# Oracle Financial Services Know Your Customer

**Risk Assessment Guide**

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**ORACLE®**
**Financial Services**

OFS Know Your Customer Risk Assessment Guide

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# Document Control

**Table 1:  Document Control**

| Revision Number | Revision Date | Change Log |
|---|---|---|
| 8.1.2.3.0 | December 2022 | Added new fields in Managing KYC Batch Assessments chapter. |
| 8.1.2.2.0 | September 2022 | Added details for the new **ML based Anomaly Detection** rule in the Accelerated Rereview Rules section. |
| 8.1.2.1.0 | June 2022 | A new version has been created for the 8.1.2.1.0 release. |
| 8.1.2.0.0 | March 2022 | A new version has been created for the 8.1.2.0.0 release. |

# Table of Contents

# 1    About This Guide

This guide provides information related to risk assessments being performed on a customer to adhere to the norms of Oracle Financial Services Know Your Customer (OFS KYC). It also covers different risk models with the parameters considered for assessing the risk a customer poses to a financial institution.

## 1.1    Intended Audience

The KYC Risk Assessment Guide is designed for various OFS KYC users. Their roles and responsibilities, as they operate within the OFS KYC application, include the following:

- **Business Analyst**: A user in this role analyses and disposes the risk assessments. This user understands how risk assessments are calculated and which risk score attributes contribute to the risk score. This user can also manually promote the risk assessments to a case and review the KYC Cases if KYC is integrated with Enterprise Case Management (ECM). A Business Analyst guides the Administrator to fine-tune the parameters required for risk assessments.

- **KYC Administrator**: This user is a manager for data center activities and application administration activities in a financial institution. This user has access to configuration functionalities and is responsible for configuring the required details for executing the KYC process. This user also has in-depth knowledge of all modules of KYC to perform the necessary administration and maintenance.

## 1.2    Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For

information, visit Oracle Accessibility Learning and Support.

Or visit Telecommunications Relay Service, if you are hearing-impaired.

## 1.3    How This Guide is Organized

The OFS KYC Risk Assessment Guide includes the following chapters:

- Know Your Customer Process provides information on how existing and prospective customers are reviewed.

- Risk Scoring Model details different risk models of KYC.

- Risk Assessment Parameters provide different parameters of the risk assessment model.

- Managing KYC Batch Assessments provides information on the risk assessments being worked on.

- Managing KYC Onboarding Assessments provides complete details of all risk assessments.

- Integration with ECM provides information on the integration with ECM.

- Appendix-A Parameters describe the various parameters specific to model and customer types.

- Appendix-B Examples of Derivation of Risk Score provides examples of how a risk score is derived for each risk assessment models for different customer types.

## 1.4    Where to Find More Information

For more information about OFS KYC, see the following KYC application documents, which can be found on the Oracle Help Center page:

- **KYC Administration Guide**: This guide provides comprehensive instructions for proper system administration and the daily operations and maintenance of the KYC system. It also details how to configure the risk scores, weights, and rule values using the User Interface.

- **Data Interface Specification (DIS) Guide**: This guide identifies the super-set of data that OFS client supplies for data ingestion. Find this guide on the My Oracle Support page.

- **Data Model Reference (DMR) Guide**: This guide explains to Business Analysts, Information Technology (IT) Support Staff, OFS Professional Services and Development Teams, and other users of the Oracle client who use the system for customer risk analysis. Find this guide on the My Oracle Support page.

- **Service Guide**: This guide provides information on the Onboarding service according to the Onboarding regulations of KYC.

- **API Data Elements Guide**: This guide provides information on the API elements used in the Onboarding service of KYC.

- **Utilities Guide**: This guide includes information on the utilities used in the Onboarding service of KYC.

- **ECM User Guide**: This guide explains to business users how to access a risk assessment promoted to a case and disposition of the case. Find this guide on the Enterprise Case Management page.

For additional information about how OFS solves real business problems, see our website on Oracle for Financial Services home page.

## 1.5    Conventions Used in This Guide

Table 1 mentions the conventions used in this guide.

**Table 1:  Conventions Used**

| Conventions | Meaning |
|---|---|
| *Italics* | <ul><li>Names of books as references</li><li>Emphasis</li><li>Substitute input values.</li></ul> |
| **Bold** | <ul><li>Menu names, field names, options, button names</li><li>Commands typed at a prompt</li><li>User input.</li></ul> |
| `Monospace` | <ul><li>Directories and subdirectories</li><li>File names and extensions</li><li>Code sample, including keywords and variables within the text and as separate paragraphs, and user-defined program elements within the text.</li></ul> |
| Hyperlink | Hyperlink type indicates the links to external websites, and internal document links to sections. |
| Asterisk (*) | Mandatory fields in User Interface. |

**Table 1:  Conventions Used**

| Conventions | Meaning |
| --- | --- |
| <Variable> | Substitute input value. |

# 2      Know Your Customer Process

Oracle Financial Services Know Your Customer (OFS KYC) assesses the risk associated with a customer by considering different attributes of the customer. The workflow of KYC enables Financial Institutions (FI) to perform Due Diligence, Enhanced Due Diligence, and continuous monitoring of customers. The attributes differ based on the customer type.

This chapter discusses the various processes involved in reviewing of an existing customer and a prospective customer during Onboarding.

**Topics**:

- Review of Existing KYC Customers
- Review of Prospective KYC Customers

## 2.1      Review of Existing KYC Customers

The following sections provide information on the types of customers that are considered for review and the customer life cycle.

**Topics**:

- Definition of Customers or Interested Parties
- KYC Reviews - Life Cycle of a Customer

### 2.1.1      Definition of Customers or Interested Parties

KYC considers the following types of customers for the risk scoring and due diligence processes:

- **Primary Customer**: The customer on whom the risk assessment is being carried out.
- **Interested Parties**: KYC classifies the following types of interested parties, the level of interested parties to be considered are configurable.
    - **Customer to Customer Relationship**: Customer who has a relationship with the primary customer through friends, colleagues, or relatives. This relationship is not required to have a controlling role on the account held by the primary customer.
    - **Customer to Account Relationship**: Customer who has a controlling role in the account held by the primary customer.
    - **Beneficial Owners**: FINCEN has made it mandatory to capture, validate, and monitor the ultimate beneficiary of an entity. To meet this requirement, the Oracle Financial Crime and Compliance Management (FCCM) data model has been extended to capture the information of the beneficial owners for both customers and non-customers of the institution and process the data for risk scoring and display this information in the User Interface (UI). This model also helps to capture the secondary business units between the parent and the beneficial owner, if any.

The KYC system captures the beneficial owners who are non-customers, that is, external parties. Some of the data elements of beneficial owners are captured according to regulations for non-customers, as follows:

- Customer Name
- Date of Birth of the Customer
- Address of the Customer
- Identity Details of the Customer

For the entire list of data elements, see the party to party relationship table in the Financial Services Data Model Reference Guide, Volume 1: Business Data.

| NOTE | • All categories of interested parties listed above are considered for watchlist risk factors and the maximum of the scores is considered as one of the risk factors of the primary customer for whom risk scoring is being done. The relationship of these can be viewed on the UI in the interested party section.<br><br>• Watchlist is considered using fuzzy name matching or OFS Customer Screening (CS), depending on which is selected for an installation. |
|---|---|

## 2.1.2 KYC Reviews - Life Cycle of a Customer

Know Your Customer assesses a customer's risk to a bank or FI. KYC is a continuous assessment process and not a one-time assessment of a customer. Customers are assessed in different stages of their relationship with the bank or FI.

The following figure depicts the KYC process during the customer's life cycle. The system has different stages, such as Onboarding, risk assessment, and risk scoring. These stages are explained as follows:

**Figure 1: KYC Life Cycle**
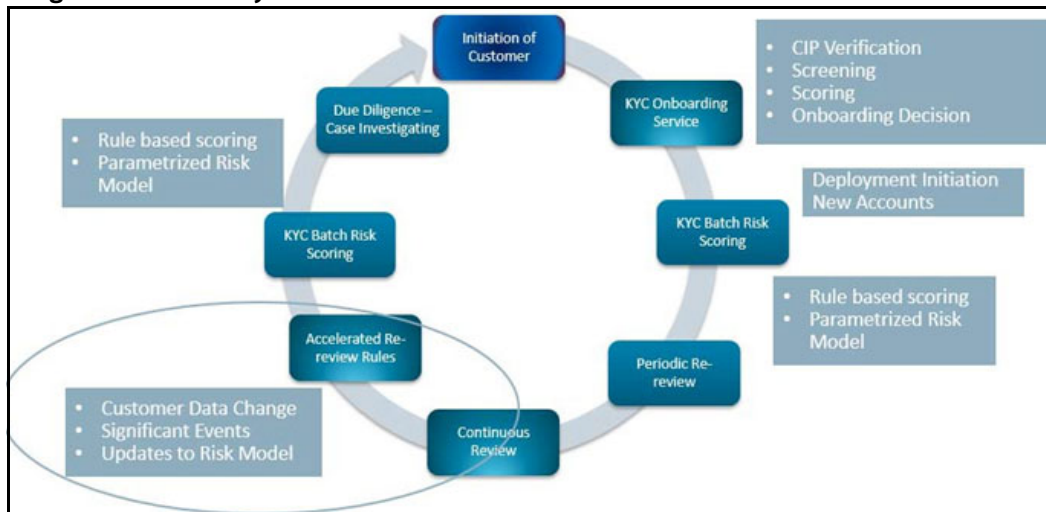


As a part of the customer life cycle, OFS KYC reviews the customer in the following ways:

- Deployment Initiation
- New Accounts End of Day Review
- Continuous Review of Customers
- Deriving at the KYC Risk Score
- Enhanced Due Diligence

**Topics**:

- Deployment Initiation
- New Accounts End of Day Review

- Continuous Review of Customers
- Deriving at the KYC Risk Score
- Enhanced Due Diligence

### 2.1.2.1 Deployment Initiation

The Deployment Initiation workflow is executed for existing customers of a bank or FI after KYC is installed.

This workflow ensures that all existing customers are risk assessed and available in the KYC system for further monitoring. Every bank customer must be risk-scored during this workflow to regularly assess the customer in the KYC system.

> **NOTE**    It is recommended that you execute this workflow only once after installing KYC. Once the customers are in the KYC system, the customers are reviewed based on the continuous review process.

### 2.1.2.2 New Accounts End of Day Review

This workflow is also called the default review. This workflow is executed when a customer opens a new account. New customers associated with a new account or an existing customer associated with a new account are considered for risk assessments. This signals the end of processing which looks at the data being sent to the system through a Distributed Interactive Simulation (DIS) file or OFS Data Foundation (OFS DF). This workflow assesses the customers associated with an account opening date based on the value provided in the Regular Processing parameter in the jurisdiction-specific Application Parameters table.

The KYC risk assessment determines which accounts are assessed by comparing the risk processing date (the date on which risk assessment is being processed) with the value provided for the Account Range for Regular Processing parameter which is defined in the jurisdiction-specific Application Parameters table. This is applicable only for Account Onboarding.

- Risk Processing Date = 24th of April
- Account Range for Regular Processing = 7

Those accounts whose Account Open Date is 7 days less than the processing date, are processed for Risk Assessment. This means any account opened between the 17th (24-7=17) to the 24th of April must be considered for risk assessment.

### 2.1.2.3 Continuous Review of Customers

KYC is a continuous process of monitoring the customer. The following workflows ensure continuous monitoring of customers and their behavior.

#### 2.1.2.3.1 Periodic Rereview

Based on the customer's risk score, the KYC system determines the next review date. If the customer poses a high risk to the bank or FI, then the customer will be reviewed more often compared to medium or low-risk customers. The Risk Category table defines the rereview period based on the score ranges.

The system calculates the next rereview date after the closure of the risk assessments, both closed by the system and closed after user review. The rereview date is then available in the Customer Review Detail table which is the repository of Customers.

##### 2.1.2.3.2 Accelerated Rereview

The Accelerated Rereview workflow considers the following data processes for the automatic reassessment of the customer irrespective of their periodic rereview date. This workflow looks for the following triggers:

1. Any changes in the customer risk attributes or factors are tracked through change logs. By default, all the change logs related to risk factors are already a part of the ready-to-use product.

    > **NOTE**　　All the change logs for the ready-to-use risk factors and their rules for automatic triggers are available in the KYC system. You can also add new risk factors or parameters and configure the risk assessment to happen for the new risk factors as well. For information on adding new risk parameters, see the *Adding Risk Parameters and Rules (KYC Batch)* section in Oracle Financial Services Know Your Customer Administrator Guide.

2. Change in behavior of the customer or account if you have an Oracle Anti Money Laundering (AML) system installed together with KYC.

3. Change in the Risk Scores of a risk parameter or rule value through the Parameter Risk Score Jurisdiction user interface. Due to external factors or regulatory changes, the risk scores sometimes need to be revised. This effectively means that all customers who are associated with those values must be reassessed. You can modify the risk scores on the UI and the system will process such changes for reassessment. You can also set a flag for reassessment on the respective Risk Model Configuration User Interface.

4. Adding a new rule for Rule-based assessments. This helps in monitoring the customers affected by changes in external factors, regulatory changes, or new amendments. You can also set a flag for reassessment on the respective Risk Model Configuration User Interface.

5. Adding a new rule value for an existing rule. This helps to monitor specific values of a risk factor. You can add the new rule value for an existing rule through the UI and the system will re-assess all the customers to the newly added rule value.

All the above automatic triggers are configurable and extensible depending on the requirement of the bank or financial institution. The ready-to-use KYC system comes with all these functionalities.

For the details of different rules and their associated configurable parameters, see the Accelerated Rereview Rules section of Appendix-A Parameters.

#### 2.1.2.4 Deriving at the KYC Risk Score

A customer is risk-scored by considering different risk factors listed in Appendix-A Parameters. The risk score is a combination of all factors and provides a complete customer risk profile view. The customer is scored using both the Rule-based and Algorithm-based models. The Algorithm-based risk assessments give a complete profile of the customer and help the investigator understand the other risk factors better. If the customer meets the rule, then it indicates that the customer must be monitored more closely as they have met the rule values which the institution defines for closer review. The maximum score of the Rule-based or Algorithm-based model is taken to be the customer's risk score.

For every customer identified and risk-scored, a risk assessment is created. If a customer is risk-scored using both the Rule-based and Algorithm-based models, then the customer will have one risk assessment with both the scores available. The Risk assessments are further analyzed after creation to check which is to be promoted to case and closed by the system.

After the risk assessment is performed for a customer the system verifies if the risk assessment is to be closed by the system or promoted to case based on the range of the KYC risk score.

The Risk Category table captures the value for the User Review flag for different ranges of scores. If the User Review flag is **Y** then the system does not close the risk assessment but promotes it to a case for further investigation. If the User Review flag is **N**, then the system closes the risk assessment. For information on how to provide values on the Risk Category, see the *Adding Risk Parameters and Rules (KYC Batch)* section in Oracle Financial Services Know Your Customer Administrator Guide.

There are exceptions to a process of risk assessment being Closed by the System. Even when the ranges defined in the Risk Category table have the User Review flag set to **N**, KYC promotes the risk assessments to a case in the following situations:

- **Watch List Scores for Promotion**: If the primary customer's or interested parties' watch list score is greater than or equal to the score defined in the Watch List Score parameter in the jurisdiction-specific application parameter table.

- **Risk Tolerance**: If the difference between the calculated Customer Effective Risk score and the prior risk score is above the value provided in the Risk Tolerance parameter in the jurisdiction-specific Application Parameter table, the assessment is promoted to a case even if it falls under the range of Closed by System.

## 2.1.2.5    Enhanced Due Diligence

KYC identifies all risk assessments which need further investigation as events, and such risk assessments are considered as KYC events, and the events are promoted to a case. The decision on which risk assessments must be moved is based on the conditions mentioned above. The KYC system provides the following information to Enterprise Case Management (ECM) for those KYC risk assessments which are investigated as a case in OFS ECM:

- Basic details of the risk assessment details
- Details of the risk score along with the risk parameters and its actual value
- Accelerated Rereview rules met by the customer
- Rules met by the Rule-based assessment model
- Internal and external relationships of the customer calculated or derived by the system

During case closure, the ECM system provides information about the user who closed the case, the date of closure, and the final risk score as of the case closure date to the KYC system.

Based on this information, the KYC system calculates the next review date and is used for feedback to the core banking system and the AML system.

After the case investigation is completed by the investigator, the ECM system calls a rest-based service of KYC which captures the following data elements in the KYC system:

- The user who closed the case
- The date of closure
- Final Risk Score of the customer during case closure (this would be the system score if there was no override performed. If there is an override performed, then it would be the overridden risk score)
- **Next Rereview Date:** This is a manually overridden rereview date provided by the system and is considered only for the periodic next review and not applicable for accelerated review. This date is given priority over the system calculated review date.

For more information, see the Oracle Financial Services Enterprise Case Management documents.

## 2.2 Review of Prospective KYC Customers

This section describes the following:

- Definition of Prospective or Interested Parties
- KYC Review During Onboarding
- OFS Questionnaire in Context of OFS KYC
- Due Diligence and Enhanced Due Diligence

### 2.2.1 Definition of Prospective or Interested Parties

OFS KYC understands a prospect as an entity or individual who wants to start a relationship with the financial institution by becoming a customer. Related parties are those individuals or entities who are related to the prospect by the relationship definition as provided by them or by external data sources. OFS KYC expects this data in a predefined format. For more information on the formats, see Oracle Financial Services Know Your Customer Service Guide and the Oracle Financial Services Know Your Customer API Data Elements Guide.

### 2.2.2 KYC Review During Onboarding

OFS KYC onboarding service caters to all the needs of KYC regulations. It performs Customer Identification Program (CIP), Screening, Scoring, and Decision for on board as well. For more information, see Oracle Financial Services Know Your Customer Service Guide.

The questionnaire which is considered as a way of gathering additional information is also available. All of these help in deriving the decision for Onboarding the prospect. The CIP and watch list screening are performed for the prospect and all related parties. Without completing the CIP and performing watch list screening of the prospect and related parties, the prospect cannot be onboarded. OFS KYC comes pre-packaged with Auto High Rules (Rule-based) and Weighted Risk Factors (Algorithm-based) for scoring the prospect.

The following figure shows the flow for a prospective customer:

**Figure 2:  Flow of Prospective Customer**
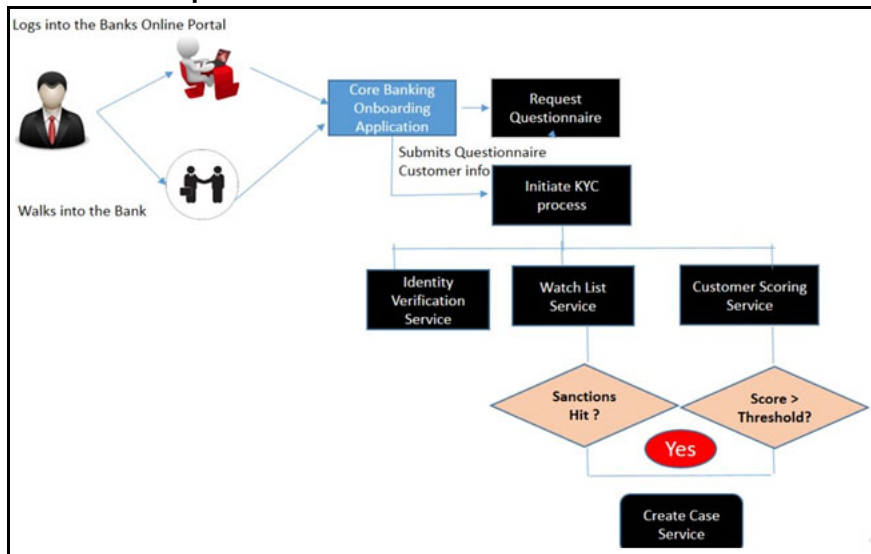
## 2.2.3　OFS Questionnaire in Context of OFS KYC

This section briefly provides details of how the questionnaire must be used by banks or financial institutions to aid in KYC reviews and help with KYC onboarding.

This section describes the following:

- Purpose of the OFS Questionnaire in the KYC Onboarding Process
- Implementing the OFS questionnaire in the KYC Onboarding Process
- Usage of the Questionnaire Answers in the KYC Onboarding Process

### 2.2.3.1　Purpose of the OFS Questionnaire in the KYC Onboarding Process

The questionnaire module intends to gather extraneous data points of prospects or customers which are specific to a certain set of conditions and are not expected to be answered by all prospects or customers. The questionnaire gathers answers which are required from the compliance team to analyze and decide whether the prospect is onboarded or not.

| NOTE | The questionnaire is not designed to replicate the application form of the onboarding system. The application form and all data related to the prospect are available in the onboarding system. The Onboarding system has to provide the appropriate information in the predefined format to the KYC system to process the onboarding request which then enables the KYC system to recommend whether the prospect can be onboarded or not. |
|------|---|

### 2.2.3.2　Implementing the OFS questionnaire in the KYC Onboarding Process

The questionnaire module is an independent service that is available for consumption as a rest-based service. The user interface has been provided for questionnaire configurations and definitions. The onboarding system can request a questionnaire based on the conditions defined through rest calls. The output of the request is a JavaScript Object Notion (JSON) file, which holds the questionnaire in a predefined format. The onboarding system must understand the JSON structure and capture the corresponding answers in the UI. It needs to send back the answers through rest calls in the defined format.

If the questionnaire needs to be answered by the relationship manager, that is, the employee of the bank, then it can use the OFS questionnaire respondent screen. This is useful as this enables the UI to display and capture the answers. This feature can only be used if the respondent has an Oracle Financial Services Analytical Applications (OFSAA) User id being created. Depending on the type of respondent (internal employee or prospect) and where the questionnaire must be invoked, one of the above options can be selected.

### 2.2.3.3　Usage of the Questionnaire Answers in the KYC Onboarding Process

As a part of the OFS KYC onboarding service, the API used has placeholders to capture the questionnaire request ID for an application that was invoked during data gathering as a part of their application process. OFS KYC then uses the questionnaire request ID to retrieve the questions and corresponding answers. The KYC onboarding service and the questionnaire module are integrated.

Currently, KYC uses information from the questionnaire to display them for investigation purposes. This is shown on the KYC onboarding risk assessment and the KYC onboarding case screens.

## 2.2.4　Due Diligence and Enhanced Due Diligence

Even for prospects, due diligence and Enhanced Due Diligence (EDD) must be performed. Real time Risk assessments are created for every request being sent by the onboarding system. Depending on

the requirement of case creation for prospects the case is created in real time and made available for users to investigate and then take the decision if they can be onboarded or not. OFS KYC onboarding service caters to all the needs of KYC regulations. It performs CIP, Screening, Scoring, and Decision for on board as well. For more information, see Oracle Financial Services Know Your Customer Service Guide.

# 3    Risk Scoring Model

As a part of regulations, every customer of the bank has to be reviewed by looking at the profile of the customer and risk score the customer to determine the risk the customer poses to the bank and to determine if the bank can do business with the customer. In addition to risk scoring the customer, bank regulations also require that the bank's prospective customers are risk-scored during Onboarding.

The Oracle Financial Services Know Your Customer (OFS KYC) application comes with pre-build risk models to help banks meet the requirements of regulations. Globally accepted risk factors are made available in the pre-build models. Additionally, banks can add additional risk factors as a configuration activity.

The risk model and parameters are derived from the following regulatory guidelines adopted around the world:

- International Money Laundering Abatement and Anti-Terrorist Financing Act
- USA PATRIOT Act
- UK Proceeds of Crime Act 2002
- JMLSG Guidance
- Third European Money Laundering Directive.

**Topics:**

- Pre-Build Risk Models
- Risk Scoring Process

## 3.1    Pre-Build Risk Models

The following risk models are applicable for KYC:

- Algorithm-Based Assessment Model
- Rule-Based Assessment Model.

### 3.1.1    Algorithm-Based Assessment Model

The Algorithm-based assessment model calculates the risk scores of customers based on customer attributes. The attributes considered for risk scoring are different for each customer type. Each Attribute is classified as a risk parameter, and each risk parameter is associated with a weight.

The risk score for each parameter is derived using the risk score of the parameter value and the weight of that parameter. The Algorithm-based KYC risk score is derived by summing up all the individually weighted risk scores.

### 3.1.2    Rule-Based Assessment Model

The Rule-based assessment model calculates a KYC risk score based on rules which can be configured by the client. This model is executed only if it is chosen by the bank or Financial Institution (FI) for an installation. When a customer is matched to multiple rules, the system considers the maximum score of the matched rules.

## 3.2 Risk Scoring Process

The Risk Scoring Process considers the following processes to derive the risk score of a customer as a part of everyday batch processing. Each of these is explained in the following sections.

- Identification of Customers
- Identification of Interested Parties and Beneficial Owners
- KYC Risk Scores for Rule-Based and Algorithm-Based Models

### 3.2.1 Identification of Customers

KYC continuously identifies customers due to KYC risk scoring and verification. KYC identifies the customers using pre-filtering assessments which include the following:

- **Account Opening Module:** New accounts opened by new customers or new accounts by existing customers.
- **Periodic Review:** Customers who are due for review as a part of the continuous process of review.
- **Accelerated Review:** Customers who are to be rereviewed due to a change in their information or change in behavior or re-assessing all customers due to a change in risk score of parameter or rule value or addition of a new rule or rule value.

> **NOTE**    For Deployment initiation, the data filters can be added during batch execution depending on the requirements of segmenting the data.

### 3.2.2 Identification of Interested Parties and Beneficial Owners

After the identification of customers, KYC proceeds with the identification of interested parties for each of the customers identified in the above process. Interested Parties can be Customer to Account or Customer to Customer relationships or beneficial owners. See the Definition of Prospective or Interested Parties section for the definition of interested parties.

### 3.2.3 KYC Risk Scores for Rule-Based and Algorithm-Based Models

All customers who are identified as part of the identification of customer processes are processed through the Rule-based Model. A customer would get a risk score for this model only if the customer meets one or more rules.

After the customers are identified through the pre-filtering assessments and their interested parties, the system proceeds with calculating the risk score of the customer through the Algorithm-based model. The following factors are considered for risk scoring:

- Customer Attributes
- Customer Geography Attributes
- Customer Account Attributes

- Watch List Scan.

> | **NOTE** | All customers who are processed through the Rule-based model are also considered for the Algorithm-based risk model to get the risk score on the customer attributes. The KYC risk score of the customer is the maximum of the Rule-based and Algorithm-based models. |

### 3.2.3.1 Customer Attributes

These are the basic attributes of the customers which are considered as risk factors such as Occupation, Source of Wealth, Date of Incorporation, and so on.

### 3.2.3.2 Customer Geography Attributes

These are the attributes that are related to the geography of the customers such as all risk factors associated with the Country (Country of Residence, Country of Citizenship, Country of Taxation, and so on.

### 3.2.3.3 Customer Account Attributes

These are the account attributes that affect the risk score of the customers such as the method of account opening and account type.

> | **NOTE** | The above attributes differ based on the customer type. For information on the risk parameters and their definitions, see Appendix-A Parameters. |

### 3.2.3.4 Watch List Scan

During risk assessments, customers are processed to have a check against a list of closely monitored individuals and entities through the Watch List scan. This is done to identify the customers whose names have already been put up on the Watch List. This is performed for the primary and interested parties of the customer.

Currently, the system provides the option of using either the internal watch list or Oracle Financial Services Customer Screening (OFS CS) to perform the screening of customers and external parties. Depending on the licenses for OFS CS, either one of them can be enabled or disabled. To know how to enable or disable the web services, see the *Adding Risk Parameters and Rules (KYC Batch)* section in Oracle Financial Services Know Your Customer Administrator Guide.

# 4     Risk Assessment Parameters

This chapter provides the details of each of the risk parameters or rules with examples of how the risk score is derived at a parameter or rule level.

Table 2 defines the risk assessment parameters or rules and provides details irrespective of the customer type and the risk model type.

**Table 2:  Parameter or Rule**

| Parameter or Rule | Details | Calculation |
|---|---|---|
| Geography Risk - Country of Primary Citizenship | The risk associated with the country of citizenship of a customer. The system considers the primary citizenship from the customer table. | If a customer's primary citizenship country is Romania, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Geography Risk - Country of Secondary Citizenship | The risk associated with the country of citizenship of a customer. The system considers secondary citizenship from the customer table. | If a customer's secondary citizenship country is Romania, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Geography Risk - Country of Residence | The risk associated with the country of residence of a customer. The system looks for the country of residence from the Customer table. | If a customer's country of residence is in Australia, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Geography Risk - Country of Taxation | The risk associated with a country where the customer pays tax. The system considers the country of taxation from the Customer table. | If a customer's country of taxation is in the UK, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Source of Wealth | The risk is associated with the source of wealth defined by the customer. The system considers the wealth source from the Customer table. | If a customer's source of wealth is Gambling, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Occupation | The risk associated with the occupation a customer performs. The system looks for the Occupation from the Customer table. | If a customer's occupation is Financial Services, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |

**Table 2:  Parameter or Rule**

| Parameter or Rule | Details | Calculation |
|---|---|---|
| Length of Relationship Risk | The risk associated with the length of the relationship a customer has with the bank or FI. The system calculates the length of the relationship by comparing the customer's Add Date from the Customer table with the risk Processing Date. | There are different ranges for defining the length of the relationship. The minimum and maximum ranges are configurable. For example:<br>● Less than 12 months<br>● 13 to 36 months<br>● More than 37 months.<br>The system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Watch List Risk | The risk associated with the customers being listed in the watch list maintained by the bank. The score assigned would be based on the list where the customer is matched. | If the customer is on a trust or exempt list (that is, a list with a risk <0),<br>Watch List Risk --> 0<br>If not, (highest risk of the matched list x 10). |
| Watch List Risk for Interested Parties | The risk associated with the interested parties and beneficial owners of a primary customer available in the list maintained by the bank for the watch list.<br>If there are multiple interested parties and beneficial owners, the maximum score is considered as the risk score. | If the customer is on a trust or exempt list (that is, a list with a risk <0),<br>Watch List Risk --> 0<br>If not, (highest risk of the matched list x 10). |
| Geography Risk - Countries of Operations | The risk is associated with the country where the customer's business is being operated. The system considers the Country of Operations from the Customer Country table. If there are multiple values for the country of operations, then the KYC system considers the maximum score of all the values. | If a customer's Country of Operation is Europe, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Geography Risk - Country of Headquarters | The risk associated with a country where the headquarters of the customer is located. The system considers the Country of Headquarters from the Customer's Address table where the address purpose is defined as Business. | If a customer's Country of Headquarters is Albania, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |

**Table 2:  Parameter or Rule**

| Parameter or Rule | Details | Calculation |
|---|---|---|
| Industry Risk | The risk associated with the industry where the customer is employed. The system considers Industry from the Customer's table. | If a customer's Industry is banking, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Legal Structure & Ownership Risk | The risk associated with the legal structure of a customer based on whether it is publicly or privately held. The system initially determines if the customer is publicly or privately held, and then looks for legal structure from the Customer table. | If a customer is publicly held and the legal structure ownership is Trust, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Corporation Age Risk | The risk associated with the age of the corporation in the industry. The system calculates the length of the relationship by comparing the Date of Incorporate from Customer table with the risk processing date. | There are different ranges for defining the length of the relationship. The minimum and maximum ranges are configurable. For example:<br>● Less than 12 months<br>● 13 to 36 months<br>● More than 37 months.<br>The system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |
| Risk Associated with the Markets Served | The risk associated with different markets served as stated by the customer for its operations. The system considers the maximum score of all the Markets Served from the Customer to Market Served table. | If a customer has investment banking and retail banking as Markets Served, the system considers the Jurisdiction Market Served table. If there are multiple values, then the system picks the maximum score associated with this value. |
| Risk Associated to Public Company | The risk associated with the type of the company, public or private. The system considers whether the customer is publicly or privately held from the Customer table. | If a customer is privately held, the system looks for the Risk Score of value associated with this parameter from the Parameter Risk Score Jurisdiction table. The scores are picked for a risk parameter as per customer jurisdiction. |

**Table 2: Parameter or Rule**

| Parameter or Rule | Details | Calculation |
|---|---|---|
| Risk Associated with the Products Offered | The risk associated with the different products served as stated by the customer. The system considers the Products Offered from the Customer to Products Offered table. It would even consider the effective and expiry date and compare it with the risk processing date.<br><br>If the expiry date is not provided the system considers risk assessment. | If a customer has loans and credit cards as Products Offered, the system considers the Jurisdiction Products Offered Served table. If there are multiple values, then the system picks the maximum score associated with this value. |
| The risk associated with Method of Account Opening | The risk is associated with a different method of account opening. For example,<br><br>Online, Walk-in, Phone. | If Customer A opens an account A 1, he also has 3 other accounts, A2, A3, and A4.<br><br>During processing KYC checks for all the four accounts values for the Method of Account Opening and assigns the maximum score derived from the map tables for each of the value for these accounts. |
| The risk associated with Account Type | Risk Associated with the account type which is associated with the account being opened. Based on the different products or services associated with an account, the account type can be defined.<br><br>For example,<br><br>● Account Type – Savings1, Products or Services – a, b, c<br>● Account Type – Savings2, Products or Services – a, d, x. | If a Customer A opens an account A 1, he also has three other accounts, A2, A3, A4. During processing KYC checks for all the four accounts values for the Account Type parameters and assigns the maximum score derived from the map tables for each of the value for these accounts. |
| IDV Default Score | Risk Associated with the identity verification output of the primary prospect and all related parties or interested parties. It considers the maximum value of all the parties. This is applicable only during On-boarding and available in the ready-to-use product. | If theres are 3 parties, one being the primary prospect and the other two related. The system looks for all the values from the IDV results and derives the score. If the IDV is not verified or not matched, then the score will be assigned as defined in the IDV score expression in the scoring engine (IPE). |

# 5     Managing KYC Batch Assessments

The Know Your Customer (KYC) Assessments user interface enables you to view all the risk assessments being worked on. For every customer who is being risk-scored, a corresponding risk assessment is created, and this can be viewed from the user interface. From here, the KYC investigator user can view the risk scores, the customer details, and manually promote the risk assessments to cases.

**Topics:**

- KYC Assessment Page Components
- Searching for KYC Assessments

## 5.1     KYC Assessment Page Components

The KYC Assessment page contains the following components:

- KYC Assessment Search Bar
- KYC Assessments List Matrix.

### 5.1.1     KYC Assessment Search Bar

The KYC Assessment search bar enables you to filter the list of risk assessments that you want to view and analyze on the KYC Assessment List matrix.

#### 5.1.1.1     KYC Assessment Information

Table 3 provides a list of the KYC assessment search components that display in the KYC Assessment Search section.

**Table 3:   Components of KYC Assessment Search Bar**

| Field | Description |
|---|---|
| Created From | Filters the KYC assessment list by the **From** date the assessment was created.<br>NOTE: By default, Created From date is automatically populated with the current date minus 7 calendar days. This field is a mandatory field when you have not selected any of the other filters. |
| Created To | Filters the KYC assessment list by the **To** date the assessment was created.<br>NOTE:By default, Created To date automatically populates the current date. This field is a mandatory field when you have not selected any of the other filters. |
| Customer | The Customer field enables you to choose between the two mutually exclusive options in the search bar. You can choose to retrieve search results related either to a customer Name or customer ID.<br>This field allows the use of wildcards when searching.<br>NOTE: By default, the ID radio button is selected. |
| Risk Score | Filters the KYC assessment list by the Risk score. This field retrieves risk assessment with scores greater than equal to, equal to, or less than equal to, to the score you enter in this text box. |
| Customer Type | Filters the risk assessment list by the customer type. |

**Table 3:  Components of KYC Assessment Search Bar**

| Field | Description |
|-------|-------------|
| Jurisdiction | Filters the KYC assessment list by the jurisdiction. The list of jurisdictions in the drop-down options is based on your access permission. |
| Risk Assessment Status | Filters the KYC assessment list by the current status of risk assessment. |
| Risk Assessment Source | Filters the KYC assessment list based on the risk assessment source. The different types of risk assessment sources available for searching are as follows:<br>● Accelerated Rereview Alerts<br>● Default Review<br>● Deployment Initiation<br>● Periodic Review. |
| Risk Assessment ID | Filters the KYC assessment list by the one or more Risk Assessment IDs entered in this text field. To search for multiple IDs, separate IDs with commas. If the assessments are found, the KYC Assessments List page displays information about the risk assessment with the IDs that exactly match the values you entered. The Risk Assessment ID search is mutually exclusive with all other filter criteria. |
| Tax ID | Filters the KYC assessment list by the tax ID of the customer. |

## 5.1.2    KYC Assessments List Matrix

The KYC Assessments List matrix displays summarized information on KYC assessments that you can further investigate.

By default, the search results are sorted as per the Assessment date, Risk Assessment ID, and Customer ID.

The KYC Assessments List matrix displays 10 risk assessments by default. To view additional KYC assessments returned by the search, use the pagination controls to move to additional pages of KYC assessments.

### 5.1.2.1    KYC Assessments List Components

The KYC Assessments List matrix of the KYC Risk Assessments Search and List page consists of the KYC Assessments List header and a matrix containing one or more KYC assessments and associated data. Each KYC assessment has an ID and a hyperlink associated with it.

The components within the KYC Assessments List matrix are as follows:

- **KYC Assessments List header:** Contains the number of KYC assessments displayed in the list, the total number of KYC assessments returned by the search, and the Excel icon. The KYC Assessment list matrix by default is sorted as per Assessment Date, Risk Assessment ID, and Customer ID. Pagination controls within the header allow you to navigate to the additional pages of KYC assessments.

- **List of KYC Assessments:** Displays a list of KYC assessments based on your search criteria on the KYC assessments Search bar.

Table 4 provides a list of the columns that display in the KYC Assessment List matrix.

**Table 4: Components of KYC Assessment List**

| Field | Description |
|---|---|
| Assessment ID | Displays the Assessment ID for the risk assessment. |
| Customer ID | Displays the Customer ID of the risk assessment. It also serves as a hyperlink to the Customer details in a popup window. The customer details displayed are always up-to-date. |
| Customer Name | Displays the name of the customer on whom the risk assessment is performed. |
| Customer Type | Displays the type of customer on whom the risk assessment is performed. |
| Tax ID | Displays the tax ID of the customer on whom the risk assessment is performed. |
| Risk Score | Displays the most recent risk score. It also serves as a hyperlink to Risk Information details in a popup window. |
| Assessment Source | Displays the assessment source for the risk assessment. A risk assessment record can have the following assessment sources:<br>● Accelerated Review<br>● Account On Boarding<br>● Deployment Initiation<br>● Periodic Review. |
| Assessment Status | Displays the current status of the risk assessment record. A risk assessment record can be in any of the following statuses:<br>● Auto Closed<br>● Closed<br>● Promote to Case. |
| Assessment Date | Displays the date on which the risk assessment was assessed. |
| Next Review Date | Displays the next review date of the risk assessment. |
| Case ID | Displays the Case ID for risk assessments that are or were in Promote to Case status. |
| Case Status | Displays the case status of risk assessments that are or were in Promote to Case status. |
| Risk Category | Displays the risk category based on the recent risk score. |

## 5.2 Searching for KYC Assessments

You can search for KYC Assessments using the search components in the KYC Assessments Search bar. To search for KYC Assessments, follow these steps:

1. Navigate to the Simple or Advanced Search section by clicking the Simple Search or Advanced Search button.

2. Specify any or all the criteria in Simple or Advanced Search. For more information, Table 4.

> | NOTE | The Customer field search field accepts wild card characters. Risk Assessment ID field accepts comma-separated entries. |
> |---|---|

If the search returns one or multiple risk assessments, the KYC Assessments List matrix displays a list of KYC assessments that match the criteria.

| NOTE | By default, it displays the records for the last six months when no date filters are applied. |
|------|------|

If no assessments meet the filter criteria, the following message displays:

*No data met the selected filter criteria. Please enter the new filter criteria.*

| NOTE | Once you click the **GO** button, you must allow the application to process and display the list. Do not click the **Go** button repeatedly as it can lock the system process. If the system is locked, you have to log off from the system and login again. |
|------|------|

## 5.2.1 Searching for KYC Assessments by Risk Assessment ID

To search for KYC assessments by Risk Assessment ID, follow these steps:

1. Navigate to the Search section by clicking the **Search** button.

2. In the KYC Assessments Search bar, type a Risk Assessment ID in the Risk Assessment ID text box. For multiple searches, enter additional Risk Assessment IDs separated by commas.

3. Click **Go**.

The KYC Assessment List returns all KYC assessments with IDs that match exactly the values you entered in the Risk Assessment ID text box.

### 5.2.1.1 Viewing Customer Details

The Customer Details pop-up window allows you to view additional details about a customer such as account details, address details, contact details, risk information details, and so on.

Click the Customer ID hyperlink under the KYC Risk Assessment List grid. The Customer Details pop-up window is displayed.

The Customer Details pop-up window contains the following areas of information. This displays the latest information about the customer.

- **Customer** - This section displays details related to the customer associated with the selected risk assessment.

- **Accounts** - This section displays the details related to the customer's account.

- **Online Accounts** - This section displays the details related to the customer's online account.

- **Address** - This section displays the text that describes the customer's residential location.

- **Phone** - This section displays the contact details of the customer.

- **Email Address** - This section displays the mailing address of the customer.

- **Risk Information** - This section displays the value of various types of risk associated with the customer.

- **Risk List Membership** - This section displays the watch lists associated with the selected customer.

- **Anticipatory Profile** - This section displays all the anticipatory profiles associated with the selected customer.

- **Insurance Policy** - This section displays the terms and conditions of the contract of insurance.

- **Customer Identification Documents** - This section displays the customer identification document details associated with the selected customer.

- **Customer Party Relationship** - This section displays the details of the customer and party's relationship.

- **Party Address** - This section displays the text that describes the party's address.

- **Party Identification documents** - This section displays the identification document details of the party associated with the selected customer.

# 6     Managing KYC Onboarding Assessments

The Know Your Customer (KYC) Onboarding assessments are displayed on the Assessments screen, where you can view the assessment details such as the applicant risk score, assessment ID, applicant type, risk assessment status, and application Onboarding status. You can also promote the risk assessment to a case.

Risk scores are generated using both Rule-based and Algorithm-based risk assessments, and the maximum score is taken as the risk score.

> **NOTE**         Only primary applicants are risk-scored.

To view the User Interface (UI):

1. Log in to the KYC application as the KYC Investigator. For more information, see the *Getting Started* chapter in the Oracle Financial Services Know Your Customer Administrator Guide.

2. Click **Behavior Detection - KYC** and select **Onboarding KYC Assessments**.

The Onboarding assessment IDs are displayed along with the assessment details.

**Figure 3:  Onboarding KYC Assessments Menu**
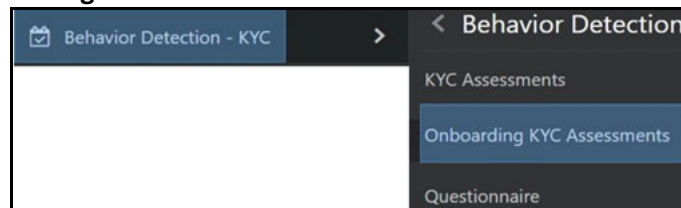


## 6.1     Searching for Assessments

To apply filters for the assessments, follow the steps:

1. Click the filter icon on the Assessments page.

**Figure 4: Filter Fields**



2.  Provide the required filter values and click **Apply Filter**.

# 6.2    Managing Risk Assessment List

This section shows the list of the risk IDs associated with a customer by considering different attributes of the customer. The workflow of KYC enables Financial Institutions (FI) to perform Due Diligence, Enhanced Due Diligence, and continuous monitoring of customers. The attributes differ based on the customer type.

- **Risk Assessment ID**: It is the unique identification for the risk assessment.

- **Applicant ID:** Displays the Applicant ID of risk assessment.

- **Applicant Name:** Displays the name of the Applicant on whom the risk assessment is performed.

- **Risk Score:** Displays the most recent risk score.

# 6.3    Managing Score and Applicant Details

- **Applicant risk score:** The risk score is the highest score of the Rule-based assessment details and Model-based or Algorithm-based assessment details.

- **Applicant details**: You can view basic information about the applicant such as the contact number, e-mail address, occupation, and so on.

- **Rule-Based Assessment Details**: Risk score assigned to each component of the Rule-based assessment such as occupation, citizenship source (primary or secondary), and so on.

- **Model-Based Assessment Details:** Risk score assigned to each component of the Model-based or Algorithm-based assessment such as watch list risk.

- **Watch List details:** The watch-listed customers are displayed in this grid. It also displays the watch list details of every party of the application.

## 6.4  Assessments Page

When there are one or more related prospects for a primary prospect, the assessment score is inherited based on the maximum risk assessment score of the related prospects. For example, the primary prospect is called John and the related prospects are called Jane and Janet. Jane has an assessment score of 60 and Janet has an assessment score of 80. This means that John inherits Janet's assessment score, which is the maximum assessment score of both the related prospects.

**Figure 5: Assessments Page**



You can filter the assessments by the risk assessment ID or case ID.

To view the tool-tip for each field, mouse over the field.

Table 5 shows the fields and their descriptions.

**Table 5:  Onboarding Assessment Fields**

| Field | Description |
|---|---|
| Risk Rating | Provides the Risk Rating of the assessment. There are three ready-to-use colors:<br>• **Green** - Assessment being assessed has a low-risk rating.<br>• **Yellow** - Assessment being assessed has a medium risk rating.<br>• **Red** - Assessment being assessed has a high-risk rating. For more information, see Thresholds for Risk Category. |
| Assessment ID | Provides the assessment ID of the assessment. This is a unique number. |
| Applicant ID | Provides the application ID of the assessment. This is a unique alphanumeric value. |
| Applicant Name | Provides the name of the customer. |
| Applicant Type | Provides the type of customer. |
| Case ID | Provides the case ID for the assessment.<br>NOTE:This number appears only after the assessment is promoted to a case. |
| Status | Provides the status of the case. |
| Recommend to Onboard | Provides the Onboarding status. |
| Risk Score | Provides the risk score of the assessment. |

**Table 5: Onboarding Assessment Fields**

| Field | Description |
|-------|-------------|
| Promote to Case | Click this button to promote the assessment to a case.<br>NOTE:<br>A warning message *Do you want to proceed with case creation?* appears. Click **OK** to proceed with case creation or click **Cancel** to go back.<br>A message *Case has already been created appears* if the risk assessment has already been promoted to a case. |

You can click any of the above fields (except the Assessment ID) to view a snapshot of the assessment details such as the jurisdiction of the assessment, date on which the assessment was created, the number of applicants involved in the assessment, case resolution status, and case recommendation status.

To view the complete details of the assessment, follow the steps:

1. Click the **Assessment ID** link.

   The following example shows the complete details of an assessment:

**Figure 5: Assessment List Page**
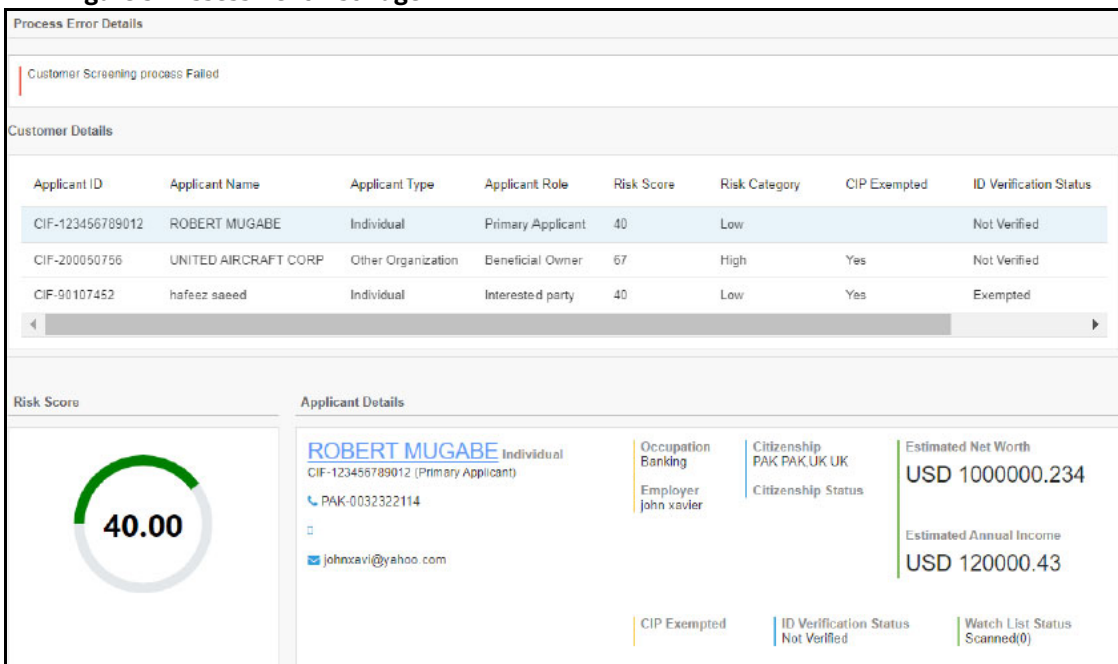


This portion of the assessments shows the risk score, result of the screening process, and customer details. The screening process is successful only if the screening and case creation processes have been successfully completed. The details of both the primary and related customers are displayed. For related customers, you can also see the relationship type in the **Applicant Role** column.

**Figure 6: Rule Based Assessment Details and Model Based Assessment Details**
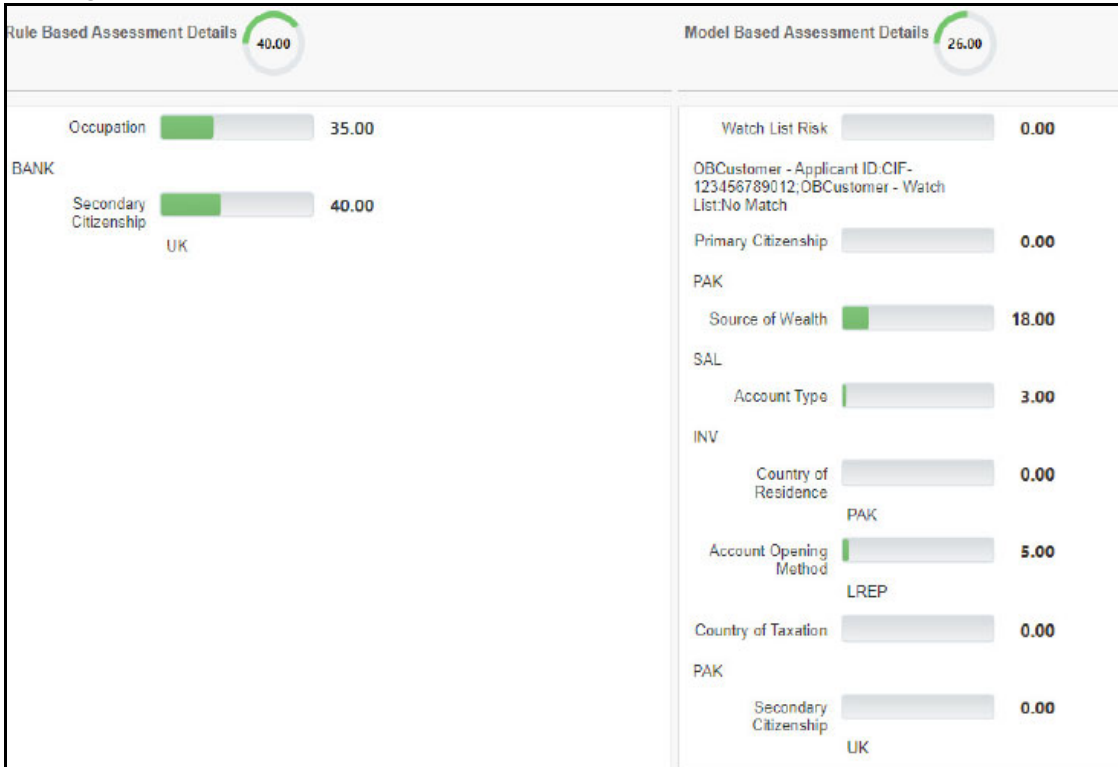


This portion of the assessment shows the rule scores of the rule-based and model-based assessments.

**Figure 7: Applicants Involved**



This portion of the assessment shows the result of onboarding of the primary and related applicants. If the **Recommend to Onboard** flag for a customer is set to **Y**, then a tick icon ✅ appears next to the customer name. If not, a cross icon ❌ appears next to the customer name.

# 7     Integration with ECM

Know Your customer (KYC) risk assessments can be promoted to a case depending on the risk threshold. This chapter explains how to manually promote a risk assessment to a case and provides brief information on case investigation in Enterprise Case Management (ECM).

**Topics:**

- Manual Promotion of KYC Risk Assessments to Cases
- Investigation of KYC Cases

## 7.1     Manual Promotion of KYC Risk Assessments to Cases

Manual Promotion of KYC risk assessments is done by the KYC investigator and is done only for risk assessments that do not have a case created before. The Promote to Case action allows you to promote the KYC risk assessment to a case manually.

> **NOTE**     A manual promotion can only be done if the risk assessment is in auto-closed status and if ECM is installed with Behavior Detection (BD).

The Promote to Case action on the KYC Risk Assessments List grid enables you to perform this action. The assignment of new cases happens along with case creation. When you perform the Promote to Case action on the selected KYC risk assessment, the status of the assessment changes to Promoted to Case, and a case ID is generated. The case ID generated is displayed in the Case ID column under the KYC Risk Assessment List grid. The data is then transferred to the Case Management system for further investigation.

Single and multiple risk assessments can be promoted to a case and while promoting multiple assessments to a case, multiple case Ids are generated by comma-separated values. If you select a risk assessment that already has a case, the following message is displayed:

*You have selected the risk assessment(s) which already has a case. Select the risk assessment which does not have a case.*

You cannot perform the Promote to Case action on a risk assessment that is locked by another for case creation. If you select a risk assessment that is locked by another user, the following message is displayed:

*You have selected the risk assessment(s) which already has a case or are locked by another user for case creation. Select the risk assessment which does not have a case and is not locked.*

To promote a KYC risk assessment to a case, follow these steps:

1. Navigate to the KYC home page.
2. Click **KYC Assessments and Cases** in the Left Hand Side (LHS) menu.
3. Click **KYC Assessments** in the Investigation menu. The **KYC Assessment Search and List** page appears.
4. Select the risk assessment that you want to promote to case. To select multiple risk assessments, use ctrl + click.
5. Click **Promote to Case**. The confirmation message informs you of the generated case ID. For further investigation, the generated case ID is used as a search filter in the KYC Cases User Interface (UI).

## 7.2      Investigation of KYC Cases

The risk assessments which are promoted to cases are investigated and resolved in the Oracle Financial Services Enterprise Case Management (OFS ECM) application. As a part of the case investigation, the user is shown the details of the risk score and the individual risk parameters. For more information on the investigation of cases, see the *Investigating Cases* section in Oracle Financial Services Enterprise Case Management User Guide.

# 8     Appendix-A Parameters

This appendix provides the list of parameters or rules for the risk models for real time and continuous risk scoring of the customer.

**Topics:**

- Rule-Based Assessment Model Parameters
- Algorithm-Based Assessment Model Parameters
- Accelerated Rereview Rules

## 8.1     Rule-Based Assessment Model Parameters

Table 6 shows the parameters that are applicable to the Rule-based model.

**Table 6: Rule-based Assessment Model Parameters**

| Rules | Individual | Other Organization | Financial Institution | Applicable for Onboarding? |
|---|---|---|---|---|
| Country of Primary Citizenship | X | | | Yes |
| Country of Secondary Citizenship | X | | | Yes |
| Country Of Residence | X | | | Yes |
| Occupation Risk | X | | | Yes |
| Watch List Risk | X | X | X | Yes |
| Industry Risk | | X | | Yes |
| Country of Head Quarters | | X | X | Yes |
| Legal Structure And Ownership Risk | | X | X | Yes |
| Country of Operations | | X | X | Yes |
| Corporation Age Risk | | X | X | No |

## 8.2   Algorithm-Based Assessment Model Parameters

Table 7 shows the parameters that are applicable for both real-time and batch mode of the Algorithm-based model.

**Table 7:  Algorithm-Based Assessment Model Parameters**

| Rules | Individual | Other Organization | Financial Institution | Applicable for Onboarding? |
|---|---|---|---|---|
| Geo Risk - Country of Operation | | X | X | Yes |
| Geo Risk - Country of Citizenship | X | | | Yes |
| Geo Risk - Country of Head Quarters | | X | X | Yes |
| Geo Risk - Country of Residence | X | | | Yes |
| Geo Risk - Country of Taxation | X | | | Yes |
| Operational Risk - Markets Served by the bank | | | X | Yes |
| Operational Risk - Products Offered by the bank | | | X | Yes |
| Risk Associated to Public Company | | X | X | Yes |
| Risk Associated with Source of Wealth | X | | | Yes |
| Watch List Risk - Primary Customer | X | X | X | Yes |
| Watch List Risk - Interested Party | | X | X | Yes |
| Risk Associated with Account Type | X | X | X | Yes |
| Risk Associated with Method of Account Opening | X | X | X | Yes |
| Identity Verification (includes both Primary and Interested Party output) | X | X | X | Yes |
| Risk Associated with Corporate Age | | X | X | No |

**Table 7: Algorithm-Based Assessment Model Parameters**

| Rules | Individual | Other Organization | Financial Institution | Applicable for Onboarding? |
|---|---|---|---|---|
| Risk Associated with Length of Relationship | X | X | X | Yes |
| Risk Associated with Occupation | X | | | Yes |
| Risk Associated with Industry | | X | X | Yes |
| Risk Associated with Legal Structure and Ownership | | X | X | Yes |

# 8.3    Accelerated Rereview Rules

The **ML based Anomaly Detection** is a new rule added to Accelerated Rereview (ARR) rules. This rule picks the KYC customers who are chosen in the Anomaly detection model of Compliance Studio. All the chosen customers are reassessed.

> **NOTE**    Compliance Studio installation is mandatory for this rule.

After installing Compliance Studio, `AIF_ANOMALY_SCORE_DETAILS` and `AIF_ANOMALY_SCORE_ECM_DETAILS` tables are created. See Section *ML_Scoring* in the Compliance Studio Administration and Configuration Guide for the table structure.

Table 8 shows the parameters that are applicable for the accelerated re-review rules.

**Table 8: Accelerated Rereview Rules**

| Rule Name | Rule Description | Rule Focus | Rule Type | Look back Period | count of alerts | alert score |
|-----------|------------------|------------|-----------|------------------|-----------------|-------------|
| Customer Address Change Log | Reviews a Customer when there is any change in the data elements of the Customer Address. The elements which are a part of this rule are:<br>● City<br>● Country<br>● Postal Code<br>● Region<br>● State<br>● Street Line 1 to 6.<br>Each of these columns is a part of the Customer Address table. | Customer | CL | NA | NA | NA |
| Customer Change Log | Reviews a Customer when there is any change in the data elements of the Customer. The elements which are a part of this rule are:<br>● Occupation<br>● Organization Legal Structure<br>● Public or Private<br>● Employer Name<br>● Full Name<br>● Display Name<br>● Middle Name<br>● Organization Name Employer Industry<br>● Country of Taxation<br>● Wealth Source<br>● Customer Status.<br>Each of these columns are a part of Customer table. | Customer | CL | NA | NA | NA |

**Table 8: Accelerated Rereview Rules**

| Rule Name | Rule Description | Rule Focus | Rule Type | Look back Period | count of alerts | alert score |
|---|---|---|---|---|---|---|
| Customer Country Change Log | Reviews a customer when there is any change in the data elements of the customer country. The elements which are a part of this rule are Country and Relationship type.<br><br>These data elements are a part of the Customer Country table. | Customer | CL | NA | NA | NA |
| Customer Product Change Log | Review a customer when there is any change in the data elements of Customer Products offered. The elements which are a part of this rule are:<br>• Addition of a new product offering<br>• Expiration of the product offered before. | Customer | CL | NA | NA | NA |
| Customer to Account Change Log | Reviews a customer if there is any change in the Customer to Account relationship in the context of a new role being added to the account. | Customer | CL | NA | NA | NA |
| Customer to Customer Change Log | Reviews a customer if there is any change in the Customer to Customer relationship in the context of a new relationship being added to a customer and the modifications to the expiration of the relationship. | Customer | CL | NA | NA | NA |
| Change In Risk Model - Account Type | Reviews a customer who has been impacted due to a change in risk score of the account type values. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Markets Risk | Reviews a customer who has been impacted due to a change in risk score of the market served values. | Customer | RSKR | NA | NA | NA |

**Table 8: Accelerated Rereview Rules**

| Rule Name | Rule Description | Rule Focus | Rule Type | Look back Period | count of alerts | alert score |
|---|---|---|---|---|---|---|
| Change In Risk Model - Product Risk | Reviews a customer who has been impacted due to a change in risk score of the products offered values. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Country of Operation | Reviews a customer who has been impacted due to a change in risk score of the country of operations values and additional rule value for rule-based. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Country Of Head Quarters | Reviews a customer who has been impacted due to a change in risk score of the country of headquarters values. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Method OF Account Opening | Reviews a customer who has been impacted due to a change in risk score of the method of account opening values. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Source Of Wealth | Reviews a customer who has been impacted due to a change in risk score of the source of wealth values. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Country Of Residence | Reviews a customer who has been impacted due to a change in risk score of the country of residence values. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Occupation | Reviews a customer who has been impacted due to a change in risk score of the occupation values and additional rule values for rule-based. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Primary Citizenship | Reviews a customer who has been impacted due to a change in risk score of the country values and additional rule values for rule-based. | Customer | RSKR | NA | NA | NA |

**Table 8: Accelerated Rereview Rules**

| Rule Name | Rule Description | Rule Focus | Rule Type | Look back Period | count of alerts | alert score |
|---|---|---|---|---|---|---|
| Change In Risk Model - Secondary Citizenship | Reviews a customer who has been impacted due to a change in risk score of the country values and additional rule values for rule-based. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Corporate Age | Reviews a customer who has been impacted due to a change in risk score of the range of the corporation age. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Length Of Relationship | Reviews a customer who has been impacted due to a change in risk score of the range of the length of the relationship. | Customer | RSKR | NA | NA | NA |
| Change In Risk Model - Legal Structure And Ownership | Reviews a customer who has been impacted due to a change in risk score of the legal structure values and additional values for rule-based. | Customer | RSKR | NA | NA | NA |
| Change in Risk Model - Industry Risk | Reviews a customer who has been impacted due to a change in risk score of the Industry values and additional values for rule-based. | Customer | RSKR | NA | NA | NA |
| Change in Risk Model - Country of Taxation | Reviews a customer who has been impacted due to a change in risk score of the Country of Taxation values. | Customer | RSKR | NA | NA | NA |
| Change In Risk model - Public Company | Reviews a customer who has been impacted due to a change in the risk score of the public company. | Customer | RSKR | NA | NA | NA |
| ML Based Anomaly Detection | Reviews a customer who has been picked in Anomaly Detection model. | Customer | RSKR | NA | NA | NA |

# 9  Appendix-B Examples of Derivation of Risk Score

This appendix has examples of how a risk score is derived for each of the risk assessment models for different customer types.

**Topics:**

- Rule-Based Risk Assessment
- Algorithm-Based Risk Assessment

## 9.1  Rule-Based Risk Assessment

Rule-based risk assessment risk score derivation for each customer type is explained as follows.

Table 9 has details of the Risk Assessment ID, Case ID, Customer, and Customer Type used for explaining the Rule-based risk assessment scoring process.

**Table 9:  Rule-Based Risk Assessment Examples**

| Risk Assessment ID | Case ID | Customer | Customer Type |
|---|---|---|---|
| 123 | CA111 | Customer A | Individual |
| 124 | CA112 | Customer B | Other Organization |
| 125 | CA113 | Customer C | Financial Institution |

### 9.1.1  Rule-Based Risk Score Calculation − Customer A - Individual

Table 10 shows the risk score calculations for customer A.

**Table 10:  Rule-Based Risk Score Calculation − Customer A - Individual**

| Rules Matched | Values of the Rules of Customer A | Risk Score |
|---|---|---|
| Country of Residence | Japan | 45 |
| Watch List Score | Available in trust with a risk degree of 6 | 60 (6*10) |
| Occupation Risk | Gambler | 50 |

Final Risk Score = 60

The maximum score of the values of the rules matched = max (45, 60, 50).

### 9.1.2 Rule-Based Risk Score Calculation – Customer B - Other Organization

Table 11 shows the risk score calculations for customer B.

**Table 11: Rule-Based Risk Score Calculation – Customer B - Other Organization**

| Rules Matched | Values of the Rules of Customer B | Risk Score |
|---|---|---|
| Country of Head Quarters | America | 30 |
| Industry Risk | Trading | 45 |

Final Risk Score = 45

The maximum score of the values of the rules matched = max(30, 45).

### 9.1.3 Rule-Based Risk Score Calculation – Customer C - Financial Institution

Table 12 shows the risk score calculations for customer C.

**Table 12: Rule-Based Risk Score Calculation – Customer C - Financial Institution**

| Rules Matched | Values of the Rules of Customer C | Risk Score |
|---|---|---|
| Country of Operations | Japan | 45 |
| Legal Structure and Ownership Risk | Trust which is held publicly held | 65 |

Final Risk Score = 65

The maximum score of the values of the rules matched = max (45, 65).

### 9.1.4 Thresholds for Risk Category

Table 13 provides details of the risk score range to define the threshold limit for risk assessment promotion to cases.

| NOTE | The following values are the ready-to-use values for Risk Assessments. |
|---|---|

**Table 13: Thresholds for Risk Category**

| Minimum Risk Score | Maximum Risk Score | Risk Category | User Review Required |
|---|---|---|---|
| 0 | 40 | Low | No |
| 40 | 60 | Medium | No |
| 60 | 100 | High | Yes |

| NOTE | • Apart from **Low**, **Medium**, or **High**, you can define risk categories for other score ranges as well. You must assign a color for each score range. To assign a color, use the `fcc_ob_risk_catgry_colr_map` table. |
| | • For the category icon to be displayed, the category values must be defined within the specified score ranges. To define the risk category for a score range, use the `fcc_ob_risk_category` table. |

## 9.2 Algorithm-Based Risk Assessment

Algorithm-based risk assessment risk score derivation for each customer type is explained as follows.

Table 14 has details of the Risk Assessment ID, Case ID, Customer, and Customer Type used for explaining the Algorithm based risk assessment scoring process.

**Table 14: Algorithm-Based Risk Assessment Examples**

| Risk Assessment ID | Case ID | Customer | Risk Score | Customer Type |
|---|---|---|---|---|
| 231 | CA222 | Customer D | 70.5 | Individual |
| 232 | CA223 | Customer E | 46.25 | Other Organization |
| 233 | | Customer F | 33 | Financial Institution |

Depending on the Jurisdiction the customer belongs to, the weights and scores for each value will be picked from the Parameter Risk Score Jurisdiction.

### 9.2.1 Risk Calculation for Customer D

Customer D is an Individual customer. Therefore, the Individual risk model will be used.

Table 15 shows the risk calculation for customer D.

**Table 15: Risk Calculation for Customer D**

| Parameter | Weight | Calculation or Verification Step | Calculation for Customer D |
|---|---|---|---|
| Watch List Primary Customer | 15 | If the customer is on a trust or exempt list (that is, a list with a risk <0), Watch List Risk --> 0 Else, (highest risk of the matched list x 10). | Customer D is on Watch List A and Watch List B. Watch List A's risk is 7. Watch List B's risk is 6. Customer A's Watch List Match Risk = max of (7, 6) * 10 = 70. |

**Table 15: Risk Calculation for Customer D**

| Parameter | Weight | Calculation or Verification Step | Calculation for Customer D |
|---|---|---|---|
| Geography Risk associated with Country of Residence | 10 | Risk as it appears on the Parameter Risk Score Jurisdiction tables for country geography risk. | Customer D's Country of Residence is the US. Per Country Parameter Risk Score Jurisdiction table of respective Jurisdiction, US risk is 100 Customer D's Country of Residence Geo Risk = 100. |
| Geography Risk associated with Country of Primary Citizenship | 5 | Risk of countries of citizenship as it appears on the Parameter Risk Score Jurisdiction tables for country geography risk. | Customer D is a citizen of Romania and the US. Per Country Parameter Risk Score Jurisdiction table, US risk is 50, Romania's risk is 100. Customer D's Country of Citizenship Geo Risk = Max of (50,100). |
| Geography Risk associated with Country of Secondary Citizenship | 5 | Risk of countries of citizenship as it appears on the Parameter Risk Score Jurisdiction tables for country geography risk. | Customer D is a citizen of Romania and the US. Per Country Parameter Risk Score Jurisdiction table, US risk is 50, Romania's risk is 100. Customer D's Country of Citizenship Geo Risk = Max of (50,100). |
| Source of Wealth | 10 | Source of wealth values as it appears on the Parameter Risk Score Jurisdiction tables. | Customer D's Source of Wealth values is Income from Leases Property (risk 80) Customer D's Source of Wealth Risk = 80. |

**Table 15: Risk Calculation for Customer D**

| Parameter | Weight | Calculation or Verification Step | Calculation for Customer D |
|---|---|---|---|
| Occupation | 10 | Risk as it appears on the Parameter Risk Score Jurisdiction tables for occupation. | Customer D's occupation is Gambler, therefore risk = 100. |
| Length of Relationship with the bank or FI | 15 | 0 - 12 months --> 80<br>13 - 36 months --> 60<br>37 - 120 months --> 40<br>More than 120 months --> 0 | Customer D has been a client for 12 months.<br>Customer D's Length of Relationship with the bank or FI Risk = 80. |
| Account Type | 10 | Maximum Risk of all the accounts a customer has a controlling role on. | Customer D has 2 accounts – Credit Card and Savings Account for which the score are 60 and 25 respectively.<br>Customer D's Account Type Risk is Max of (60,25). |
| Method of Account Opening | 10 | Maximum Risk of all the accounts a customer has a controlling role on. | Customer D has 2 accounts that have been opened via Online and Walk-in and the scores are 70 and 20 respectively. Customer D's Method of Account Opening Risk is a maximum of (70,20). |

Risk Score = Sum (value of the risk assessment parameter * weight in decimals)

Sum(0*.10) + (70*.15) + (50*.10) + (100*.05) + (40*.1) + (20*.10) + (0 *.05) + (40*.15) + (60*.10) + (70*.10) = 70.5.

## 9.2.2 Risk Calculation for Customer E

Customer E is a Legal Entity (LE) (Other Organization). Therefore, the Legal Entity risk model will be used.

When Customer Type = ORG or FIN, WLS will consider Interested Parties as well which are determined based on Customer-to-Customer relationship(s) and Customer to Account relationship(s).

| NOTE | The Party - Party Relationship is specifically for those who are non-customers of the bank but are related to the primary customer who is being risk-scored. |
|------|---|

**Figure 9: Risk Score Calculations for Customer E**
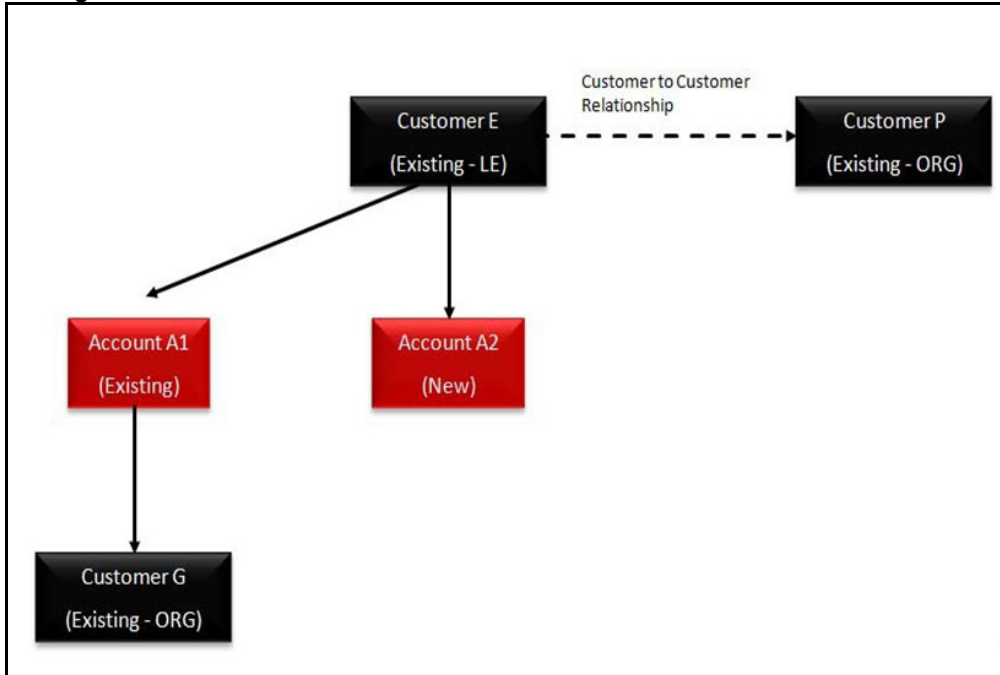


Table 16 shows the risk score calculations for customer E.

**Table 16:  Risk Calculation for Customer E**

| Parameter | Weight | Calculation or Veri-fication Step | Calculation for Customer E |
|-----------|--------|-----------------------------------|----------------------------|
| Geography Risk associated with Country of Headquarters | 7.5 | Risk as it appears on the Parameter Risk Score Jurisdiction tables for country geography risk. | Customer E's headquarter is in the US. Per Country Parameter Risk Score Jurisdiction table, US risk is 90 Customer B's Country of Head Quarters (HQ) Geo Risk = 90. |

**Table 16:  Risk Calculation for Customer E**

| Parameter | Weight | Calculation or Verification Step | Calculation for Customer E |
|---|---|---|---|
| Geography Risk associated with Countries of Operation | 7.5 | The maximum risk of countries in which the corporation conducts business. | Customer E operates in Romania and the US.<br><br>Per Country Parameter Risk Score Jurisdiction table, US risk is 50, Romania's risk is 100.<br><br>Customer E's Country of Operation Geo Risk = 100 |
| Watch List for Primary Customer | 20 | If the customer is on a trust or exempt list (that is, a list with a risk <0), Watch List Risk --> 0<br><br>Else, (highest risk of the matched list x 10). | Customer E appears on a PEP list and the risk level is 40<br><br>Customer E's Watch List Match Risk = 40. |
| Watch List for Interested Parties | 10 | For each customer (and<br><br>non-customer) directly associated with the current customer (that is, through CUST_ACCT, CUST_CUST, or<br><br>party_party_rlshp), calculate INTERESTED PARTIES WATCH LIST<br><br>RISK as (highest risk of the matched list x 10) *For this parameter, calculate Maximum Interested Parties Watch List Risk). | Customer G, P is on Watch List A, Watch List B, and Watch List C.<br><br>Watch List A's risk is 1. Watch List B's risk is 2, Watch List C's risk is 3 Watch List Match Risk = 30. |

**Table 16:  Risk Calculation for Customer E**

| Parameter | Weight | Calculation or Verification Step | Calculation for Customer E |
|---|---|---|---|
| Industry | 15 | Risk as it appears on the Parameter Risk Score Jurisdiction tables for industry types. | Customer E is in the Telecommunications Industry. Per Industry Parameter Risk Score Jurisdiction table, Telecom. risk is 50. Customer B's Industry Risk = 50. |
| Corporation Age | 5 | 0 - 12 months --> 80 13 - 36 months --> 60 37 - 120 months --> 40 More than 120 months --> 0 | Customer E has been a customer since 36 months. Customer E's Corporation Age Risk = 60. |
| Legal Structure & Ownership | 5 | Risk as it appears on the Parameter Risk Score Jurisdiction tables for legal structure types. | Customer E is a Public Corporation. Based on Legal Structure & Ownership Parameter Risk Score Jurisdiction, Public Corporation Risk is 0. Customer B's Legal Structure & Ownership Risk = 0. |
| Risk Associated with Account Type | 5 | Maximum Risk of all the accounts a customer has a controlling role on. | Customer E has 2 accounts – Credit Card and Savings Account for which the score are 60 and 25 respectively. Customer E's Account Type Risk is Maximum of (60,25). |

**Table 16: Risk Calculation for Customer E**

| Parameter | Weight | Calculation or Verification Step | Calculation for Customer E |
|---|---|---|---|
| Risk Associated with Method of Account Opening | 5 | Maximum Risk of all the accounts a customer has a controlling role on. | Customer E has 2 accounts that have been opened via Online and Walk-in and the scores are 70 and 20 respectively. Customer E's Method of Account Opening Risk is Maximum of (70,20). |
| Length of Relationship with the bank or FI | 10 | 0 - 12 months --> 80<br>13 - 36 months --> 60<br>37 - 120 months --> 40<br>More than 120 months --> 0. | Customer E has been a Customer for 36 months.<br>Customer E's Length of Relationship with the bank or FI Risk = 60. |

Risk Score = Sum (value of the risk assessment parameter * weight in decimals) Final Risk Score = 46.25.

Sum of [(0*0.05)+(20*0.05)+(90*0.075)+(100*0.075)+(40*0.2)+(30*0.1)+(50*0.15)+ (40*0.05)+(0*0.05)+(60*0.05)+(70*0.05)+(40*0.1)]

Risk Category: Medium

Promoted to Case, even though the category is medium, as the Watch List Score is 40, which is above the threshold set.

## 9.2.3 Risk Calculation for Customer F

Customer F is a Correspondent Bank (CB) (Financial Institution). Therefore, the Correspondent Bank risk model will be used.

When Customer type = ORG or FIN, NNS or WLS will consider Interested Parties as well which are determined based on Customer-to-Customer relationship(s) and Customer to Account relationship(s).
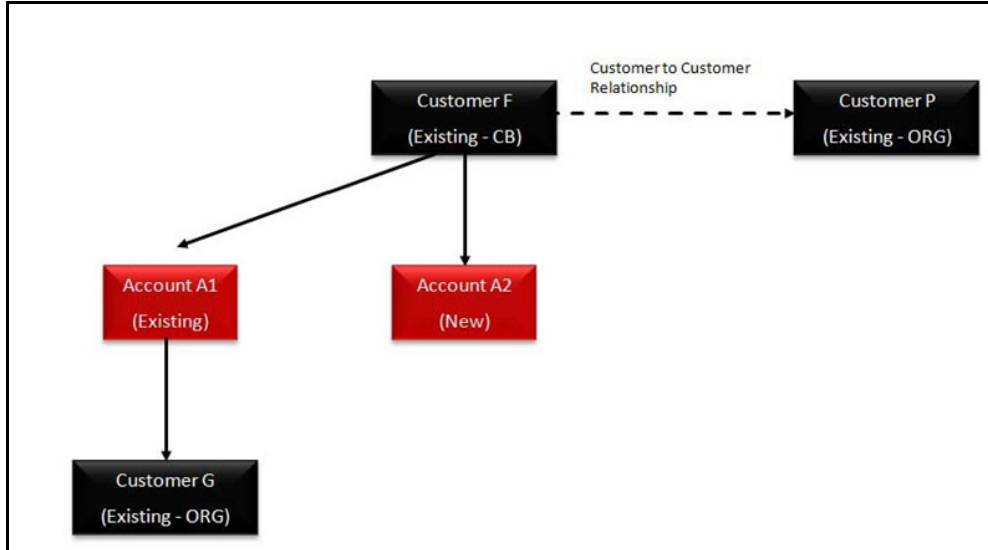
**Figure 8: Risk Score Calculations for Customer F**



Table 17 shows the risk score calculations for customer F.

**Table 17: Risk Calculation for Customer F**

| Parameter | Weight | Calculation or Verification Step | Calculation for Customer F |
|---|---|---|---|
| Geography Risk associated with Country of Headquarters | 5 | Risk as it appears on the Parameter Risk Score Jurisdiction tables for Country Geography Risk. | Customer F's headquarter is in the UK.<br>Per Country Parameter Risk Score Jurisdiction table, UK risk is 70<br>Customer F's Country of HQ Geo Risk = 70. |
| Geography Risk associated with Countries of Operation | 10 | The maximum risk of countries in which the corporation conducts business. | Customer F operates in Europe and the UK<br>Per Country Parameter Risk Score Jurisdiction table, UK risk is 70, Europe risk is 85.<br>Customer F's Country of Operation Geo Risk = 85. |

**Table 17: Risk Calculation for Customer F**

| Parameter | Weight | Calculation or Verification Step | Calculation for Customer F |
|---|---|---|---|
| Watch List for Primary Customer | 10 | If the customer is on a trust or exempt list (that is, a list with a risk <0), Watch List Risk --> 0 Else, (highest risk of the matched list x 10). | Customer F appears on a Trust list and the risk level is 2 Customer E's Watch List Match Risk = 20. |
| Watch List for Interested Parties | 10 | For this parameter, calculate MAXIMUM INTERESTED PARTIES WATCH LIST RISK). | Customer G, P is on Watch List A, Watch List B, and Watch List C. Watch List A's risk is 1. Watch List B's risk is 2, Watch List C's risk is 3<br><br>Watch List Match Risk = 30. |
| Operational Risk – Markets Served by the bank | 15 | Risk as it appears on the Parameter Risk Score Jurisdiction tables for industry types. | Customer F serves Private Banking – Trust, and Private Banking – Wealth Management which has a score of 30 and 20, respectively.<br><br>Maximum (30,20). |
| Corporation Age | 5 | 0 - 12 months --> 80<br>13 - 36 months --> 60<br>37 - 120 months --> 40<br>More than 120 months --> 0 | Customer E has been a customer since 12 months.<br>Customer E's Corporation Age Risk = 80. |
| The risk associated to Public Company | 5 | Risk as it appears on the Parameter Risk Score Jurisdiction tables for legal structure types. | Customer F is a Public Corporation.<br>Based on Legal Structure & Ownership Parameter Risk Score Jurisdiction, Public Corporation Risk is 0.<br>Customer F's Legal Structure & Ownership Risk = 0. |

**Table 17: Risk Calculation for Customer F**

| Parameter | Weight | Calculation or Verification Step | Calculation for Customer F |
|---|---|---|---|
| Risk Associated with Account Type | 5 | Maximum Risk of all the accounts a customer has a controlling role on. | Customer F has 2 accounts – Credit Card and Savings Account for which the score are 60 and 25 respectively. Customer F's Account Type Risk is Maximum of (60,25). |
| Risk Associated with Method of Account Opening | 5 | Maximum Risk of all the accounts a customer has a controlling role on. | Customer F has 2 accounts that have been opened via Online and Walk-in and the scores are 70 and 20 respectively. Customer F's Method of Account Opening Risk is Maximum of (70,20). |
| Length of Relationship with the bank or FI | 10 | 0 - 12 months --> 80  13 - 36 months --> 60  37 - 120 months --> 40  More than 120 months --> 0 | Customer E has been a customer since 12 months. Customer E's Corporation Age Risk = 80. |
| Operational Risk – Products Offered by the bank | 10 | Maximum of different products being served by the bank. | Customer F offers products related to Securities and Checking with a score of 40 and 20. Maximum (40,20). |

Risk Score = Sum (value of the risk assessment parameter * weight in decimals) Final Risk Score = 33

Sum of [(0*0.05)+(20*0.05)+(70*0.05)+(85*0.1)+(20*0.1)+(30*0.1)+(60*0.05)+ (30*0.15) +(70*0.05)+ (40*0.1)]

Risk Category: Low.

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