, and Half-Yearly are covered in the application.

The Cumulative Triangle does not apply to the Outstanding, Partly Paid (Amount and Number) Triangles. The Yearly, Monthly, Quarterly, and Half-Yearly developments apply to all Triangles.

To derive the Cumulative Triangle from the Incremental Triangle, each value in the Incremental Triangle adds the previous number, the left-hand side number, from the Cumulative Triangle. The number in the second position is the sum of the number in the first position in the Cumulative Triangle, and the number in the second position in the Incremental Triangle in each row.

Figure 6: The Cumulative Triangle

FUNCTIONAL FLOW

						Cumulati	ve Triangles	Developmen	t Factor Pro	ojection Facto	r Projectio	on Trian
											(?
lulativ	e Incremental											
tional	Loss Triangle	00	12	24	26	40	60	73	84	06	109	хÌ
	Accident fear	00	12	24	50	40	00	12	04	90	100	
	2012	0	0	0	130,377,368.00	130,377,368.00	130,377,368.00	168,088,272.00	168,088,272.00	168,088,272.00	172,954,760.0	
	2013	29,184,628.00	34,621,928.00	457,860,568.00	836,835,956.00	846,702,340.00	897,880,720.00	897,880,720.00	918,347,540.00	975,897,516.00		
	2014	82,317,092.00	688,051,452.00	1,577,325,464.00	1,784,742,124.00	1,903,886,952.00	1,903,886,952.00	1,985,186,280.00	2,059,265,824.00			
	2015	192,679,432.00	1,129,183,088.00	1,381,775,340.00	1,650,214,236.00	1,650,214,236.00	1,730,014,440.00	1,767,473,664.00				
	2016	319,195,580.00	602,402,768.00	885,826,964.00	885,826,964.00	980,593,152.00	988,385,376.00					
	2017	266,284,392.00	586,112,868.00	1,411,394,468.00	1,525,378,272.00	1,525,378,272.00						
	2018	47,138,740.00	855,917,260.00	961,770,480.00	994,068,416.00							
	2019	222,368,652.00	406,773,664.00	509,721,564.00								

Depending on the development period for the Triangle, the Triangle Page will display the following developments:

- Monthly Monthly Triangle by default displays 1 Year (12 Developments).
- Quarterly Quarterly Triangles display 2 years (8 Developments).
- Half-yearly Half-Yearly Triangles display 5 Years (10 Developments).
- Yearly Yearly Triangles display 10 Years (10 Developments).

If the Attritional Paid Loss Triangle is being created for a particular line of business, then the column selected from the database is *Loss Type* with the selected value as *Attritional Loss*. For the Paid Loss Triangle, the column to be considered is **Paid Loss** in the Claim System. For the Outstanding Loss Triangle, the **Outstanding Loss** Column is used. For the Gross Premium Triangle, the **Premium** Column from Policy Admin is used. These columns are in addition to other columns such as **Lines of Business**, **Business Unit, Coverage**, and so on based on the selection criteria in the dashboard filters. To create a Triangle, the logic is to first summarize the data based on the filter selection such as **Business Unit, Lines of Business**, **Product, Sub Product, Coverage, Region, Currencies, Loss Type**, and so on based on the selected dimension.

By default, multiple varieties of Triangles are pre-configured within the application and these Triangles can be copied or modified but cannot be deleted.

The Triangle can be Draft, Submitted, Approved, or Rejected based on the status of the work progress.

The user that has Admin rights has the option to Approve or Reject a Triangle. These options are only available when the status of a Triangle is *Submitted*.

Figure 7: The Additional Loss Triangle

Accident Year	0	1	2	3	4	
2017	182,494.00	285,813.00	285,813.00	285,813.00	285,813.00	
2018	0.00	1,457,087.00	1,457,087.00	1,457,087.00		
2019	0.00	0.00	0.00			
2020	0.00	0.00				
2021	0.00					

3.2.5.2 Incremental Triangle

The Incremental Triangle represents the losses and premium for the given Accident or UW or Reporting cohort respectively for a particular point of time when these triangles were created directly from the data. Developments such as Yearly, Monthly, Quarterly, and Half-Yearly are covered in the application. In case it is a loss Triangle such as Paid or Outstanding and Claim-related expense, the source table will be the Claim system and the Triangle basis (left vertical axis) in the Triangle will be Accident Year. The default setting can be modified to another basis.

						Cur	mulative Tria	ngles De	velopment Fa	ctor Proj	ection Factor	Projection	n Triangle
mulative	Incremental]											?
ritional L	oss Triangle	1997°										þ	x]
	Accident Year	00	12	24	36	48	60	72	84	96	108		
	2012	0	0	0	130,377,368.00	0	0	37,710,904.00	0	0	4,866,488.00		
	2013	29,184,628.00	5,437,300.00	423,238,640.00	378,975,388.00	9,866,384.00	51,178,380.00	0	20,466,820.00	57,549,976.00			
	2014	82,317,092.00	605,734,360.00	889,274,012.00	207,416,660.00	119,144,828.00	0	81,299,328.00	74,079,544.00				
	2015	192,679,432.00	936,503,656.00	252,592,252.00	268,438,896.00	0	79,800,204.00	37,459,224.00					
	2016	319,195,580.00	283,207,188.00	283,424,196.00	0	94,766,188.00	7,792,224.00						
	2017	266,284,392.00	319,828,476.00	825,281,600.00	113,983,804.00	0							
	2018	47,138,740.00	808,778,520.00	105,853,220.00	32,297,936.00								
	2019	222,368,652.00	184,405,012.00	102,947,900.00									
	2020	169.612.652.00	221.795.200.00										

Figure 8: The Incremental Triangle

The Attritional Paid Loss Triangle, Paid Loss Triangle, Outstanding Loss Triangle, and Gross Premium Triangle work similarly to the Cumulative triangle in this tab.

3.2.5.3 Development Factor Triangle: Age to the Age calculation

The Development Factor Triangle is calculated by using the Cumulative Triangle. Irrespective of a selected Triangle, the Development Factor, and Age to Age Factor is always derived from the Cumulative Triangle.

Figure 9: The Age to Age Factor Triangle

FUNCTIONAL FLOW

	Cumulative Triangles Development Factor P													
ge to Age Factor Triangle												x		
	Accident Year	0-12	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108				
	2012	0	0	0	1.00	1.00	1.29	1.00	1.00	1.03				
	2013	1.19	13.22	1.83	1.01	1.06	1.00	1.02	1.06					
	2014	8.36	2.29	1.13	1.07	1.00	1.04	1.04						
	2015	5.86	1.22	1.19	1.00	1.05	1.02							
	2016	1.89	1.47	1.00	1.11	1.01								
	2017	2.20	2.41	1.08	1.00									
	2018	18.16	1.12	1.03										



o Age Factor Triangle											X
	Simple Average										
0	Latest-5	5.28	1.49	1.09	1.04	1.02	1.09	1.02	1.03	1.03	
0	Latest-3	7.43	1.59	1.04	1.04	1.02	1.02	1.02	1.03	1.03	
0	Latest-2	2.07	1.19	1.06	1.06	1.03	1.03	1.03	1.03	1.03	
	Volume Weighted Average										
0	All year	3.53	1.67	1.15	1.03	1.03	1.03	1.03	1.05	1.03	
0	Latest-5	2.78	1.44	1.10	1.03	1.03	1.03	1.03	1.05	1.03	
0	Latest-4	3.18	1.54	1.09	1.04	1.03	1.03	1.03	1.05	1.03	
0	Latest-3	3.77	1.56	1.04	1.02	1.02	1.02	1.03	1.05	1.03	
0	Latest-2	2.04	1.16	1.06	1.04	1.04	1.03	1.03	1.05	1.03	
۲	All year average	4.64	2.87	1.04	1.03	1.02	1.09	1.02	1.03	1.03	
	Geometric Average										
0	Latest-3	4.25	1.50	1.04	1.04	1.02	1.02	1.02	1.03	1.03	

The following is the formula used for calculating the different averages:

- Simple Average Latest 5: It calculates the simple average of the latest 5 years that are available in the Development Factor Triangle. Note that if the data is available till the year 2020, then the Development Factor will contain factors only till the year 2019. Based on this understanding the latest year, in this case, will be 2019 and not 2020. The simple 5-year average is calculated by using the years 2015, 2016, 2017, 2018, and 2019 years.
- **Simple Average Latest 3**: It calculates the simple average of the latest 3 years available in the Development Factor Triangle. For example, the years 2017, 2018, and 2019.
- **Simple Average Latest 2:** It calculates the simple average of the latest 2 years available in the Development Factor Triangle. For example, the years 2018 and 2019.
- Volume weighted average Latest 5: It calculates the Volume Weighted Average of the latest 5 years that are available in the Development Factor Triangle. It calculates the Weighted Average by using the Development Factors from the Development Triangle and the corresponding numbers from the Cumulative Triangle.
- Volume weighted average Latest 4: It calculates the Volume Weighted average of the latest 4 years that are available in the Development Factor Triangle. It calculates the Weighted Average by

using the Development Factors from the Development Triangle and the corresponding numbers from the Cumulative Triangle.

- Volume weighted average Latest 3: It calculates the Volume Weighted Average of the latest 3 years available in the Development Factor Triangle. It calculates the Weighted Average by using the Development Factors from the Development Triangle and the corresponding numbers from the Cumulative Triangle.
- Volume weighted average Latest 2: It calculates the Volume Weighted Average of the latest 2 years that are available in the Development Factor Triangle. It calculates the Weighted Average by using the Development Factors from the Development Triangle and the corresponding numbers from the Cumulative Triangle.
- **All-year average:** It calculates the Simple Average by using all the available years in the Development Triangle.
- **Geometric Average Latest 3:** It calculates the Geometric Average of the latest 3 years available in the Development Factors Triangle.
- **Selected:** This section displays all the selected averages. This section is editable and can be modified after selecting an average. Users can select any of the above-average by clicking the radio button based on their observation or requirement.
- **Cumulative Development Factor:** This section calculates the Cumulative Development Factor (CDF). The calculation uses a user-selected row as a base.
- **Ratio to Ultimate Factor:** The Ratio to Ultimate Factor is calculated based on the Cumulative Development Factor.

3.2.5.4 **Projection Factor**

The Projection Factor is calculated to get the Development Patterns for future developments (such as future years, half years, quarters, or months). The data is derived from the Development Factor or Age to Age Factor and is displayed in a Triangle format.

Figure 11: The Projection Factor

FUNCTIONAL FLOW

					C	Cumulative	e Triangles	Devel	opment Fa	ictor .	Projection Factor Projection Triar
											(
pjection Factor Triangle											X
	Accident Year	12	24	36	48	60	72	84	96	108	
	2012										
	2013									1.03	
	2014								1.03	1.03	
	2015							1.02	1.03	1.03	
	2016						1.09	1.02	1.03	1.03	
	2017					1.02	1.09	1.02	1.03	1.03	
	2018				1.03	1.02	1.09	1.02	1.03	1.03	
	2019			1.04	1.03	1.02	1.09	1.02	1.03	1.03	

3.2.5.5 **Projection Triangle**

The Projection Triangle has two sections; the first section is the Cumulative Triangle, which is already generated under the **Cumulative Triangle**Tab, and the second section is the projection numbers. Here, the Development Factors from the Projection Factor are multiplied by the latest cumulative numbers, brought in here from the Cumulative Triangle, to produce projected numbers.

ion Triangle										
Accident Year	00	12	24	36	48	60	72	84	96	108
2012	0	0	0	130,377,368.00	130,377,368.00	130,377,368.00	168,088,272.00	168,088,272.00	168,088,272.00	172,954,760.00
2013	29,184,628.00	34,621,928.00	457,860,568.00	836,835,956.00	846,702,340.00	897,880,720.00	897,880,720.00	918,347,540.00	975,897,516.00	1,005,174,441.48
2014	82,317,092.00	688,051,452.00	1,577,325,464.00	1,784,742,124.00	1,903,886,952.00	1,903,886,952.00	1,985,186,280.00	2,059,265,824.00	2,121,043,798.72	2,184,675,112.68
2015	192,679,432.00	1,129,183,088.00	1,381,775,340.00	1,650,214,236.00	1,650,214,236.00	1,730,014,440.00	1,767,473,664.00	1,802,823,137.28	1,856,907,831.40	1,912,615,066.34
2016	319,195,580.00	602,402,768.00	885,826,964.00	885,826,964.00	980,593,152.00	988,385,376.00	1,077,340,059.84	1,098,886,861.04	1,131,853,466.87	1,165,809,070.87
2017	266,284,392.00	586,112,868.00	1,411,394,468.00	1,525,378,272.00	1,525,378,272.00	1,555,885,837.44	1,695,915,562.81	1,729,833,874.07	1,781,728,890.29	1,835,180,757.00
2018	47,138,740.00	855,917,260.00	961,770,480.00	994,068,416.00	1,023,890,468.48	1,044,368,277.85	1,138,361,422.86	1,161,128,651.31	1,195,962,510.85	1,231,841,386.18
2019	222,368,652.00	406,773,664.00	509,721,564.00	530,110,426.56	546,013,739.36	556,934,014.14	607,058,075.42	619,199,236.93	637,775,214.03	656,908,470.45
2020	169,612,652.00	391,407,852.00	1,123,340,535.24	1,168,274,156.65	1,203,322,381.35	1,227,388,828.98	1,337,853,823.58	1,364,610,900.06	1,405,549,227.06	1,447,715,703.87

Figure 12: The Projection Triangle

3.2.6 Methods

This section provides detailed information on the methods that are available in the application.

3.2.6.1 Chain Ladder

The Chain Ladder Method is used to forecast the reserve that must be established for a particular year to cover future losses. The exercise uses projected losses from the triangulation method. The Chain Ladder Method requires the Cumulative Paid Triangle and Cumulative Reported Losses Triangle as a prerequisite, however, the application enables the modification of the basis of these calculations and different Triangles can be selected. For more information on how to use the Methods feature in the application, see the <u>Methods</u> Section.

3.2.6.2 Custom Method

The customized approach is a continuation of the Chain Ladder Method. The first table is the same as the Chain Ladder Method. Two different sets of Adjustments can be added in the **Adjustment 1** and **Adjustment 2** Columns for the final output.

Both the columns, Adjustment 1 and Adjustment 2, are editable at the cell level, and adding a comment for a modified cell is mandatory.

The calculation of IBNR, IBNR based on Dev. Method with, and Reserve, Total based on Using Dev. Method displays both Adjustment 1 and Adjustment 2 as an Input Variable for customization and adjustments.

The adjustment columns enable the upload of Patterns and other calculations performed within the application as well as external sources such as Excel, CSV, etc as these calculations or Patterns are available for all the Accident Years. Failing this the system gives an error message informing us that the input is not in the correct format.

3.2.6.3 Expected Claim

The Expected Claim Method is used to forecast the amounts. This is done by projecting historical experiences into the future.

The Expected Claim Method requires the Cumulative Paid Triangle, Cumulative Reported Losses Triangle along with Cumulative Earned Premium Triangle as a prerequisite.

On clicking the **Expected Claim** Tab on the **Methods** Page, three tables will be displayed. For more information on how to use the Methods feature in the application, see the <u>Methods</u> Section.

3.2.6.4 Bornhuetter Ferguson (BF) Method

The BF Method combines two methods by splitting the Ultimate Losses into two components: Actual Losses and Expected Unreported (or Unpaid) Losses. As the years mature, more weight is given to the Actual Losses and Expected Losses (Loss Projection) gradually becomes less important. This method is a reasonable approach to estimating Ultimate Losses, especially for current or recently completed years, by smoothing the variance caused by the absence or presence of Large Claims.

The BF Method is useful for situations where the Actual Losses are not a good indicator of IBNR. This is often the case for low frequency but high severity lines of insurance. Another advantage of the BF Method is that it can be used even if there is not enough Historical Data. This method can be particularly useful when entering a new Line of Business. Additionally, the BF Method smooths the variance when there are random fluctuations or large claims at early maturities. This is useful for Long-Tailed Lines of Insurance such as medical malpractice or workers' compensation, particularly for the most immature years.

3.2.6.5 Cape Cod Method

The Cape Cod Method, also known as the Stanard-Buhlmann Method, is used to calculate the Ultimate Losses in the Loss Reserves. Losses are projected through the Cape Cod Method by measuring both the Loss Exposure and Loss Development that occurs in a year. There are diverse volume measures that estimate the Loss Reserves for the Historical Accident Years. The Cape Cod Method, however, uses Volume Measures to project the Ultimate Losses for all Accident Years.

The Cape Cod Method is identified as a framework or an extension under the BF Method. It is a method that projects the Loss Development as well as patterns that signal the Ultimate Losses in Accident Years. The Cape Cod Method uses approaches that are more comprehensive than other methods, for example, many volume measures, and even the BF Method uses external information to calculate Loss Reserves for Accident Years. The Cape Cod Method, however, uses both internal and external information for the Ultimate Loss Calculations. The Cape Cod Method calculates the Loss Reverses by dividing the Loss to Date by Exposure, and then dividing it by the Ultimate Loss Development. The Cumulative Losses are also estimated by the Cape Cod Method.

3.2.7 Patterns

A variety of trends and patterns are used in the general insurance industry to calculate some of the IFRS17-specific inputs. A few examples of these are Earning Patterns, Premium Receiving Patterns, Claims Payment Patterns, and so on. This section uses these Patterns, calculated from either the previous sections (e.g. Triangles) or via direct input, to calculate IFRS 17 specific inputs.

3.2.8 Outputs

The output generated in the application is consumed by various processes and applications. Some of the examples are Reserving Exercise and Capital Modeling. A large portion of these outputs are also required for the IFRS17 computation and thus these work as an input for Oracle Insurance Accounting Analyzer (OFS IAA). The outputs that will be mapped to OFS IAA are:

- The Ultimate is calculated from each of the Loss Triangles, for example, Paid and Incurred Triangles. These losses form the expected losses for a particular Accident Year in the IFRS17 Application and will be mapped to the respective Accident Year.
- The IBNR is calculated using different methods, for example, the Chain Ladder Method. In case, the Incurred Loss has a component of IBNR, these are mapped based on the accident years in the IFRS17 Application.
- The Output is calculated from each variety of patterns, for example, Earned Premium. Depending on the variety of patterns, it can be mapped to the Underwriting Year (UWY) or Accident Year (AY). For example, the Earned Premium is mapped based on the UWY, and claim payment is mapped based on the AY.

4 OILM Workflow

The following diagram illustrates the OILM Approval Workflow.



- 1. The User Analyst or Admin can create and modify Triangles, and Methods. Once the Triangle or Method is created or modified the Triangle and Methods the status will be *Draft*. Once the user submits the Triangle or Method the status changes to *Submitted*. The Admin can approve or reject the submitted Triangle or Method.
- 2. The Admin can log in and *Approve* or *Reject* the modification of the submitted Triangle or Method.
- 3. Once *Approved*, the Triangle or Method cannot be modified further.
- 4. If Rejected, the analyst or admin can modify the Triangle or Method.
- 5. Only the Admin can delete the Triangle or Method.
- **6.** When clicking Save As, the user is prompted to give a name to the Triangle or Method to save. It appends incremental numbers to the existing name, for example, -1,1-1. If the user wants to edit a Triangle or a Method, he can modify the Triangle or Method Name.

5 Application Workflow

This chapter provides the application workflow of various modules. This chapter includes the following sections:

5.1 Global Preferences

From the **OILM Landing** Page, select **Oracle Insurance Loss Modelle**r on the OFSAA Landing Page , then select **Oracle Insurance Loss Modeller** in the Left-Hand Side (LHS) Pane, and then select **Global Preferences** to open the **Global Preferences** Page.

		10 to 10	US-English 🔻 OILMUSER 🔻 🛞	3
Global Preferences v Display			Ø	4
Show Preferences for OILMUSER				
Property Name	Property Value		Is Editable	
Default Application Language	US-English 🗸			
Date Format	MM/dd/yyyy			
Pagination Records	20			
∽Ledger				
Property Name	Property Value			
Functional Currency	US Dollar			
Signage	Natural Signage			
Apply	Cancel Reset to Default			
		Copyright © 1993,	, 2021, Oracle and/or its affiliates. All rights reserved	J.

Figure 13: The Global Preferences Page

5.1.1 Setting the Global Preferences

Global Preferences items are used to configure your user interface. If you are logged in as an Administrator, you can set Global Preferences for all users by selecting All Users from the **Show Preferences** for the drop-down list.

While setting preferences for All Users, you may restrict the ability of non-Administrators to change a Global Preference item by deselecting the **Is Editable** checkbox. If a preference item is defined as not editable, a user who is not an Administrator will inherit the value of the preference item that his Administrator has set for him and he will not have the ability to change it for himself.

1. Set the Global preference as tabulated:

Table 2: The Parameter IDs

Field	Description
Details Pane	
Show Preferences for	Select a value from the drop-down list

Field	Description
Display Pane	
Default Application Language	Select the default language from the drop-down list.
Date Format	Select the required date format to be used in the application from the drop-down list.
Pagination Records	Enter a value in this field.
	If you select Pagination Records to be 25 records, then any screen displaying results in a tabular format will display a maximum of 25 records. To see the next set of 25 records, use the Next button.
Ledger Pane	
Functional Currency	Enter a value in this field.
	Functional Currency is an installation-time parameter that may not be reset in Global Preferences. Functional Currency is defined as the currency of the primary economic environment in which an entity conducts its business. For details on signage, see the Oracle Financial Services Analytical Applications Profitability Management (OFSPM) User Guide.
Signage	Enter a value in this field.
	Signage is an installation-time parameter that may not be reset in Global Preferences. Functional Currency is defined as the currency of the primary economic environment in which an entity conducts its business. For details on signage, see the Oracle Financial Services Analytical Applications Profitability Management (OFSPM) User Guide.

- 2. Click **Apply** to save the changes.
- 3. Additionally, click **Reset to Default** to reset the form to its default values.

5.2 OILM Configuration

From the **OILM Landing** Page, select **Oracle Insurance Loss Modeller** in the **OFSAA** Landing Page , then select **Oracle Insurance Loss Modeller** in the Left-Hand Side (LHS) Pane, and then select **OILM Configurations** to open the **OILM Configurations** Page.

Figure 14: The OILM Configurations Page

OILM CONFIGURATION

OILM Config	uration		₿ € ?
		Users OILMUSER	•
As Of Date	2021-01-01 💌	Dimension Selection	Legal Entity × Business Unit × Line of Business × Product × Sub Product × Coverage × Location × Zone × Development × Country ×
Calculation Decimal Places	2	Display Decimal Places	2
atest Years for Yearly Friangles	10	Latest Years for Quarterly Triangles	2
atest Years for Monthly riangles	1	Latest Years for HalfYearly Triangles	5

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Use this Page to set the OILM configurations. Populate the form as tabulated:

Table 3	3: The	OILM	Configuration	Details
---------	--------	------	---------------	---------

Field	Description
Users	Select the user from the drop-down list.
As Of Date	Select the as-of date from the drop-down list
Dimension Selection	Select a dimension from the drop-down list.
Calculation Decimal Places	Enter a numeric value for the decimal places of the data that is generated in the application.
Display Decimal Places	Enter a numeric value for the decimal places of the data that is displayed in the application.
Latest Years for Yearly Triangles	Enter a numeric value for the latest years that must be displayed for the Yearly Triangles
Latest Years for Quarterly Triangles	Enter a numeric value for the latest years that must be displayed for the Quarterly Triangles
Latest Years for Monthly Triangles	Enter a numeric value for the latest years that must be displayed for the Monthly Triangles
Latest Years for HalfYearly Triangles	Enter a numeric value for the latest years that must be displayed for the Half-Yearly Triangles

Click **Save**, to save your changes.

5.3 Dashboard

From the **OILM Landing** Page, select **Oracle Insurance Loss Modeller** in the OFSAA Landing Page, then select **Oracle Insurance Loss Modeller** in the Left-Hand Side (LHS) Pane, and then select **Dashboard** to open the **Dashboard** Page.

Figure 15: The Dashboard Page

of Date: 01/01/2021	Dashbo	ard	?
gal Entity Development om	·		Apply C Reset
Claim Status All Sum Of Premium) Sum Of Losse	es) Average Of Loss Ratio	Claim Status All Sum Of Losses	
1.58	83%		
1.28	67%	5.07% 11.1% 13.5%	Mar 21 Apr 21 May 21
0.98	50% Sum Of Premium 50% Average Of Loss Ratio	11.3% 15.5%	Jun 21 Jul 21 Aug 21
0.68	33%	18.0%	Sep 21 Oct 21 5.55% Nov 21
0.38	17%	3.32%	Dec 21

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5.3.1 Dashboard Filters

Dashboard filters are dimensions specific to an Insurance Company. Apart from the available filters in the dashboard, an Insurance Company can add more dimensions based on the requirement. In the current release, up to 10 dimensions can be updated to be displayed on the Dashboard filters, for more information on how to configure the OILM Tables, see the **Configuration of the OILM Configuration Tables** in the <u>Oracle Insurance Loss Modeller Installation Guide</u>. In future releases, the user will be able to add more than 10 (up to 20) dimensions and choose 10 from them to be shown in the dashboard filter.

	Figure 16: Th	e Dashboard Filters	5					
\equiv		Insurance Loss Modeller		(US-English 🔻	OILMUSER ▼ & @	9
As of	f Date: 01/01/2021	D	ashboard				?	
Lega Cor Deve Mo	al Entity ▼ Business Un ▼ elopment nt	Line of Busir Product	Sub Product Coverage	Location 👻 Zone	•	I	Apply Apply C Reset	

Out of these 10 dimensions, 7 dimensions will appear on the filter band and the remaining 3 can be viewed

after clicking the **Manage Filters** in Icon. Click the **Manage Filters** Icon to select or deselect the required filters and then click Apply. See the Appendix <> to view the list of available dimensions available in the application.

- Legal entity This is a mandatory dimension and appears by default on the Dashboards Filter.
- Business Unit

- Line of Business
- Product
- Sub Product
- Coverage
- Location
- Zone
- Development This contains developments for:
 - Half Yearly
 - Monthly
 - Yearly
 - Quarterly
- Country

Click Reset to reset the filters to the previous setting.

Based on the selection of the filters, the graphs on the **Dashboard** Page are refreshed. If some dimensions are not selected, the calculation will be done at the aggregate level for those unselected dimensions.

The selected filters are carried forward to the <u>Project Summary</u>, <u>Triangles Summary</u>, <u>Method Summary</u>, <u>and Pattern Summary Pages</u>. The Projects, Triangles, Methods, and Patterns displayed on the respective pages are based on these filter selections.

5.3.1.1 Graph 1 - Premium, Losses, and Loss Ratio

The Premium, Losses, and Loss Ratio Graph is a Multi-Bar Line Graph with 2 vertical axes and one horizontal axis. The premium and losses are displayed by using bars, and the Loss Ratio is displayed by using a Line Graph. The left-hand side of the Y-axis displays intervals in absolute numbers and is used as a reference for the Premium and Losses. The right-hand side of the Y-axis displays intervals in the percentage form and is used as a reference for the Loss Ratios.

In addition to the dashboard filters, the **Claim Status** Filter is specific to this graph. This filter contains the options *Open* and *Close* claims. The X-axis displays the timelines for each quarter by default and can be modified from the Dashboard Filter selection. The Claim status is only applicable for the Sum of Losses and Loss Ratios.

Figure 17: Graph 1 - The Premium, Losses, and Loss Ratio Graph with the Claim Status as All



Additionally, hover over each bar to view the detailed values.

Figure 18: The Hover over Details for the Bar Chart



5.3.1.2 Graph 2 - Claim Status Pie Graph

The Claim Status Pie Graph displays the percentage of reported claims for each quarter. In addition to the dashboard filters, the **Claim Status** Filter is available for this graph and contains the *Open* and *Close* options. On selection of the *Close* option, a proportion of all the settled claims across ten quarters (can be modified to months, half-year, and annual from the Dashboard filters) are displayed in a Pie form. Similarly, on the selection of the **Claim Status** *Open*, all unsettled claims are displayed. The **Claim Status** Column is available in the Claim System. The X-axis displays the timelines for each quarter by default and can be modified from the Dashboard Filter selection.



Figure 19: Graph 2 -The Claim Status as All

The Pie Graph appears in the 3D view by default. Click 2D to view the Pie Graph in 2D.



Figure 20: The Hover over Details for the Pie Chart

Additionally, hover over each bar to view the detailed values.

Figure 21: The Hover over Details for the Pie Chart

Claim Status		Claim Status	?
Sum Of Premium Sum Of Losses Avera	ige Of Loss Ratio	Sum Of Losses	
18M	100%		
15M	- 425	2.61%	Sector 2017
12M	- 675	2125	Value 1.574M 2010
pM	Sum Of Premium 10% Sum Of Losses Average Of Loss Ratio	NIN	2013 2013 2014
6M			2015 2016 2017
3M			
0	4 2015 2016		
		3D 2D	

5.3.1.3 Graph 3 - Loss Ratio Multi-Line Graph

This is a Multi-Line Graph that displays the loss ratios of different Lines of Business (LOB) in the same graph. The Y-axis represents the loss ratios and is displayed in a percentage format. The X-axis represents the development time frame and by default displays a quarterly development. This graph contains a filter to select the Line of Business when viewing the Average Loss Ratio.



Figure 22: Graph 3 - The Loss Ratio Multi-Line Graph

Additionally, hover over each bar to view the detailed values.

Figure 23: The Hover over Details for the Loss Ratio Multi-Line Graph



5.3.1.4 Graph 4 – Boxplot Losses

Box Plot or Boxplot is a method for graphically depicting groups of numerical data through their quartiles. Box plots may also have lines extending from the boxes (whiskers) indicating variability outside the upper and lower quartiles, hence the terms Box-and-Whisker Plot and Box-and-Whisker Diagram. Outliers may be plotted as individual points. Box Plots are non-parametric: they display variation in samples of a statistical population without making any assumptions about the underlying statistical distribution. The spacing between the different parts of the box indicates the degree of dispersion (spread) and skewness in the data and shows outliers. In addition to the points themselves, they allow one to visually estimate various L-estimators, notably the interquartile range, midhinge range, mid-range, and trimean. Box Plots can be drawn either horizontally or vertically.



Figure 24: The Boxplot Losses

Additionally, hover over each bar to view the detailed values.

Figure 25: The Hover over Details for the Boxplot Losses Plot Graph



5.3.1.5 Top X Accounts and Losses

101420

This shows the list of top X Accounts based on the volume of Premium and Losses. The Premium and Losses are shown in descending order with the highest at the top. The columns displayed for the Top X Accounts are; Policy Number, Line of Business, Name of Account, and Premium. For the Top X Losses, the columns displayed are; Claim Number, Line of Business, Name of Account, and Incurred Claims. Enter a numeric value in the field adjacent to Top X Accounts and Top X Losses. Only 2-digit values can be entered with the highest being 99. By default, this grid displays the Top 10 Accounts and Losses. Additionally, click the Export to xlsx icon to download the details in an Excel format.

Click the link in the Policy Number or Claim Number column to view its details respectively.

Figure 26: The Policy Details Window

P87420

11
0:00:00
Incurred Claims î↓

ICICI Lombard

699,876.00

General Accident

Click **Projects Summary** to navigate to the **Projects Summary** Page.

5.4 **Projects Summary**

The **Project Summary** Page displays the list of all projects available in the Application.

Figure 28: The Project Summary Page

As of Date: 0	1/01/2021		Projects Su	mmary		+) (?)
ashboard > Pro	jects Summary						
)ashBoard Filters :	Legal Entity: Commercial Insuran	ce Development: Mon	thly				
Iters: 🗙 Nam	e: X Description:	X Folder: OILMSE	5	Sort By:	Project Id 🔹	↓ ■	x
-							
Q							
Q Field Search				Page	1 of 1 (1-3 of 3 iten	ns) < 4 1	→ >
Q Field Search Project Id ↑↓	Project Name 11	Folder 1	Created Date 14	Page Created by 14	1 of 1 (1-3 of 3 iten Modified Date 1↓	ns) K 4 1	>>> Action
Project Id 11 200020	Project Name 11 Check 1	Folder 11 OILMSEG	Created Date 14 06/14/2022 12:15:29	Created by 11 OILMUSER	1 of 1 (1-3 of 3 iten Modified Date 14 06/14/2022 12:15:29	ns) IC 4 1 Modified by 11 OILMUSER	Action
Q Field Search Project Id 11 200020 200023	Project Name 11 Check 1 Project-1	Folder 11 OILMSEG OILMSEG	Created Date 14 06/14/2022 12:15:29 06/14/2022 12:19:08	Page Created by 11 OILMUSER OILMUSER	I of I (1-3 of 3 iten Modified Date 14 06/14/2022 12:15:29 06/14/2022 13:05:08	No. IK (1 Modified by 14 OILMUSER OILMUSER	Action

Click the **Search** Field and enter the name, description and select a folder in the respective fields and click **Search** to find a required Project.

Additionally, enter a value in the **Field Search** field to search for a Project.

The Projects that appear in the list can be sorted by Project Id, Name, Folder, Created Date, Created By, Modified Date, Modified by, and Action. Select how the list must be sorted by selecting a value from the **Sort by** drop-down list.

Additionally, click the **Export to xlsx** Button to download the Project details in an Excel format.

5.4.1 Create a Project

Perform the following steps to create a Project:

1. On the **Project Summary** Page, click **Create Project I** to open the **Project** Window.

Figure 29: The Project Window

Project	;	<
Name	Enter Name for Project	
Description		
Folder	OILMSEG 👻	
	Save Cancel	

- 2. Enter a name for the Project in the Name Field.
- 3. Enter a description for the Project in the **Description** Field.
- 4. In the Folder drop-down list, select a folder for the Project.
- 5. Click Save.
- 6. Additionally, click **Reset** to reset the values in the fields.

The new project appears in the Project Summary List.

5.4.2 View or Edit a Project

Perform the following steps to view or edit a project:

- 1 Click Action
- 1. Click **Action** adjacent to the required Project.
- 2. Click View/Edit to open the View/Edit Window for the Project.
- **3.** Modify the fields and then click **Save**.

5.4.3 Save a Project

The Save As feature allows you to save a Project under a new name and details. Perform the following steps to save a modified Project under a new name:

- 1. Click Action _____ adjacent to the required Project.
- 2. Click Save As to open the Save As Window for the Project.
- **3.** Modify the fields and then click **Save**. Note, that the value in the name field must be unique. If an existing Project already contains the same name, then the application will prompt you to add a different name.

5.4.4 Download the Project Details

Perform the following steps to download the Project details in an Excel format:

- 1. On the **Project Summary** Page, click the **Excel** icon.
- 2. The Excel is downloaded to your system and you can view the Project details in the Excel document.

5.4.5 Delete a Project

Only an Admin user can delete a Project. Perform the following steps to delete a Project:

- 1. Click **Action** adjacent to the required Project.
- 2. Click Delete.

A confirmation message appears.

3. Click Yes to delete the Project.

5.4.6 Rollforward a Project

Perform the following steps to roll forward a Project:

- **1.** Click **Action** adjacent to the required Project.
- 2. Click Rollforward.

A confirmation message appears.

3. Click **Yes** to roll forward the Project.

5.4.7 Refresh a Project

Perform the following steps to refresh a Project:

- 1. Click **Action** adjacent to the required Project.
- 2. Click Refresh.

A confirmation message appears.

3. Click **Yes** to refresh the Project

5.4.8 Triangles

Click **Action** adjacent to the required Project and then click **Triangles** to open the **Triangle Summary** Page.

Figure 30: The Triangles Summary Page

PROJECTS SUMMARY

As of Date :	1/01/2021		Tria	ingle Sur	mmary			•	?
ashboard > I	rojects Summary > Tria	ngle Summary							
ilters: 🗙 Na	me: X Description:	× Folder: OILMSEG	× Development: Yearly	× Legal Entity	/: Commercial Insurance				
					Sort By: Trian	ngle Id	•	↓ 🔳 🔳	x
Q									
Field Search					Page 1	of 1 (1-6	of 6 items)	< - € 1 →	×
Field Search Triangle ↑↓ d	Triangle Name 1	Triangle Type ↑↓	Loss Type ी↓	Folder 1↓	Page 1 Created Date 1↓	of 1 (1-6 Created by ↑↓	5 of 6 items) Status ↑↓	I< 1 → Approved/Rejected by	> Actio
Field Search Triangle 11 d 11	Triangle Name 11 Comm-Paid	Triangle Type 11 Accident Year	Loss Type 11 Attritional Loss Triangle	Folder 1↓ OILMSEG	Page 1 Created Date 11 06/02/2022 11:14:48	of 1 (1-6 Created by 14 OILMUSER	of 6 items) Status ↑↓ Approved	Approved/Rejected 11	> Actio
Field Search Irriangle ↑↓ 200025 200026	Triangle Name 11 Comm-Paid Comm-Incurred	Triangle Type 14 Accident Year Accident Year	Loss Type 11 Attritional Loss Triangle Attritional Loss Triangle	Folder 1↓ OILMSEG OILMSEG	Page 1 Created Date 14 06/02/2022 11:14:48 06/02/2022 11:17:10	of 1 (1-f by 14 OILMUSER OILMUSER	Status 14 Approved Approved	Approved/Rejected 1	> Actio
Field Search Triangle 11 200025 200026 200027	Triangle Name 11 Comm-Paid Comm-Incurred Comm-EP	Triangle Type 11 Accident Year Accident Year Underwriting Year	Loss Type 11 Attritional Loss Triangle Attritional Loss Triangle Attritional Loss Triangle	Folder 14 OILMSEG OILMSEG OILMSEG	Page 1 Created Date 1↓ 06/02/2022 11:14:48 06/02/2022 11:17:10 06/02/2022 11:58:50	of 1 (1-f by 14 OILMUSER OILMUSER OILMUSER	Status 14 Approved Approved Approved	Approved/Rejected 1	> Actio

Click the **Search** Field and enter the name, description and select a folder in the respective fields and click **Search** to find a required Triangle.

Enter a value in the **Field Search** Field to search for a Triangle.

Click either **DashBoard** or **Projects Summary** or **Triangle Comparison** or **Methods Summary** or **Pattern Summary** to navigate to the **Dashboard**, **Projects Summary**, **Triangle Comparison**, **Methods Summary**, or **Pattern Summary** Page respectively.

5.4.8.1 Download the Triangle Details

Perform the following steps to download the Triangle details in an Excel format:

- 1. On the Triangle Summary Page, click the Excel icon.
- **2.** The Excel is downloaded to your system and you can view the Triangle details in the Excel document.

5.4.8.2 Delete a Triangle

Perform the following steps to delete a Triangle as an Admin user:

NOTE

Approved Triangles cannot be deleted.

- 1. Log in to the application as an Admin user
- 2. Click the More icon adjacent to the Triangle that you want to delete.

A confirmation message appears asking you if you want to delete the Triangle.

3. Click Yes.

The Triangle is deleted and the list of Triangles is refreshed to reflect the remaining Triangles.

5.4.8.3 Refresh a Triangle

Perform the following steps to refresh a Triangle:
1. Click the **More** icon adjacent to the Triangle that you want to refresh.

The Triangle is refreshed with the newly available data.

5.4.8.4 Approve or Reject a Triangle

Figure 31: The Triangles Page

Perform the following steps to Approve or Reject a Triangle:

- 1. Click the **More** icon adjacent to the Triangle that you want to *Approve* or *Reject*.
- **2.** If *Approve* is clicked, then the Triangle is approved and cannot be modified further. Or
- **3.** If *Reject* is clicked, then the Analyst or Admin user can modify the Triangle and submit it again for approval.

5.4.8.5 Add a Triangle

On the **Triangle Summary** Page, click **Add to** open the **Triangles** Window.

s of Date	: 01/01/2021				Ti	riangles						?
shboard > Legal Entit Com	y Version Summary	r > Triangle Sum	mary > Triangles							i L C	Apply Reset	
Name Triangle Gross	e1	Triangle Tr Acciden	^{ype} t Year	▼ Amount/ Paid Ar	Number nount	▼ Loss Typ Attritio	^{pe} onal Loss	•				
Cumulativ	e Incremental					Cumulat	ive Triangles	Developme	nt Factor Pr	ojection Factor	Projecti	on Triang
Cumulativ	e Incremental Loss Triangle]				Cumulat	ive Triangles	Developme	nt Factor Pr	rojection Factor	Projecti	on Triang
Cumulativ Attritional	e Incremental Loss Triangle Accident Year	00	12	24	36	Cumulat	tive Triangles	Developmen 72	nt Factor Pr 84	rojection Factor	Projecti 108	on Triang
Cumulativ	e Incremental Loss Triangle Accident Year 2012	00	12 0	24 0	36 130,377,368.00	Cumulat 48 130,377,368.00	60 130,377,368.00	Developmen 72 168,088,272.00	nt Factor Pr 84 168,088,272.00	96 168,088,272.00	Projecti 108 172,954,760.00	on Triang
Cumulativ	e Incremental Loss Triangle Accident Year 2012 2013	00 0 29,184,628.00	12 0 34,621,928.00	24 0 457,860,568.00	36 130,377,368.00 836,835,956.00	Cumulat 48 130.377,368.00 846,702,340.00	60 130,377,368.00 897,880,720.00	Developmen 72 168,088,272.00 897,880,720.00	Rector Pr 84 168,088,272.00 918,347,540.00	96 168,088,272.00 95,897,516.00	Projecti 108 172,954,760.0	on Triang

All the selected filters from the **Dashboard** Screen are carried forward to the **Triangles** Page. The filters can be reset. There are additional filters such as; **Name**, **Triangle Type**, **Amount/Number**, and **Loss Type** available and are used to create a Triangle. Select the required values from the drop-down list fields as tabulated:

Table 4: The Fields and Buttons on the Triangles Page

Field	Description
Triangle Filters	

Field	Description
Manage Filters	Click this icon to select the filters to be used. Depending on the filters selected, the Triangles are displayed in the Triangles grid accordingly.
Apply	Click Apply to apply the selected filters.
Reset	Click Reset to reset the previous filters.
Development	 Select a development period for the Triangle. Available options are: Monthly – These triangles default displays 60 developments (5 years). Quarterly – These triangles display 20 developments (5 years). Half-yearly – These triangles display 20 developments (10 years). Yearly – These triangles display 10 developments (10 years).
Name	The name of the triangle. Add a name for the triangle. This is the Triangle name that can be used to search for a Triangle.
Triangle Type	 These are the different columns that are available in the Triangle Type. The available values are: Accident Year - The Accident Year Triangles are created using the Reference Date as the Date of Loss/Date of Accident. Underwriting Year - The Underwriting Year Triangles are created using the Reference Date as the Risk Start Date. Reporting Year - The Reporting Year Triangles are created using the Claim Intimation Date.
Amount/Number	 Select the Amount/Number from the drop-down list. The available values are: Paid Amount Fully Paid Amount Partly Paid Amount Outstanding Amount Reported Amount Incurred Amount Fully Paid Number Outstanding Number
Loss Type	 The type of losses. The available values are; All Attritional Loss Large Loss CAT Loss

Field	Description
Gross/Net	Select either Gross or Net.

Additionally, the following buttons are also present on this page:

Table 5: The Additional Buttons on the Triangles Page

Field	Description
Dashboard	Click this button to navigate to the Dashboards Page.
Projects Summary	Click this button to navigate to the Project Summary Page.
Triangle Comparison	Click this button to navigate to the Triangle Comparison Page.
Triangle Summary	Click this button to navigate to the Triangle Summary Page.
Method Summary	Click this button to navigate to the Method Summary Page.
Pattern Summary	Click this button to navigate to the Pattern Summary Page.
Refresh	Click this button to refresh the list of available Triangles on this page.
Back	Click this button to go back.
Next	Click this button to go next.
Save	Click this button to save the Triangle.
Submit	Click this button to submit the Triangle to the administrator for approval. For more information on the OILM approval workflow, see the <u>OILM Workflow</u> Section.
Approve	This button is only available for an Administrator. The administrator can click this button to Approve a Triangle. For more information on the OILM approval workflow, see the <u>OILM Workflow</u> Section.
Reject	This button is only available for an Administrator. The administrator can click this button to Reject a Triangle. For more information on the OILM approval workflow, see the <u>OILM Workflow</u> Section.

5.4.8.5.1 Cumulative Triangles

The **Cumulative Triangles** Section appears by default when the **Triangles** Page is displayed. This Triangle is created from the <u>Incremental Triangle</u>.

Figure 32: The Cumulative Triangle

						Cumulat	ive Triangles	Developmen	t Factor Pro	ojection Facto	r Projectio	on Trian
oulativa	Incremental											?
	The chief of the											
itional L	Accident Year	00	12	24	36	48	60	72	84	96	108	X
	2012	0	0	0	130,377,368.00	130,377,368.00	130,377,368.00	168,088,272.00	168,088,272.00	168,088,272.00	172,954,760.0	
	2013	29,184,628.00	34,621,928.00	457,860,568.00	836,835,956.00	846,702,340.00	897,880,720.00	897,880,720.00	918,347,540.00	975,897,516.00		
	2014	82,317,092.00	688,051,452.00	1,577,325,464.00	1,784,742,124.00	1,903,886,952.00	1,903,886,952.00	1,985,186,280.00	2,059,265,824.00			
	2015	192,679,432.00	1,129,183,088.00	1,381,775,340.00	1,650,214,236.00	1,650,214,236.00	1,730,014,440.00	1,767,473,664.00				
	2016	319,195,580.00	602,402,768.00	885,826,964.00	885,826,964.00	980,593,152.00	988,385,376.00					
	2017	266,284,392.00	586,112,868.00	1,411,394,468.00	1,525,378,272.00	1,525,378,272.00						
	2018	47,138,740.00	855,917,260.00	961,770,480.00	994,068,416.00							
	2019	222,368,652.00	406,773,664.00	509,721,564.00								
						_						

The cumulative Triangle does not apply to the Outstanding Claim Triangle.

This Triangle cannot be modified when the approval status is *Approved*. Different versions of the same triangle can be created. Once a new version of a triangle is created or a triangle is edited, click the **Save** Button to save the triangle. A Cumulative Triangle can be modified in the following way:

- 1. Select a row to modify or remove a value. If a value is removed, then it is excluded from further calculations.
- **2.** After modifying a value, enter a comment and then click **Save**. If you try to save a modified Cumulative Triangle without adding a comment, then instead of a manual comment, a system-generated comment will get saved.
- **3.** Once saved, the modified cell will contain a comment and you can hover over the modified cell to view the old value and comments or view only the comments in case the previous value was removed.
- **4.** Additionally, click the **Excel** icon to download the data in an Excel format.

Figure 33: The Cumulative Attritional Loss Triangle

PROJECTS SUMMARY

tritional Loss	Accident Year	00	12	24	36	48	60	72	84	96	108	
	Accident real				50	**		~~				
	2014	0	91,785,892.00	172,779,332.00	172,779,332.00	201,508,516.00	201,508,516.00	229,537,836.00	319,251,768.00			
	2015	49,661,172.00	130,391,360.00	130,391,360.00	130,391,360.00	130,391,360.00	182,274,532.00	236,660,204.00				
	2016	57,504,480.00	57,504,480.00	57,504,480.00	57,504,480.00	88,329,164.00	152,564,236.00					
	2017	25,065,568.00	25,065,568.00	25,065,568.00	176,146,080.00	223,962,596.00						
	2018	0	47,152,116.00	170,597,768.00	276,921,876.00							
	2019	0	79,116,972.00	100,057,100.00								
	2020	75,964,680.00	132,940,324.00									
	2021	26,868,424.00										
				_	_	_	_	_	_			

5.4.8.5.2 Incremental Triangle

The Incremental Triangle represents the losses and premium for the given Accident or Under Writing (UW) or Reporting cohort respectively for a particular point of time when these triangles were created directly from the data. An Incremental Triangle cannot be edited and can only be copied. Additionally, click the

Excel icon to download the data in an Excel format.

The incremental Triangle does not apply to the Outstanding Claim Triangle.



Figure 34: The Incremental Attritional Loss Triangle

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5.4.8.5.3 Development Factor Triangle: Age to the Age calculation

The Development Factor Triangle is calculated by using the Cumulative Triangle as a base.

The Age to Age Factor and Average Age to Age Factor Triangle can be modified in the following way:

- **1.** Select a cell to modify or remove a value. If a value is removed, then it is excluded from further calculations.
- 2. After modifying a value, enter a comment and then click **Save**. If you try to save a modified Cumulative Triangle without adding a comment, then instead of a manual comment, a system-generated comment will get saved.
- **3.** Once saved, the modified cell will contain a comment and you can hover over the modified cell to view the old value and comments or view only the comments in case the previous value was removed.

					Cu	mulative T	riangles	Develo	oment Fac	tor Pr	ojection Factor	Projection Triangle
ge to Age Factor Triangle	Accident Year	0-12	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108		X
	2012	0	0	0	1.00	1.00	1.29	1.00	1.00	1.03		
	2013	1.19	13.22	1.83	1.01	1.06	1.00	1.02	1.06			
	2014	8.36	2.29	1.13	1.07	1.00	1.04	1.04				
	2015	5.86	1.22	1.19	1.00	1.05	1.02					
	2016	1.89	1.47	1.00	1.11	1.01						
	2017	2.20	2.41	1.08	1.00							
	2018	18.16	1.12	1.03								
	2019	1.83	1.25									

Figure 35: The Age to Age Factor Triangle



Figure 36: The Average Age to Age Factor Triangle

5.4.8.5.4 Projection Factor

The Projection Factor is created to get the Development Patterns for future developments (such as future years, half years, quarters, or months). The data is derived from the Development Factor or Age-to-Age Factor Triangle and is displayed in a Triangle format.

Figure 37: The Projection Factor

					0	Cumulative	e Triangles	Devel	opment Fa	ctor	Projection Factor Projection Triar
											1
ection Factor Triangle											X
	Accident Year	12	24	36	48	60	72	84	96	108	
	2012										
	2013									1.03	
	2014								1.03	1.03	
	2015							1.02	1.03	1.03	
	2016						1.09	1.02	1.03	1.03	
	2017					1.02	1.09	1.02	1.03	1.03	
	2018				1.03	1.02	1.09	1.02	1.03	1.03	
	2019			1.04	1.03	1.02	1.09	1.02	1.03	1.03	

5.4.8.5.5 **Projection Triangle**

The projection triangle has 2 sections, the first section is a cumulative triangle (which was already generated in the prior section) and the second section is projection numbers. Here, development factors from the projection factor are multiplied with the latest cumulative numbers (brought in here from the cumulative triangle) to produce projected numbers.

on Triangle										5
Accident Year	00	12	24	36	48	60	72	84	96	108
2012	0	0	0	130,377,368.00	130,377,368.00	130,377,368.00	168,088,272.00	168,088,272.00	168,088,272.00	172,954,760.00
2013	29,184,628.00	34,621,928.00	457,860,568.00	836,835,956.00	846,702,340.00	897,880,720.00	897,880,720.00	918,347,540.00	975,897,516.00	1,005,174,441.48
2014	82,317,092.00	688,051,452.00	1,577,325,464.00	1,784,742,124.00	1,903,886,952.00	1,903,886,952.00	1,985,186,280.00	2,059,265,824.00	2,121,043,798.72	2,184,675,112.68
2015	192,679,432.00	1,129,183,088.00	1,381,775,340.00	1,650,214,236.00	1,650,214,236.00	1,730,014,440.00	1,767,473,664.00	1,802,823,137.28	1,856,907,831.40	1,912,615,066.34
2016	319,195,580.00	602,402,768.00	885,826,964.00	885,826,964.00	980,593,152.00	988,385,376.00	1,077,340,059.84	1,098,886,861.04	1,131,853,466.87	1,165,809,070.87
2017	266,284,392.00	586,112,868.00	1,411,394,468.00	1,525,378,272.00	1,525,378,272.00	1,555,885,837.44	1,695,915,562.81	1,729,833,874.07	1,781,728,890.29	1,835,180,757.00
2018	47,138,740.00	855,917,260.00	961,770,480.00	994,068,416.00	1,023,890,468.48	1,044,368,277.85	1,138,361,422.86	1,161,128,651.31	1,195,962,510.85	1,231,841,386.18
2019	222,368,652.00	406,773,664.00	509,721,564.00	530,110,426.56	546,013,739.36	556,934,014.14	607,058,075.42	619,199,236.93	637,775,214.03	656,908,470.45
2020	169,612,652.00	391,407,852.00	1,123,340,535.24	1,168,274,156.65	1,203,322,381.35	1,227,388,828.98	1,337,853,823.58	1,364,610,900.06	1,405,549,227.06	1,447,715,703.87

Figure 38: The Projection Triangle

5.4.8.6 Triangle Comparison

The **Cumulative Triangles** Section appears by default when the **Triangles Comparison** Page is displayed. This page enables the comparison of data between two triangles for the same development period.

Figure 39: The Triangle Comparison Page

PROJECTS SUMMARY

s of Date: 0	1/01/2021			Tria	ingle C	Comparis	on				
hboard > Pro	jects Summary	/ > Triangle Su	mmary > Triang	le Comparisor	1						
Development Yearly		•		Triangle 1 Paid Yearly				Triangle 2 Incurred Yearly			
								creiophienen	actor Proje	ction ractor	Trojection
umulative	Incremental										Trojection
umulative ritional Loss Tri Accident Year	Incremental angle 00	12	24	36	48	Accident Year	00	12	24	36	48
umulative ritional Loss Tri Accident Year 2012	angle 00 0	12 0	24 0	36 130,377,368.00	48 130,377,368	Accident Year 2012	00 0	12 0	24 0	36 224,425,784.00	48 130,377,368
umulative ritional Loss Tri Accident Year 2012 2013	Incremental angle 00 0 29,184,628.00	12 0 34,621,928.00	24 0 457,860,568.00	36 130,377,368.00 836,835,956.00	48 130,377,368 846,702,340	Accident Year 2012 2013	00 0 46,676,520.00	12 0 36,477,012.00	24 0 630,595,257.60	36 224,425,784.00 845,378,076.40	48 130,377,368 867,437,692
umulative diritional Loss Tri Accident Year 2012 2013 2014	angle 00 29,184,628.00 82,317,092.00	12 0 34,621,928.00 688,051,452.00	24 0 457,860,568.00 1,577,325,464.00	36 130,377,358.00 836,835,956.00 1,784,742,124.00	48 130,377,368 846,702,340 1,903,886,95	Accident Year 2012 2013 2014	00 0 46,676,520.00 144,126,624.40	12 0 36,477,012.00 953,272,953.60	24 0 630,595,257.60 1,870,335,349.83	36 224,425,784.00 845,378,076.40 1,972,422,152.80	48 130,377,368 867,437,692 1,975,781,412
Cumulative ritional Loss Tri Accident Year 2012 2013 2014 2015	Incremental angle 00 0 29,184,628.00 82,317,092.00 192,679,432.00	12 0 34,621,928.00 688,051,452.00 1,129,183,088.00	24 0 457,860,568.00 1,577,325,464.00 1,381,775,340.00	36 130,377,368.00 836,835,956.00 1,784,742,124.00 1,650,214,236.00	48 130,377,368 846,702,340 1,903,886,95 1,650,214,23	Accident Year 2012 2013 2014 2015	00 0 46,676,520.00 144,126,624.40 293,021,781.80	12 0 36,477,012.00 953,272,953.60 1,476,792,577.08	24 0 630,595,257.60 1,870,335,349.83 1,556,735,859.80	36 224,425,784.00 845,378,076.40 1,972,422,152.80 1,825,061,568.00	48 130,377,368 867,437,692 1,975,781,412 1,650,214,23

The following table provides information about this page:

Field	Description
Development	Select a development period for the Triangle. Available options are:
	 Monthly – These triangles display 12 developments (1 year).
	• Quarterly – These triangles display 8 developments (2 years).
	• Half-yearly – These triangles display 10 developments (5 years).
	 Yearly – These triangles display 10 developments (10 years).
Triangle 1	Click the button adjacent to this field to make the right- hand-side menu appear. From this menu, select the desired Triangle.
Triangle 2	Click the button adjacent to this field to make the right- hand-side menu appear. From this menu, select the desired Triangle.
Cumulative Triangles	The Cumulative Triangles Section appears by default when the Triangles Page is displayed. This Triangle is created from the <u>Incremental Triangle</u> .
Cumulative	The Cumulative Section appears by default. Click this button to toggle between the Cumulative and Incremental Button. For more information, see the <u>Cumulative</u> <u>Triangles</u> Section.

Table 6: The Fields and Buttons on the Triangles Page

Field	Description
Incremental	Click this button to toggle to the Incremental Triangle. The Incremental Triangle represents the losses and premium for the given Accident or Under Writing (UW) year respectively for a particular point of time when these triangles were created directly from the data. For more information, see the <u>Incremental Triangle</u> Section.
	Note : This section only appears if the Cumulative Triangles Tab is selected.
Development Factor	Click this tab to navigate to the Development Factor Section. The Development Factor Triangle is created by using the Cumulative Triangle as a base. For more information, see the <u>Development Factor</u> Section.
Projection Factor	Click this tab to navigate to the Projection Factor Section. The Projection Factor is created to get the Development Patterns for future developments (such as future years, half years, quarters, or months). For more information, see the <u>Projection Factor</u> Section.
Projection Triangle	Click this tab to navigate to the Projection Triangle Section. The Projection Triangle produces the final output of the triangulation exercise. For more information, see the <u>Projection Triangle</u> Section.

5.4.9 Methods

The Chain Ladder Method is used to forecast the number of reserves that must be established for a

particular year to cover future losses. Click **Action** adjacent to the required Project and then click **Methods** to open the **Method Summary** Page.

Figure 40: The Method Summary Page

As of Date : 01	/01/2021		Metho	d Summary					÷	?
)ashboard > Proj	ects Summary > Method	Summary								
DashBoard Filters :	Legal Entity: Commercial Insurar	nce Development: Month	y							
ilters: 🗙 Name	e: X Description:	X Folder: OILMSEG)		Sort By: Meth	od Id	•	• • =		x)
Field Search					Pag	e 1	(0 of 0 it	ems) <	< 1 →	×
Method Id ी↓	Method Name 1↓	Method Type ↑↓	Folder 1↓	Created Date 1↓	Created by 1↓	Status	î↓	Approved/Rejected by	î↓	Action
No data to displa	ay.									

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Additionally, click the Export to xlsx Button to download the Method details in an Excel format.

Click either **Dashboard** or **Projects Summary** or **Triangle Summary** or **Pattern Summary** to navigate to the **Dashboard**, **Projects Summary**, **Triangle Summary**, or **Pattern Summary** Page respectively.

5.4.9.1 Search a Method

Click the Search field and enter the name, description and select a folder in the respective fields and click **Search** to find a required Method.

Additionally, enter a value in the **Field Search** field to search for a Method.

5.4.9.2 Delete a Method

Perform the following steps to delete a Method as an Admin user:

NOTE

Approved Methods cannot be deleted.

- 1. Log in to the application as an Admin user.
- 2. Click the More icon adjacent to the Method that you want to delete.

A confirmation appears asking you if you want to delete the Method.

3. Click Yes.

The Method is deleted and the list of Triangles is refreshed to reflect the remaining Method.

5.4.9.3 Refresh a Method

Perform the following steps to refresh a Method:

NOTE

Approved Methods cannot be refreshed.

1. Click the **More** icon adjacent to the Method that you want to refresh.

The Method is refreshed with the newly available data.

5.4.9.4 Approve or Reject a Method

Perform the following steps to Approve or Reject a Method:

- 1. Click the **More** icon adjacent to the Method that you want to *Approve* or *Reject*.
- 2. If **Approve** is clicked, then the Method is approved and cannot be modified further.

Or

3. If *Reject* is clicked, then the Analyst or Admin user can modify the Method and submit it again for approval.

5.4.9.5 Download the Method Details

Figure 41: The Methods Page

Perform the following steps to download the Method details in an Excel format:

1. On the **Method Summary** Page, click the **Excel** icon.

The Excel is downloaded to your system and you can view the Method details in the Excel document.

5.4.9.6 Add a Method

On the **Method Summary** Page, click Add **W** to open the **Methods** Window.

s of Date: 01/01/2021			Methoc	s					
shboard > Projects Summ	nary > Method	Summary > Methods							
Method Name		Cł	ethod Type hain Ladder		•		Triangle 1 Comm-EP		•
	Req	uired							
Triangle 2 Comm-EP		•							
								Projection Lo	ss Reserve Compariso
		Age of Accident Year at	Claim at 1	2/31/2021	CDF to U	ltimate	Claims Using	Projection Lo	ss Reserve Comparisc
	Accident Year	Age of Accident Year at 12/31/2021	Claim at 1 Reported	2/31/2021 Paid	CDF to U Reported	ltimate Paid	Claims Using Reported	Projection Lo	ss Reserve Compariso
	Accident Year 2012	Age of Accident Year at 12/31/2021 120	Claim at 1 Reported 11,593,585,029,950	2/31/2021 Paid 11,593,585,029.950	CDF to U Reported 1.000	Itimate Paid 1.000	Claims Using Reported 11,593,585,029.950	Projection Lo Dev Method Paid 11,593,585,029,950	ss Reserve Compariso
	Accident Year 2012 2013	Age of Accident Year at 12/31/2021 120 108	Claim at 1 Reported 11,593,585,029.950 24,095,165,224.050	2/31/2021 Paid 11,593,585,029.950 24,095,165,224.050	CDF to U Reported 1.000 1.000	ltimate Paid 1.000 1.000	Claims Using Reported 11,593,585,029,950 24,095,165,224,050	Projection Lo Dev Method 11,593,585,029.950 24,095,165,224.050	ss Reserve Compariso

Populate the form as tabulated:

Table 7: The Additional Buttons on the Methods Page

Field	Description
Method	Enter a name for the Project that will use this Method.

Field	Description
Method Type	 Select the Method from the drop-down list. The available options are: Chain Ladder Customised Method Expected Claim BF Cape Code Note: If <i>Expected Claim</i>, <i>BF</i>, or <i>Cape Code</i> is selected then an additional drop-down field, <i>Earned Premium Triangle</i> appears. Additionally, the Adjustment Level Percent and Claim Trend Percent Fields also appear when these Methods are selected.
Triangle 1	Select the required Triangle from the drop-down list. Only approved Triangles appear in the drop-down list.
Triangle 2	Select the required Triangle from the drop-down list. Only approved Triangles appear in the drop-down list.
Earned Premium Triangle	Select the required Triangle from the drop-down list. Only approved Triangles appear in the drop-down list. Note : This field only appears if the selected Method is <i>Expected Claim, BF,</i> or <i>Cape Code</i> .
Adjustment Level Percent	Enter a value in this field. Note : This field only appears if the selected Method is <i>Expected Claim, BF,</i> or <i>Cape Code</i> .
Claim Trend Percent	Enter a value in this field. Note : This field only appears if the selected Method is <i>Expected Claim, BF,</i> or <i>Cape Code</i> .

Additionally, the following buttons are also present on this page:

Table 8: The Additional Buttons on the Methods Page

Field	Description
Dashboard	Click this button to navigate to the Dashboards Page.
Projects Summary	Click this button to navigate to the Projects Summary Page.
Method Summary	Click this button to navigate to the Method Summary Page.
Triangle Summary	Click this button to navigate to the Triangle Summary Page.
Pattern Summary	Click this button to navigate to the Pattern Summary Page.
Refresh	Click this button to refresh the Methods on this page.
Back	Click this button to go back to the previous Method.
Next	Click this button to go to the next Method.
Save	Click this button to save the Method.

Field	Description
Submit	Click this button to submit the Method to the administrator for approval. For more information on the OILM approval workflow, see the <u>OILM Workflow</u> Section.
Approve	This button is only available for an Administrator. The administrator can click this button to Approve a Triangle. For more information on the OILM approval workflow, see the <u>OILM Workflow</u> Section.
Reject	This button is only available for an Administrator. The administrator can click this button to Reject a Triangle. For more information on the OILM approval workflow, see the <u>OILM Workflow</u> Section.

5.4.9.7 Chain Ladder

This section provides information on the columns present in the **Projection**, **Loss Reserve**, and **Comparison** Tables.

5.4.9.7.1 Projection

This table explains the columns in the **Projection** Tab.

Table 9: The C	Columns in the	Projection Tab
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Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same vertical column that is used in various Triangles. Here the number of years will also be the same as that being used in these Triangles.
Age of Accident at	The number in this column for years will be 12, 24, 36, 48, and so on. For months it will be 1,2,3 and so on. For the quarter it will be 3, 6, 9, 12, and so on. And for half-yearly, it will be 6, 12, 18, and so on.
Claims at	This column reflects the latest valuation date. This column contains two subheadings:
	• Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.

Field	Description
CDF to Ultimate	The values in these columns are Cumulative Development Factor, CDF to Ultimate, under the Development Factor Triangle. This column contains two subheadings:
	 Reported – For Reported Cumulative Factors, the data available under the Reported Loss Triangle are being used.
	 Paid –For Paid Cumulative Factors, the data available under the Paid Loss Triangle is used.
Claims using Dev Method	This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year at 12/31/2011 with the Claims at 12/31/2011 as described above. This column contains two subheadings:
	 Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported.
	• Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid.
Total	This displays the sum and is applicable for Claims at 12/31/2011 and Projected Ultimate Claims Using Dev. The method is in this table.

5.4.9.7.2 Loss Reserve

The following table explains the columns that are present in the table in the **Loss Reserve** Tab.

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same vertical column that is used in various Triangles. Here the number of years will also be the same as that being used in these Triangles.
Claim at	This reflects the latest valuation date. This column contains two subheadings:
	• Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.

Table 10: The Columns in the Loss Reserve Table

Field	Description
Projected Ultimate Claims Using Dev Method	This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year at 12/31/2011 with the Claims at 12/31/2011 as described above. This column contains two subheadings:
	 Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported.
	 Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid.
Case Outstanding at	The 12/31/2011 reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at 12/31/2011 Reported and Claims at 12/31/2011 Paid in this table.
IBNR based on Dev Method with	This column displays the calculated reserves based on the Method used.
Total based on Using Dev.Method	This column displays the sum of the actual reported/paid to date and the calculated reserves.

5.4.9.7.3 Comparison

The Comparison and bench-marking functionality enable a user to compare 2 or 3 Methods. The system enables the user to select different Methods across the application from different projects irrespective of their approval status. The user is also able to compare all Methods even if they are not approved.

When the **Comparison** Tab is clicked, the comparison data between the Methods appear by default. Depending on which Method Type was selected in the **Method Type** Field, the remaining Methods appear as drop-down lists. Select the required methods from the drop-down lists to compare the desired Methods.

Additionally, click the **Excel** icon to view the comparison details of the Method in the Excel document.

This page contains two tables and the following sections contain detailed information on them depending on the Method selected.

Columns in the First Table

The following table explains the columns that are specific to the first table.

Table 11: The Columns in the First Tabl	Table 11:	The Columns i	in the	First	Table
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Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.

Field	Description
Claims at	 This reflects the latest Valuation Date. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest
	diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total based on Using Dev. Method	This column is sourced from the available methods.
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total based on Using BF Method	This column is sourced from the available methods.
	This column contains two subheadings:
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.

Field	Description
Total based on Using Cape Code Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total based on Using Expected Claims Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Paid Losses Triangles from the Large Reported Loss Triangles.
Total based on Using Customized Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total	The sum is displayed in this field.

Columns in the Second Table

The following table explains the columns that are in the Second Table.

Table 12: The Columns in the Second Table

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same as the field in the <u>first Table</u> and is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.
Case Outstanding	This reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at 12/31/2011 Reported and Claims at 12/31/2011 Paid in this table.
IBNR based on Dev Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on BF Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.

Field	Description
IBNR based on Cape Code Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on Expected Claims Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on Customized Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
Total	The sum is displayed in this field.

5.4.9.8 Customised Method

This section provides information on the columns present in the **Projection**, **Loss Reserve**, and **Comparison** Tables.

5.4.9.8.1 Projection

This table explains the columns in the **Projection** Tab.

Field Description Accident (Month, Quarter, Half-This is the same vertical column that is used in various Triangles. Here the number of years will also be the same Year, Year) as that being used in these Triangles. Age of Accident Year at The number in this column for years will be 12, 24, 36, 48, and so on. For months it will be 1,2,3 and so on. For the quarter it will be 3, 6, 9, 12, and so on. And for half-yearly, it will be 6, 12, 18, and so on. Claims at This reflects the latest valuation date. This column contains two subheadings: • **Reported** – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles. • Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle. CDF to Ultimate The values in these columns are Cumulative Development Factor, CDF to Ultimate, under the Development Factor Triangle. This column contains two subheadings: • Reported – For Reported Cumulative Factors, the data available under the Reported Loss Triangle are being used. Paid –For Paid Cumulative Factors, the data available under the Paid Loss Triangle is used.

Table 13: The Columns in the Projection Tab

Field	Description
Claims Using Customised Method	This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year at 12/31/2011 with the Claims at 12/31/2011 as described above. This column contains two subheadings:
	 Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported.
	 Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid.
Total	This displays the sum and is applicable for Claims at 12/31/2011 and Projected Ultimate Claims Using Dev. The method is in this table.

5.4.9.8.2 Loss Reserve

The following table explains the columns that are present in the table in the **Loss Reserve** Tab.

Table 14: The	Columns	in the	Loss	Reserve	Table
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Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same vertical column that is used in various Triangles. Here the number of years will also be the same as that being used in these Triangles.
Claim	This reflects the latest valuation date. This column contains two subheadings:
	• Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.

Field	Description
Projected Ultimate Claims Using Customised Method	This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year at 12/31/2011 with the Claims at 12/31/2011 as described above. This column contains two subheadings:
	 Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported.
	 Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid.
Case Outstanding at	This reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at 12/31/2011 Reported and Claims at 12/31/2011 Paid in this table.
Adjustment 1	Additionally, dick the Adjustment1 File Unlead bytten to
	upload the file for Adjustment1.
Adjustment 2	Additionally, click the Adjustment2 File Upload button to upload the file for Adjustment12
IBNR based on Customised Method with	This column displays the calculated reserves based on the Method used.
Total based on Using Dev.Method	This column displays the sum of the actual reported/paid to date and the calculated reserves.

5.4.9.8.3 Comparison

The Comparison and bench-marking functionality enable a user to compare 2 or 3 Methods. The system enables the user to select different Methods across the application from different projects irrespective of their approval status. The user is also able to compare all Methods even if they are not approved.

When the **Comparison** Tab is clicked, the comparison data between the Methods appear by default. Depending on which Method Type was selected in the **Method Type** Field, the remaining Methods appear as drop-down lists. Select the required methods from the drop-down lists to compare the desired Methods.

Additionally, click the **Excel** icon to view the comparison details of the Method in the Excel document.

This page contains two tables and the following sections contain detailed information on them depending on the Method selected.

Columns in the First Table

The following table explains the columns that are specific to the first table.

Table 15: The Columns in the First Table

Field	Description	
Accident (Month, Quarter, Half- Year, Year)	This is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.	
Claims at	This reflects the latest Valuation Date. This column contains two subheadings:	
	• Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles.	
	• Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.	
Total based on Using Dev. Method	This column is sourced from the available methods.	
	This column contains two subheadings:	
	• Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles.	
	• Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.	
Total based on Using BF Method	This column is sourced from the available methods.	
	This column contains two subheadings:	
	• Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles.	
	• Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.	

Field	Description
Total based on Using Cape Code Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total based on Using Expected Claims Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total based on Using Customized Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total	The sum is displayed in this field.

Columns in the Second Table

The following table explains the columns that are specific to the Expected Claims Method.

Table 16: The Columns in the Second Table

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same as the field in the <u>first Table</u> and is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.
Case Outstanding at 12/31/2011	The 12/31/2011 reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at 12/31/2011 Reported and Claims at 12/31/2011 Paid in this table.
IBNR based on Dev Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on BF Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.

Field	Description
IBNR based on Cape Code Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on Expected Claims Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on Customized Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
Total	The sum is displayed in this field.

5.4.9.9 Expected Claim

This section provides information on the columns present in the **Projection**, **Loss Reserve**, and **Comparison** tables.

5.4.9.9.1 Projection

This table explains the columns in the **Projection** Tab.

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same vertical column that is used in various Triangles. Here the number of years will also be the same as that being used in these Triangles.
Age of Accident Year	The number in this column for years will be 12, 24, 36, 48, and so on. For months it will be 1,2,3 and so on. For the quarter it will be 3, 6, 9, 12, and so on. And for half-yearly, it will be 6, 12, 18, and so on.
Claims at	This reflects the latest valuation date. This column contains two subheadings:
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
CDF to Ultimate	The values in these columns are Cumulative Development Factor, CDF to Ultimate, under the Development Factor Triangle. This column contains two subheadings:
	 Reported – For Reported Cumulative Factors, the data available under the Reported Loss Triangle are being used.
	 Paid –For Paid Cumulative Factors, the data available under the Paid Loss Triangle is used.
Claims Using Expected Claim Method	This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year at 12/31/2011 with the Claims at 12/31/2011 as described above. This column contains two subheadings:
	 Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported.
	• Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid.

Field	Description
Total	This displays the sum and is applicable for Claims at 12/31/2011 and Projected Ultimate Claims Using Dev. The method is in this table.

5.4.9.9.2 Expected Claim

The following table explains the columns that are specific to the **Expected** Claim Tab.

Table 18: The Columns in the Second Table

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is similar to the column of the same name in Table 1 and is a vertical column used in various Triangles. Here the number of years is the same as that being used in these triangles.
Initial Selected Ultimate Claims	This column is calculated as an Average Projected Ultimate Claim by using the reported and Paid Losses i.e. the average of Projected Ultimate Claims Using Dev. Method – Reported and Projected Ultimate Claims Using Dev. Method – Paid Columns from the <u>first table</u> .
Earned Premium	The numbers in this column flow from the Cumulative Earned Premium Triangles from the latest diagonal. Only approved and selected from the drop-down list Earned Premium Triangles are displayed.
On level Adjustment	This column shows the On Level factor that is used to On- Level each year's Premium. The On Level can be modified during the Method creation and modifications as well.
On Level Premium	This column is the product of the Earned Premium and On level Adjustment Columns and gives the On Level Premium .
Claim Trend	Similar to the On Level Adjustment Factor Column, the Claim Trend factor is used to Trend the Loss to the Current Date (12/31/2011 in this case). This column can be modified during the Method creation and modification as well.
Adjustment for Law reform	This column captures the Adjustments to Losses due to the Law Reform. This column can be modified at the cell level. In absence of any user input, the system used the default value of 1.
Trended Adj Ultimate Claims	The Claim Trend Factor and Adjustment for Law Reform when multiplied with the Initial Selected Ultimate Claims, displays the Trended Adj Ultimate Claims. In other words, this column is calculated as a product of the Initial Selected Ultimate Claims, Claim Trend , and Adjustment for Law reform Columns.

Field	Description
Claim Ratio	This section calculates the Loss Ratios and adjusts them further to suit business requirements.
	 Estimated – This column estimates the Loss Ration by using the Trended Adj Ultimate Claims and On-Level Premium Columns. It is calculated as a percentage.
	• Methods – This column displays the list of drop- downs. Based on the selection of these drop-downs the value of the next column changes. The list of drop- downs includes; <i>Average, Average latest 5, Median,</i> <i>Custom & Manual.</i>
	 Selected – This column changes based on the selection in the previous column (Claim Ratio - Methods). For each modification, adding a comment is mandatory. For example, if the Average is selected in the Claim Ratio - Methods column, then the system displays a percentage that is the average of the Claim Ratio - Methods Column. Similarly, on selecting any of the following options:
	 Average latest 5 – The system will consider the latest 5 years to calculate the average and the same will be shown in the cell. In case the Average latest 5 is selected and only 2 years is available, then the system calculates the average of only 2 years.
	 Median – On selection of Median, the system calculates the median of all percentages in the Claim Ration – Estimated Column, and the same is displayed in the cell.
Custom	Select this column to perform small mathematical operations such as addition, multiplication, division, and subtraction.
Manual	Select this column to manually enter the required percentage.
Expected Claims	This column is calculated based on the finalized Claim or Loss Ratio in the Claim Ratio – Selected Column. This column is the product of the On Level Premium and Claim Ratio - Selected .

5.4.9.9.3 Loss Reserve

The following table explains the columns that are present in the table in the **Loss Reserve** Tab.

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same vertical column that is used in various Triangles. Here the number of years will also be the same as that being used in these Triangles.

Table 19: The Columns in the Loss Reserve Table

Field	Description
Claim at	 This reflects the latest valuation date. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangles.
Projected Ultimate Claims Using Dev Method	 This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year by the Claims as described above. This column contains two subheadings: Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported.
	 Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid.
Case Outstanding at	This reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at Reported and Claims at Paid in this table.
IBNR based on Dev Method with	This column displays the calculated reserves based on the Method used.
Total based on Using Dev.Method	This column displays the sum of the actual reported/paid to date and the calculated reserves.

5.4.9.9.4 Comparison

The Comparison and bench-marking functionality enable a user to compare 2 or 3 Methods. The system enables the user to select different Methods across the application from different projects irrespective of their approval status. The user is also able to compare all Methods even if they are not approved.

When the **Comparison** Tab is clicked, the comparison data between the Methods appear by default. Depending on which Method Type was selected in the **Method Type** Field, the remaining Methods appear as drop-down lists. Select the required methods from the drop-down lists to compare the desired Methods.

Additionally, click the Excel icon to view the comparison details of the Method in the Excel document.

This page contains two tables and the following sections contain detailed information on them depending on the Method selected.

Columns in the First Table

The following table explains the columns that are specific to the first table.

Table 20: The Columns in the First Table

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.
Claims at	This reflects the latest Valuation Date. This column contains two subheadings:
	• Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total based on Using Dev. Method	This column is sourced from the available methods.
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.

Field	Description
Total based on Using BF Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle.
Total based on Using Cape Code Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total based on Using Expected Claims Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Triangle.

Field	Description
Total based on Using Customized Method	This column is sourced from the available methods. This column contains two subheadings:
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Reported Loss from the latest diagonal. For Attritional Paid Losses Triangle. Similarly, for Large Reported Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large
	Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total	The sum is displayed in this field.

Columns in the Second Table

The following table explains the columns that are specific to the Expected Claims Method.

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same as the field in the <u>first Table</u> and is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.
Case Outstanding	This reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at 12/31/2011 Reported and Claims at 12/31/2011 Paid in this table.
IBNR based on Dev Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.

Table 21: The Columns in the Second Table

Field	Description
IBNR based on BF Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on Cape Code Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on Expected Claims Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.

Field	Description
IBNR based on Customized Method	This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below:
	 Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported.
	 Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
Total	The sum is displayed in this field.

5.4.9.10 BF

This section provides information on the columns present in the Projection, Loss Reserve, and Comparison tables.

5.4.9.10.1 Projection

This table explains the columns in the **Projection** Tab.

Table 22: The Columns in the Projection Tab

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same vertical column that is used in various Triangles. Here the number of years will also be the same as that being used in these Triangles.
Age of Accident Year (Month, Quarter, Half-Year, Year)	This reflects the latest valuation date. The number in this column will be 12, 24, 36, 48, and so on based on the years. For example, 12 for the latest year, 24 for the prior year, and so on.

Field	Description
Claims at	This reflects the latest valuation date. This column contains two subheadings:
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
CDF to Ultimate	The values in these columns are Cumulative Development Factor, CDF to Ultimate, under the Development Factor Triangle. This column contains two subheadings:
	 Reported – For Reported Cumulative Factors, the data available under the Reported Loss Triangle are being used.
	 Paid –For Paid Cumulative Factors, the data available under the Paid Loss Triangle is used.
Claims UsingBF Method	This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year at 12/31/2011 with the Claims at 12/31/2011 as described above. This column contains two subheadings:
	 Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported.
	 Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid.
Total	This displays the sum and is applicable for Claims at 12/31/2011 and Projected Ultimate Claims Using Dev. The method is in this table.

5.4.9.10.2 Loss Reserve

The following table explains the columns that are present in the table in the **Loss Reserve** Tab.

Table 23: The Columns in the Loss Reserve Table
Field	Description		
Accident (Month, Quarter, Half- Year, Year)	This is the same vertical column that is used in various Triangles. Here the number of years will also be the same as that being used in these Triangles.		
Claim at	Here 12/31/2011 reflects the latest valuation date. This column contains two subheadings:		
	• Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles.		
	• Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.		
Projected Ultimate Claims Using BF Method	This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year at 12/31/2011 with the Claims at 12/31/2011 as described above. This column contains two subheadings:		
	 Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported. 		
	 Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid. 		
Case Outstanding at	The 12/31/2011 reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at 12/31/2011 Reported and Claims at 12/31/2011 Paid in this table.		
IBNR based on Dev Method with	This column displays the calculated reserves based on the Method used.		
Total based on Using Dev.Method	This column displays the sum of the actual reported/paid to date and the calculated reserves.		

5.4.9.10.3 Comparison

The Comparison and bench-marking functionality enable a user to compare 2 or 3 Methods. The system enables the user to select different Methods across the application from different projects irrespective of their approval status. The user is also able to compare all Methods even if they are not approved.

When the **Comparison** Tab is clicked, the comparison data between the Methods appear by default. Depending on which Method Type was selected in the **Method Type** Field, the remaining Methods appear

as drop-down lists. Select the required methods from the drop-down lists to compare the desired Methods.

Additionally, click the **Excel** icon to view the comparison details of the Method in the Excel document.

This page contains two tables and the following sections contain detailed information on them depending on the Method selected.

Columns in the First Table

The following table explains the columns that are specific to the first table.

Description
This is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.
This reflects the latest Valuation Date. This column contains two subheadings:
 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss, the numbers flow from the Large Paid Loss.
This column is sourced from the available methods.
 This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss

Table 24: The Columns in the First Table

Field	Description			
Total based on Using BF Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the number flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle. 			
Total based on Using Cape Code Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Large Reported Loss Triangles. 			
Total based on Using Expected Claims Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle. 			

 Total based on Using Customized Method This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the number flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the 	Field	Description			
 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the number flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the latest diagonal. 	Total based on Using Customized Method	This column is sourced from the available methods. This column contains two subheadings:			
Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle		 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss, the numbers flow from the Large Paid Loss. 			
Total The sum is displayed in this field.	Total	The sum is displayed in this field.			

Columns in the Second Table

The following table explains the columns that are specific to the Expected Claims Method.

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same as the field in the <u>first Table</u> and is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.
Case Outstanding at	This reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at 12/31/2011 Reported and Claims at 12/31/2011 Paid in this table.
IBNR based on Dev Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.

Table 25: The Columns in the Second Table

Field	Description	
IBNR based on BF Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported. 	
IBNR based on Cape Code Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported. 	
IBNR based on Expected Claims Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported. 	

Field	Description
IBNR based on Customized Method	This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below:
	 Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported.
	 Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
Total	The sum is displayed in this field.

5.4.9.11 Cape Cod

This section provides information on the columns present in the Projection, Loss Reserve, and Comparison tables.

5.4.9.11.1 Expected Claim Ratio

The following table explains the columns that are specific to the Expected Claim table.

Table 26: The Columns in the Second Table

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is similar to the column of the same name in Table 1 and is a vertical column used in various Triangles. Here the number of years is the same as that being used in these triangles.
Age of Accident Year (Month, Quarter, Half-Year, Year)	This reflects the latest valuation date. The number in this column will be 12, 24, 36, 48, and so on based on the years. For example, 12 for the latest year, 24 for the prior year, and so on.
CDF to Ultimate	The values in these columns are Cumulative Development Factor, CDF to Ultimate, under the Development Factor Triangle. This column contains two subheadings:
	 Reported – For Reported Cumulative Factors, the data available under the Reported Loss Triangle are being used.
	 Paid –For Paid Cumulative Factors, the data available under the Paid Loss Triangle is used.

Field	Description
Claims at	This reflects the latest valuation date. This column contains two subheadings:
	• Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.

5.4.9.11.2 Projection

This table explains the columns in the **Projection** Tab.

Table 27: The Columns in the Projection Tab

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same vertical column that is used in various Triangles. Here the number of years will also be the same as that being used in these Triangles.
Age of Accident Year at	The number in this column for years will be 12, 24, 36, 48, and so on. For months it will be 1,2,3 and so on. For the quarter it will be 3, 6, 9, 12, and so on. And for half-yearly, it will be 6, 12, 18, and so on.
Earned Premium	The numbers in this column flow from the Cumulative Earned Premium Triangles from the latest diagonal. Only approved and selected from the drop-down list Earned Premium Triangles are displayed.
CDF to Ultimate	 The values in these columns are Cumulative Development Factor, CDF to Ultimate, under the Development Factor Triangle. This column contains two subheadings: Reported – For Reported Cumulative Factors, the data available under the Reported Loss Triangle are being used. Paid –For Paid Cumulative Factors, the data available under the Paid Loss Triangle is used.
Expected Claims	This column is calculated based on the finalized Claim or Loss Ratio in the Claim Ratio – Selected Column. This column is the product of the On Level Premium and Claim Ratio - Selected .

Field	Description			
Claims at	This reflects the latest valuation date. This column contains two subheadings:			
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles. 			
	• Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.			
Projected Ultimate Claims Using Dev Method	This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year at 12/31/2011 with the Claims at 12/31/2011 as described above. This column contains two subheadings:			
	 Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported. 			
	 Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid. 			

5.4.9.11.3 Loss Reserve

The following table explains the columns that are present in the table in the **Loss Reserve** Tab.

Table 28: The Columns	in the Loss	Reserve	Table
-----------------------	-------------	---------	-------

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same vertical column that is used in various triangles. Here the number of years will also be the same as that being used in these Triangles.

Field	Description
Claim at	This reflects the latest valuation date. This column contains two subheadings:
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Loss Triangle. Similarly, for Large Reported Loss, the numbers flow from the Large Reported Loss Triangles.
	• Paid - The numbers in this column flow from the Cumulative Paid Triangles from the latest diagonal. For Attritional Paid Loss Triangles the numbers flow from the Attritional Paid Loss Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Projected Ultimate Claims Using Cape Code	This involves the calculation of the projected ultimate, reserve, by using Cumulative Development factors. The method used is to multiply the Age of Accident Year at 12/31/2011 with the Claims at 12/31/2011 as described above. This column contains two subheadings:
	 Reported – To derive ultimate using reported Loss, the Claims at 12/31/2011 Reported is multiplied with CDF to Ultimate Reported.
	 Paid – To derive the Ultimate by using the Paid Losses Section, Claims at 12/31/2011 Paid is multiplied with CDF to Ultimate Paid.
Case Outstanding at	This reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at 12/31/2011 Reported and Claims at 12/31/2011 Paid in this table.
IBNR based on Cape Code with	This column displays the calculated reserves based on the Method used.
Total based on Using Cape Code	This column displays the sum of the actual reported/paid to date and the calculated reserves.

5.4.9.11.4 Comparison

The Comparison and bench-marking functionality enable a user to compare 2 or 3 Methods. The system enables the user to select different Methods across the application from different projects irrespective of their approval status. The user is also able to compare all Methods even if they are not approved.

When the **Comparison** Tab is clicked, the comparison data between the Methods appear by default. Depending on which Method Type was selected in the **Method Type** Field, the remaining Methods appear as drop-down lists. Select the required methods from the drop-down lists to compare the desired Methods.

Additionally, click the **Excel** icon to view the comparison details of the Method in the Excel document.

This page contains two tables and the following sections contain detailed information on them depending on the Method selected.

Columns in the First Table

The following table explains the columns that are specific to the first table.

Table 29: The Columns in the First Table

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.
Claims at	This reflects the latest Valuation Date. This column contains two subheadings:
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss, the numbers flow from the Large Paid Loss Triangle.
Total based on Using Dev. Method	This column is sourced from the available methods.
	This column contains two subheadings:
	 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss, the numbers flow from the Large Paid Loss.

Field	Description
Total based on Using BF Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle.
Total based on Using Cape Code Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Large Reported Loss Triangles.
Total based on Using Expected Claims Method	 This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Large Reported Loss Triangles.

 Total based on Using Customized Method This column is sourced from the available methods. This column contains two subheadings: Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the number flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the 	Field	Description
 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the number flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the latest diagonal. 	Total based on Using Customized Method	This column is sourced from the available methods. This column contains two subheadings:
Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss Triangle		 Reported – The numbers in this column flow from the Cumulative Reported Triangles from the latest diagonal. For Attritional Reported Losses, the numbers flow from the Attritional Reported Losses Triangle. Similarly, for Large Reported Losses, the numbers flow from the Large Reported Loss Triangles. Paid - The numbers in this column flow from the Cumulative Loss Triangles from the latest diagonal. For Attritional Paid Losses the numbers flow from the Attritional Paid Losses the numbers flow from the Attritional Paid Losses Triangle. Similarly, for Large Paid Loss, the numbers flow from the Large Paid Loss, the numbers flow from the Large Paid Loss.
Total The sum is displayed in this field.	Total	The sum is displayed in this field.

Columns in the Second Table

The following table explains the columns that are specific to the Expected Claims Method.

Field	Description
Accident (Month, Quarter, Half- Year, Year)	This is the same as the field in the <u>first Table</u> and is the vertical column being used in the Paid and Reported Loss Triangles. Here the number of years is the same as the data being used in these Triangles.
Case Outstanding at 12/31/2011	The 12/31/2011 reflects the latest Valuation Date. Case Outstanding is calculated as the difference between the Reported Loss and Paid Loss. In order words, it is the difference between Claims at 12/31/2011 Reported and Claims at 12/31/2011 Paid in this table.
IBNR based on Dev Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the
	difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.

Table 30: The Columns in the Second Table

Field	Description
IBNR based on BF Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on Cape Code Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
IBNR based on Expected Claims Method	 This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below: Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported. Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.

Field	Description
IBNR based on Customized Method	This section calculates IBNR by using the Ultimate derived from the Reported and Paid Loss as mentioned below:
	 Reported – To evaluate the IBNR, it calculates the difference between the Projected Reported and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported and Claims at 12/31/2011 Reported.
	 Paid – To evaluate the IBNR, it calculates the difference between the Projected Paid and Actual Reported Loss. In other words, it calculates the difference between Projected Ultimate Claims Using Dev. Method Reported Paid and Claims at 12/31/2011 Reported.
Total	The sum is displayed in this field.

5.4.10 Patterns

Click Action adjacent to the required Project and then click **Patterns** to open the **Pattern Summary** Page.

Figure 42: The Pattern Summary Page

As of Date : 01/01/2021				Pa	attern Sumr	nary					H	2
ashboard > Projects Sumn	nary > Pattern Su	immary										
ashBoard Filters : Legal Ent	ity: Commercial Insu	rance Devel	opment: M	onthly								
Iters: X Name: X De	scription: X P	attern Type:	× Fold	ler: OILMSEG		Sort By:	Pattern Id	•		+ ≣		X
Q												
							Page	1 (0 d	of 0 items)	K	€ 1	► >I
Field Search												
Field Search Pattern Id 1↓ Pattern I	Name †↓	Pattern Type	î↓	Folder 1↓	Created Date 1↓	Created by	t↓ :	Status î↓	Approve	d/Rejected b	y î↓	Action
Field Search Pattern Id 1년 Pattern I No data to display.	Name 1↓	Pattern Type	t↓	Folder 1	Created Date 1↓	Created by	t↓	Status î↓	Approve	d/Rejected b	ıy î↓	Action

Click the **Search** Field and enter the name, description and select a folder in the respective fields and click Search to find a required Pattern. You can also search by the Pattern Type by clicking the **Pattern Type** drop-down list and selecting a value (Payment Pattern, Earning Pattern, or Receiving Pattern). Additionally, select the **Folder** drop-down list to select a folder.

Additionally, enter a value in the **Field Search** field to search for a Pattern.

Additionally, click **Dashboard** or **Projects Summary** to navigate to the **Dashboard** or **Projects Summary** Page respectively.

From this page, the **Add** button can be used to open the **Patterns** Window and on this window, Patterns can be created. An approved Triangle can be selected to create the basis of the pattern.



	Modeller					US-English 🔻	OILMUSER 🔻 🔤
		Patterns					?
ashboard > Projects Summary > Pattern Summ	nary > Patterns	n Type	.		Triangle		•
Required	Paym	nent Pattern			Commercial Yearl	y-Paid	
Pattern Generation Triangle	Freque	ency Jal	-		Pattern Annual		•
						X	
	Development	Claim Payment Pattern	Expected Loss	Receiving Patter	n	X	
	Development 0	Claim Payment Pattern 4.64	Expected Loss 252269204	Receiving Patter	n	X	
	Development 0 12	Claim Payment Pattern 4.64 2.87	Expected Loss 252269204	Receiving Patter 1,170,529,106.56 724,012,615.48	n	X	
	Development 0 12 24	Claim Payment Pattern 4.64 2.67 1.04	Expected Loss 252269204	Receiving Patter 1,170,529,106.56 724,012,615.48 262,359,972.16	n	X	
	Development 0 12 24 36	Claim Payment Pattern 4.64 2.87 1.04 1.03	Expected Loss 252269204	Receiving Patter 1,170,529,106.50 724,012,615.48 262,359,972.16 259,837,280.12	n	2	

The output on this page is calculated primarily by using the Premium and Loss Triangles. For *Earning* and *Receiving Patterns*, the Premium Triangle can be used. For Claim Payments, the Loss Triangle can be used as a basis.

For Earning and Premium Receiving, any of the approved Premium Triangles can be selected, and based on this selection, the Premium Frequency, Earning Pattern (or Premium Receiving Pattern), and the **Development** Column of the table are populated.

Similarly, based on the selection of an approved Loss Triangle, the **Claim Payment Pattern** and **Development** Columns of the table are populated. Based on the selection of a Triangle from the **Triangle** drop-down list, the Development Column is populated for each selected Pattren Type.

The Gross Premium and Expected Loss Columns are populated from the latest diagonal of the latest year based on the selected Triangle. In case the Premium (or Loss) Frequency is Annual, then only the Single Premium (or Loss) is displayed. However, based on the frequency the number of entries in this column increases.

5.4.10.1 Download the Pattern Details

Perform the following steps to download the Pattern details in an Excel format:

1. On the Pattern **Summary** Page, click the **Excel** icon.

The Excel is downloaded to your system and you can view the Pattern details in the Excel document.

5.4.10.2 Delete a Pattern

Perform the following steps to delete a Pattern as an Admin user:



Approved Patterns cannot be deleted.

- 1. Log in to the application as an Admin user
- 2. Click the **More** icon adjacent to the Pattern that you want to delete.

A confirmation appears asking you if you want to delete the Pattern.

3. Click Yes.

The Pattern is deleted and the list of Pattern is refreshed to reflect the remaining Pattern.

5.4.10.3 Refresh a Pattern

Perform the following steps to refresh a Pattern:

NOTE

Approved Patterns cannot be refreshed.

1. Click the **More** icon adjacent to the Pattern that you want to refresh.

The Pattern is refreshed with the newly available data.

5.4.10.4 Approve or Reject a Pattern

Perform the following steps to Approve or Reject a Pattern:

- 1. Click the More icon adjacent to the Pattern that you want to Approve or Reject.
- 2. If *Approve* is clicked, then the Pattern is approved and cannot be modified further.
- **3.** Or
- **4.** If *Reject* is clicked, then the Analyst or Admin user can modify the Pattern and submit it again for approval.

5.4.10.5 Add a Pattern

Perform the following steps to add a Pattern:

1. On the **Pattern Summary** Page, click **Add L** to open the **Patterns** Window.

Figure 44: The Patterns Page

PROJECTS SUMMARY

ORACLE [®] Oracle Insur	ance Loss Modeller				iii 💩 US-English 🔻 OILMUSER 🔻
		Patterns			?
shboard > Projects Summary > Pat	tern Summary > Patterns				
Pattern Name	Patte	^{rn Type} ment Pattern	•		Triangle Commercial Yearly-Paid
	Required				
Pattern Generation Triangle	▼ Frequ	Jency Jual	•		Pattern Annual
					x
	Development	Claim Payment Pattern	Expected Loss	Receiving Pattern	n
	0	4.64	252269204	1,170,529,106.56	
	0	4.64 2.87	252269204	1,170,529,106.56 724,012,615.48	
	0 12 24	4.64 2.87 1.04	252269204	1,170,529,106.56 724,012,615.48 262,359,972.16	
	0 12 24 36	4.64 2.87 1.04 1.03	252269204	1,170,529,106.56 724,012,615.48 262,359,972.16 259,837,280.12	

On this page, you can create a new Pattern.

The following table contains information about the fields and buttons on this page:

Table 31: The Buttons on the Patterns Page

Field	Description
Pattern Name	Enter a name for the Pattern.
Pattern Type	Select the type of Pattern from the drop-down list. The available options are:
	• Payment Pattern - The Claim payment is calculated as a product of the Claim Payment Pattern and the Expected Loss. The output is created by using the Loss Triangle.
	 Earning Pattern - The earning is calculated as a product of the earning pattern and gross premium. The output is created by using the Premium Triangle.
	 Receiving Pattern - The Receiving Pattern is calculated as a product of the Premium Receiving Pattern and Gross Premium. The output is created by using the Premium Triangle.
Triangle	Select a Triangle from the drop-down list.
Pattern Generation	Select the type of Pattern to be generated. The available options are:
	 Triangle - If this option is selected, then the selected Age to Age Factor from the selected Triangle will be populated here.
	 Custom - Custom Out-of-the-Box Patterns are populated. These Patterns need to be identified based on the Dimension selected to create the Triangle.
Frequency	Select Annual from the drop-down list.

Field	Description
Pattern	Select Annual from the drop-down list.

Additionally, the following buttons are also present on this page:

Table 32: The Additional Buttons on the Patterns Page

Field	Description
Dashboard	Click this button to navigate to the Dashboards Page.
Project Summary	Click this button to navigate to the Projects Summary Page.
Method Summary	Click this button to navigate to the Method Summary Page.
Triangle Summary	Click this button to navigate to the Triangle Summary Page.
Refresh	Click this button to refresh the Methods on this page.
Save	Click this button to save the Method.
Submit	Click this button to submit the Method to the administrator for approval. For more information on the OILM approval workflow, see the <u>OILM Workflow</u> Section.
Approve	This button is only available for an Administrator. The administrator can click this button to Approve a Triangle. For more information on the OILM approval workflow, see the <u>OILM Workflow</u> Section.
Reject	This button is only available for an Administrator. The administrator can click this button to Reject a Triangle. For more information on the OILM approval workflow, see the <u>OILM Workflow</u> Section.

6 Annexure – Technical Details

See the following sections in the <u>OILM Installation Guide</u> for additional configurations:

- Configure the OILM Configuration Tables
- Configure the Large Loss Threshold

7 Appendix

This section contains the following topics:

- Glossary
- <u>Common Features in OILM</u>

7.1 List of Dimensions

This section contains the List of Dimensions available in the application.

Table 33: The List of Dimensions

Dimension Name	Description
Product	Product
Legal Entity	Legal Entity
Country	Country
Line of Business	Line of Business
Business Unit	Business Unit
Sub Product	Sub Product
Coverage	Coverage
Location	Location
Development	Development
Loss Type	Loss Type
Zone	Zone
Source or Agent or Broker	Source or Agent or Broker
Claim Manager	Claim Manager
UnderWritter	UnderWritter
Segment	Segment
Primay or Excess Layer	Primary or Excess Layer
Co Insuarnce Share	Co Insuarnce Share
Lead Follower	Lead Follower
Reinsurance	Reinsurance
Currency	Currency

7.2 Glossary

Accident: An event or occurrence which is unforeseen and unintended.

Accident Year: An accident year grouping of claims means that all the claims relating to events that occurred in 12 months are grouped, irrespective of when they are reported or paid and irrespective of the year in which the period of cover commenced

Actual Total Loss: An insured item that has been lost or destroyed. The full insured value is payable by the insurer.

Attritional Losses: Losses other than those related to major CAT events or exposures. These are majorly small losses with high frequency and low severity.

Cancellation: The discontinuance of an insurance policy before its normal expiration date, either by the insured or the company.

Captive Insurance Company: A company owned solely or in large part by one or more non-insurance entities for the primary purpose of providing insurance coverage to the owner or owners.

Cargo Insurance: Type of Transit insurance that protects the shipper of the goods against financial loss if the goods are damaged or lost.

Catastrophe Cover: Type of reinsurance on an excess of loss basis to protect against an accumulation of losses arising from one event.

Catastrophe reinsurance: This is a form of aggregate excess of loss reinsurance providing coverage for very high aggregate losses arising from a single event, which may be spread over several hours; 24 or 72 hours is common.

Catastrophe: In the context of general insurance a catastrophe is a single event that gives rise to exceptionally large losses. The exact definition often varies and is often dependent on the excess of loss wordings e.g. it might mean all losses, in 72 hours, arising from a wind storm.

Claim: A request by a policyholder for payment following the occurrence of an insured event. A claim does not necessarily lead to a payment.

Claim amount distribution: A statistical frequency distribution for the amounts of claims.

Claim frequency: The number of claims in a period per unit of exposure, such as the number of claims per vehicle year for a calendar year or per policy over a period.

Coinsurance: A method of sharing risk among several direct insurers, each of which has a separate direct contractual relationship with the insured and is, therefore, liable only for its contractual share of the total risk. The term is also used in certain excess of loss contracts to refer to the proportion of claims retained by the cedant.

Co-insurance: Method of sharing insurance risk between several insurers. The policyholder will deal as a lead insurer who issues documents and collects premiums. The policy will detail the shares held by each company.

Commercial Lines: Insurance of businesses, organizations, institutions, governmental agencies, and other commercial establishments.

Commercial Umbrella: A liability policy designed to cover catastrophic losses.

Commission: The part of an insurance premium paid by the insurer to an agent or broker for his services in procuring and servicing the insurance.

Comprehensive Coverage: Portion of an auto insurance policy that covers damage to the policyholder's car not involving a collision with another car (including damage from fire, explosions, earthquakes, floods, and riots), and theft

Conditions: Provisions inserted in an insurance contract that qualify or place limitations on the insurer's promise to perform.

Consideration: In some forms of contract, the agreement is made binding by the payment of a sum of money from one party to the other. Such a payment is known as a consideration. The term is also used informally to mean any form of payment.

Deductible: The portion of an insured loss borne by the policyholder. The amount or percentage is specified in the policy.

Earned Premium: For an insurance policy, the part of the premium relates to an expired period of cover.

Endorsement: A written amendment affecting the declarations, insuring agreements, exclusions, or conditions of an insurance policy: a rider.

Estimated Maximum Loss (EML): Used in fire, explosion, and material damage insurance policies, it is an estimate of the monetary loss that could be sustained on a single risk as a result of single peril, which is considered by the underwriters to be possible.

Excess of loss: In reinsurance, an agreement requires the reinsurer to bear any loss over a certain stated amount.

Excess: Amount of any loss that is not included in the cover provided (e.g. a loss falling below the excess is not a claim). A deductible on the other hand eats into the cover. This difference only really matters where there is an upper limit on the number of covers such as reinstatements or an annual aggregate.

Exgratia Payment: In insurance, a payment is made to settle an issue(such as an insurance claim) but without admitting liability.

Expense Ratio: The ratio of a company's operating expenses including acquisition costs to premiums written or earned.

Facultative Reinsurance: A reinsurance arrangement covering a single risk as opposed to a treaty arrangement; commonly used for very large risks or portions of risk written by a single insurer, that is shared among several reinsurers.

Incurred Losses: Expenses account in an insurance company's income statement reflecting the claims paid during the policy year plus the loss reserves as of the policy year, minus the corresponding reserves as of the beginning of the policy year.

Incurred-But-Not Reported Reserves (IBNR): Liability account on an insurer's balance sheet reflecting claims that are expected based upon statistical projections but which have not yet been reported to the insurer.

Indemnification: Compensation to the victim of a loss, in whole or in part, by payment, repair, or replacement.

Indemnity: Legal principle that specifies an insured should not collect more than the actual cash value of a loss but should be restored to approximately the same financial position that existed before the loss.

Insurable Interest: Financial interest, recognized by law, which the insured has in the subject matter of insurance. In some cases, an unlimited insurable interest exists, for example, in one's own life and the life of a spouse. However, in most cases, insurable interest is limited to the value of the property or goods, or the extent of liability.

Insurable Risk: Risk against which insurance cover can be obtained by somebody with an insurable interest in it.

Insurance: Contract under which the insurer agrees to provide compensation to the insured in the event of a specified occurrence, for example, loss or damage to property. In return, the insured pays the insurer a premium, usually at fixed intervals.

Insured Peril: Peril that is specifically stated in an insurance policy as being covered or included.

Insured: The policyholder - the person(s) protected in case of a loss or claim.

Liability: A duty or contract to fulfill an obligation to another person or organization.

Loss: The occurrence of an event for which insurance pays.

Loss Exposure: A potential loss that may be associated with a specific type of risk.

Loss Ratio: In insurance, the value of all claims is expressed as a percentage of the total premium for a period. The figure is used as a guide to the profitability of the business when considering rates.

Loss Reserve: The amount set up as the estimated cost of a claim.

Outstanding Amount - Reserve Amount (Indemnity as well as expenses) that is outstanding as of the End of the Reporting Period

Overriding: In reinsurance, the commission paid to the ceding company is more than the acquisition cost to allow for additional expenses.

Paid Amount- Paid Amount is the sum of the Total Claim Payments (Indemnity and/or Expenses) that are made during the Reporting Period irrespective of the status of the Claim (Open or Closed).

Partly Paid Amount - Claims that are open at the end of the Development Period and part payments that have been made during the Development Period

Policyholder: A person who pays a premium to an insurance company in exchange for the insurance protection provided by a policy of insurance.

Premium: The amount of money an insurance company charges for insurance coverage.

Rate: The cost of a unit of insurance. Rates are based on historical loss experience for similar risks and may be regulated.

Reimbursement: The payment of the expenses incurred as a result of an accident or sickness, but not to exceed any amounts specified in the policy.

Reinstatement: The resumption of coverage under a policy that has lapsed.

Reinsurance: Transfer of insurance (or part of the risk covered) from one insurance company to another for a premium, not necessarily with the knowledge of the policyholder.

Renewal: Continuance of coverage under a policy beyond its original term by the insurer's acceptance of the premium for a new policy term.

Reopened Amount - First Reserve (Indemnity as well as Expenses) set after reopening the claim

Repudiated Claims - Closed Claims with 0 (Zero/Nil) payments under Indemnity/Compensation during the Development Period. However, the Expenses may or may not be paid.

Retention: The net amount of risk retained by an insurance company for its account or that of specified others, and not reinsured.

Retro-cession: The amount of risk that a reinsurance company reinsures; the amount of a cession that the reinsurer passes on. Reinsurance is bought by reinsurers to protect their financial stability.

Risk: The chance of loss.

Salvage: Rescuing people or property from a flood, fire, shipwreck, or another disaster. A person who salvages goods may be paid compensation by their owners or insurers. The ownership of some salvaged goods can be a contentious issue.

Subrogation: The right of an insurer, having indemnified the insured, to avail himself or herself of any rights and remedies of the insured, for example, salvage.

Sum-Insured: Limit an insurance company's liability under a particular insurance policy.

Surcharge: An extra charge applied by the insurer. For automobile insurance, a surcharge is usually for accidents or moving violations.

Surplus: In reinsurance, it is the amount by which the sum insured exceeds the ceding office's retention

Underwriting: The process of selecting applicants for insurance and classifying them according to their degrees of insurability so that the appropriate premium rates may be charged. The process includes the rejection of unacceptable risks.

7.3 Common features in OILM

The following table lists the common elements available on the summary pages of the OILM Application:

Field	Description
Refresh	Click this button to refresh the page.
Help	Click this button to access the help document for the feature.
Ascending	Click this button to sort the list by ascending order.
Descending	Click this button to sort the list by descending order.
List View	Click this button to view the items in a list format.
Table View	Click this button to view the items in a table format.

Table 34: The Buttons on the Summary Pages

OFSAA Support

Raise a Service Request (SR) in <u>My Oracle Support (MOS)</u> for queries related to the OFSAA applications.

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- Is the information clearly presented?
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Before sending us your comments, you might like to ensure that you have the latest version of the document wherein any of your concerns have already been addressed. You can access My Oracle Support site that has all the revised or recently released documents.

