Oracle® Financial Services

Know Your Customer

Risk Assessment Guide

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Oracle® Financial Services Know Your Customer Risk Assessment Guide

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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 (KYC). It also covers different risk models with the parameters considered for assessing the risk a customer poses to a financial institution. This chapter focuses on the following topics:

- Who Should Use this Guide
- How this Guide is Organized
- Where to Find More Information
- Conventions Used in this Guide

Who Should Use this Guide

The *KYC Risk Assessment Guide i*s designed for a variety of Oracle Financial Services KYC users. Their roles and responsibilities, as they operate within the Oracle Financial Services 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. 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 KYC process to execute. This user also has in-depth knowledge of all modules of KYC to perform the necessary administration and maintenance.

How this Guide is Organized

The *Oracle Financial Services KYC Risk Assessment Guide* includes the following chapters:

- Chapter 1, *KYC Risk Assessments,* provides a brief overview of the KYC risk assessments.
- Chapter 2, *Risk Assessment Model,* details different risk models of KYC.
- Chapter 3, *Risk Assessment Parameters,* provides different parameters of the risk assessment model.
- Appendix A, *Parameters,* describes the various parameters specific to model and customer types.
- Appendix B, *Examples of Derivation of Risk Score,* describes examples of how a risk score is derived for each of the risk assessment models for different customer type.

Where to Find More Information

For more information about Oracle Financial Services KYC, refer to the following documents:

- *Enterprise Case Management User Guide*: This guide explains to business users how to access a risk assessment promoted to a case and disposition the case.
- *Know Your Customer Administration Guide:* This guide provides comprehensive instructions for proper system administration, and the daily operations and maintenance of the KYC system. It also provides the details of how to configure the risk scores, weights and rule values using the User Interface.
- *Configuration Guide:* This guide explains how the software works and provides instructions for configuring the Oracle Financial Services Behavior Detection Platform, its subcomponents, and required third-party software for operation. With respect to the FSDM specifically, it describes the steps by which data is processed and loaded (ingested) into the database.
- *Data Interface Specification (DIS) Guide:* This guide identifies the super-set of data that Oracle Financial Services client supplies for data ingestion.
- *Data Model Reference (DMR) Guide:* This guide explains to Business Analysts, Information Technology (IT) Support Staff, Oracle Financial Services Professional Services and Development Teams, and other users of the Oracle client who use the system for customer risk analysis.

These documents can be found at the following link:

http://docs.oracle.com/cd/E60570_01/homepage.htm

To find additional information about how Oracle Financial Services solves real business problems, see our website at www.oracle.com/financialservices.

Conventions Used in this Guide

Table 1 lists the conventions used in this guide.

Table 1. Conventions Used in this Guide

Convention	Meaning
Italics	● Names of books, chapters, and sections as references ● Emphasis
Bold	● Object of an action (menu names, field names, options, button names) in a step-by-step procedure ● Commands typed at a prompt ● User input

Table 1. Conventions Used in this Guide (Continued)

Convention	Meaning
`Monospace`	• Directories and subdirectories • File names and extensions • Process names • Code sample, including keywords and variables within text and as separate paragraphs, and user-defined program elements within text
<Variable>	Substitute input value

CHAPTER 1

KYC Risk Assessments

Oracle Financial Services Know Your Customer (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.

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

This chapter discusses the following topics:

- Workflow of KYC Risk Assessments
- Risk Scoring Process
- Creation of Risk Assessment

Workflow of KYC Risk Assessments

Know Your Customer assesses the risk that a customer poses to a bank or FI. KYC is a continuous process of assessment 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 life cycle of the customer. The system has different stages, such as onboarding, risk assessment, and risk scoring. These stages are explained below:

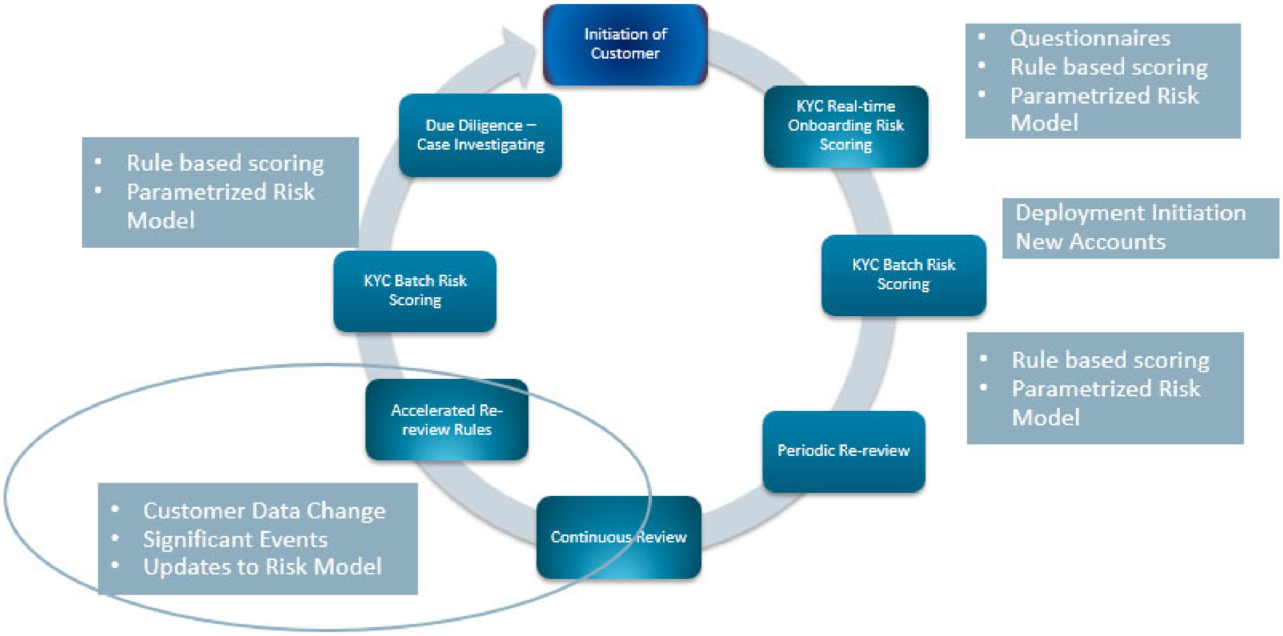

Initiation of Customer
KYC Real-time Onboarding Risk Scoring
KYC Batch Risk Scoring
Periodic Re-review
Continuous Review
Accelerated Re-review Rules
KYC Batch Risk Scoring
Due Diligence – Case Investigating
Questionnaires
Rule based scoring
Parametrized Risk Model
Deployment Initiation New Accounts
Rule based scoring
Parametrized Risk Model
Customer Data Change
Significant Events
Updates to Risk Model
Rule based scoring
Parametrized Risk Model

Figure 1. KYC Lifecycle Workflow

The following sections describe the different stages of a KYC lifecycle workflow:

- Deployment Initiation
- Real Time Account On Boarding
- Account On Boarding
- Continous Review of Customers
- Due Diligence

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 being risk assessed and available in the KYC system for further monitoring. Every customer of the bank has to be risk scored during this work flow so that the customer is regularly assessed in the KYC system.

Real Time Account On Boarding

As a part of On Boarding a customer, it is required to assess the risk of the customer before they on board the bank. On Boarding service caters to both the needs of Data Gathering of the customer and the anticipated behavior of the customer, as well as risk scoring the customer. This helps in decision making for on boarding the customer based on Initial Risk Scoring and Questionnaire responses. Real time has the capability of both Rule Based and Algorithm Based Models to be processed for a customer.

Interactive capability to help ensure that tellers or bank officers gather the right information to correctly classify the risk posed to the bank by a potential new client. Real Time Account On Boarding Helps eliminate crucial data gaps that could impact accurate risk assessment. Real time risk scoring gives a complete risk profile for a more informed decision.

Account On Boarding

This workflow is also called as default review. This workflow is executed when a new account is opened by a customer. New customers associated with a new account or an existing customer associated with a new account is considered for risk assessment in this workflow. This workflow assesses the customers associated with an account opening date based on the value provided in Regular Processing parameter in the jurisdiction-specific Application Parameters table. The following image shows the On boarding workflow:

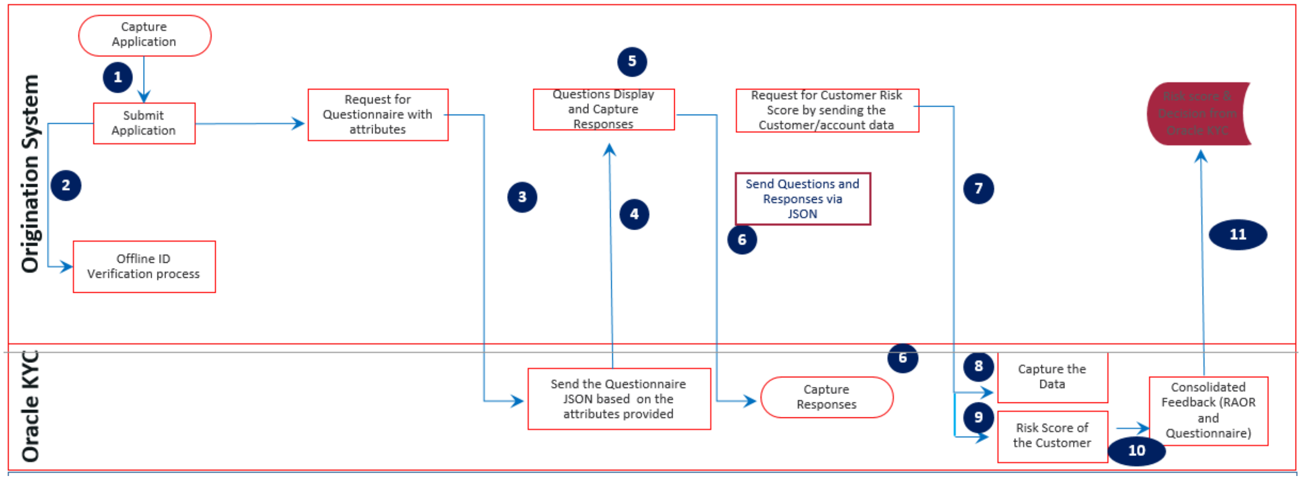

Origination System
Oracle KYC
Capture Application
1
Submit Application
2
Offline ID Verification process
Request for Questionnaire with attributes
3
Send the Questionnaire JSON based on the attributes provided
4
5
Questions Display and Capture Responses
Request for Customer Risk Score by sending the Customer/account data
Send Questions and Responses via JSON
6
6
Capture Responses
7
8
Capture the Data
9
Risk Score of the Customer
10
Consolidated Feedback (RAOR and Questionnaire)
11
Risk score & Decision from Oracle KYC

Figure 2. On boarding Workflow

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

- 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 which is opened between 17th (24-7=17) to 24th of April shall be considered for risk assessment.

Continous Review of Customers

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

- Periodic Rereview
- Accelerated Rereview

Periodic Rereview

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

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

Note: KYC determines the review date of active customers with active accounts only. Oracle recommends creating a new client entry for inactive customers who become active.

KYC considers the Periodic Review process if the value defined in the Periodic Review parameter in the jurisdiction-specific Application Parameters table is *Yes*.

Accelerated Rereview

The Accelerated Rereview workflow considers the following data process for 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 which are tracked through change logs.

   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 *KYC Administration Guide*.

2. Change in behavior of the customer or account if you have Oracle 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. For more information, see *KYC Administration Guide*.
4. Adding a new rule for Rule-Based Assessments. This helps to monitor the customers who have been 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. For information on adding new rules and setting a flag for reassessment, see *KYC Administration Guide*.
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. For more information, see *KYC Administration Guide*.

All of 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 its associated configurable parameters, see *Accelerated Rereview Rules* section of *Appendix A, Parameters*.

Due Diligence

Due Diligence is the process wherein the customers are risk assessed without consideration of third party verification such as Watch List. Customers are assessed based on parameters like occupation, industry, or geography.

Enhanced Due Diligence is the process where third party verifications such as Watch List are considered in addition to the Due Diligence parameters when risk assessing a customer.

Customers

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. For more details, see *Configuration guide* on OTN.
    - **Customer to Customer Relationship:** Customer who has 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 of 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 FCCM data model has been extended to capture the information of the beneficial owners for both customer and non-customers of the institution and process the data for risk scoring and display this information in the 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 shown below:

- 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 *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 factor 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.
- Watchlist is considered using fuzzy name matching.

Risk Scoring Process

The Risk Scoring Process considers the following processes to derive the risk score of a customer. Each of these are explained in the following sections.

- Identification of Customers
- Identification of Interested Parties and Beneficial Owners
- Calculation of Rule Based KYC Risk Score
- Calculation of Algorithm Based KYC Risk Score
- Deriving at the KYC Risk Score

Identification of Customers

KYC continuously identifies customers due for KYC risk scoring and verification. KYC identifies the customers using pre-filtering assessments which includes 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 continuous process of review.
- **Accelerated Review**: Customers who are to be rereviewed due to change in their information or change in behavior, or re-assessing all customers due to change in risk score of parameter or rule value or addition of a new rule or rule value.

Note: Based on the requirements, you can pick customers to be risk scored for deployment initiation. There are no ready-to-use data filters provided.

Identification of Interested Parties and Beneficial Owners

After the identification of customers, KYC proceeds with 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. Refer to the section *Customers* for the definition of interested parties.

Calculation of Rule Based KYC Risk Score

All customers who are identified as part of the identification of customer process 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.

Calculation of Algorithm Based KYC Risk Score

After the customers are identified through the pre-filtering assessments and its interested parties, the system proceeds with calculating the risk score of the customer. 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.

Customer Attributes

These are the basic attributes of the customers which are considered as risk factors.

Customer Geography Attributes

These are the attributes which are related to the geography of the customers.

Customer Account Attributes

These are the account attributes which affect the risk score of the customers.

Note: The above attributes differ based on the customer type. For information on the risk parameters and their defnitions, see *Appendix A, Parameters*.

Watch List Scan

During risk assessments, customers are processed to have a check against a list of closely monitored individuals and entities through Watch List scan. This is done to identify the existing and prospective customers whose names have already been put up on the Watch List. Watch List Scan would be initiated if the Watch List Scan parameter value is defined as *Yes* in the jurisdiction-specific Application Parameters table. This is performed for the primary and the interested parties of the customer.

For more details on watch list functionality, see the Watch List section in the *Data Interface Specification (DIS) Guide* available on Doc ID 2039648.1.

Deriving at the KYC Risk Score

A customer is risk scored by considering different risk factors as 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. If the customer meets the rule, then it indicates that the customer is to be monitored more closely as he has met the rule values which are defined by the institution for closer review.. The Algorithm-Based risk assessments give a complete profile of the customer and helps the investigator understand the other risk factors better.

Creation of Risk Assessment

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 after creation is further analyzed 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 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 risk assessment is closed by the system.

There are exceptions to a process of risk assessment being Closed By 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 or interested parties' watch list score is greater than or equal to the score defined in Watch List Score parameter in 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 Risk Tolerance parameter in jurisdiction-specific Application Parameter table, the assessment is promoted to case even if it falls under the range of Closed by System

Customers who are assessed through Rule-based Risk Assessment Model are automatically promoted to a case. Customers who are assessed through Algorithm-based Assessment Model may automatically be promoted to case(s) based on the scores and user review flag defined in the Risk Category table. For information on providing values, see *KYC Administration Guide*.

Integration with OFS Enterprise Case Management

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 of which risk assessments must be moved are based on the conditions mentioned above. The KYC system provides the below information to 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 used for feedback to the core banking system and the AML system.

The cases are then investigated through the Enterprise Case Management (ECM) system. For more information, refer to the following documents:

- ECM user guide
- ECM administration guide
- BD configuration guide.

CHAPTER 2

Risk Assessment Model

KYC assesses a risk of a customer primarily with two different models. It assesses a customer's risk before they open an account using Real Time Account On Boarding Risk. Rule-based Model focuses on different rules configured by the bank or a FI. Algorithm-based Model focuses on different parameters for arriving at a risk score.

The weights of the risk parameters, the values for the Parameter Risk Score Jurisdiction tables, the values for the parameters of the Application Parameters table, the values for a rule can be different or the same for each jurisdiction, based on the need of the bank or FI. Each jurisdiction has a table for the Parameter Risk Score Jurisdiction tables, the Application Parameters table, and the Risk Assessment table. For more information about providing values, see the *Configuration Guide* available on OTN.

This chapter discusses the following topics:

- Real-Time Account On Boarding Risk (RAOR)
- Rule-based Assessment Model
- Algorithm-based Assessment Model

Real-Time Account On Boarding Risk (RAOR)

As a part of On Boarding a customer, it is required to assess the risk of the customer before they on board the bank. On Boarding service caters to both the needs of Data Gathering of the customer and the anticipated behavior of the customer, as well as risk scoring the customer. This helps in decision making for on boarding the customer based on Initial Risk Scoring and Questionnaire responses. Real time has the capability of both Rule Based and Algorithm Based Models to be processed for a customer.

Interactive capability to help ensure that tellers or bank officers gather the right information to correctly classify the risk posed to the bank by a potential new client. Helps eliminate crucial data gaps that could impact accurate risk assessment. Real time risk scoring gives a complete risk profile for a more informed decision.

Rule-based Assessment Model

Rule-based assessment calculates a KYC risk score based on client configurable rules. Rule-based assessment model is executed only if it is chosen by the bank or FI for an installation.

Rule-based assessment model supports a business process framework, which allows the bank or FI to provide different values for the pre-defined rules. For more information about rules, based on customer type, see *Rule-based Assessment Model Parameters*.

For Rule-based assessment, the risk score is derived from the parameter risk score jurisdiction table for all the rules met by a customer, and the values for each rule are provided to the system through the KYC Configuration Rule Based Assessment Model User Interface by the Admin user. For more information about providing values for rule-based assessment, see *KYC Administration Guide*. The bank or the FI can provide as many values as required for a rule.

A customer can fall under one or more rules during rule-based assessment. When a customer has been matched to multiple rules, the system considers the maximum score of the matched rules.

For example, a customer has matched the Country of Citizenship and Country of Residence rules, with the values being Afghanistan and India, with a score of 45 and 60 respectively. In this case, the system considers the KYC risk as 60 for the customer. It also captures and display all the rules matched.

Algorithm-based Assessment Model

Algorithm-based Assessment Model calculates the risk of customers based on the attribute of the customers. The attributes considered for risk scoring are different for each customer type. Each Attributes is classified as risk parameters. Each risk parameter is associated with a weight which can be defined by the KYC Admin user through the UI. If a particular risk parameter is provided a weight as 0, then the system ignores that parameter during risk assessment process. The score for a risk parameter is derived from the Parameter Risk Score Jurisdiction table. These parameters are applicable for both Real-time and continuous scoring of the customers.

For each parameter, the system checks the value provided by the customer who is being risk assessed, and retrieves the score of that value from the defined risk score as available in the Parameter Risk Score Jurisdiction table. If the value provided by the customer for a parameter is not available, then the system provides the default score for the respective parameter. The default scores are configurable for every parameter through a UI. The risk score per parameter is derived by the risk score of the parameter value the weight of that parameter. The Algorithm Based KYC risk Score is derived by summing up all the individual weighted risk scores. see Appendix A, *Algorithm-based Assessment Model Parameters* for parameters of this model.

For more information about providing values for algorithm-based assessment, see *KYC Administration Guide*.

CHAPTER 3

Risk Assessment Parameters

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

Risk Assessment Parameters or Rules

The following table defines the risk assessment parameters or rules and provides details irrespective of the customer type and the risk model type.

Table 2. Parameter/Rule

Parameter/Rule	Details	Calculation
Geography Risk - Country of Primary Citizenship	Risk associated with the country of citizenship of a customer. The system considers the country of citizenship from the Customer table for primary.	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	Risk associated with the country of citizenship of a customer. The system considers the country of citizenship from the Customer table for secondary.	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	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 *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	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 *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	Risk 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.

Table 2. Parameter/Rule

Parameter/Rule	Details	Calculation
Occupation	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.
Length of Relationship Risk	Risk associated with the length of relationship a customer has with the bank or FI. The system calculates the length of 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 relationship. The minimum and maximum range are configurable. For example: ● Less than 12 months ● 13 to 36 months ● More than 37 months 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	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 customer is on a trust or exempt list (that is, list with a risk <0), Watch List Risk --> 0 If not, (highest risk of the matched list x 10)
Watch List Risk for Interested Parties	Risk associated with the interested parties and beneficial owners of a primary customer available in the list maintained by the bank for watch list. If there are multiple interested parties and beneficial owners, the maximum score is considered as the risk score.	If customer is on a trust or exempt list (that is, list with a risk <0), Watch List Risk --> 0 If not, (highest risk of the matched list x 10)
Geography Risk - Countries of Operations	Risk associated with the country where the customer's business is being operated. The system considers Country of Operations from the Customer Country table.	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	Risk associated with a country where the headquarters of the customer is located. The system considers 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/Rule

Parameter/Rule	**Details**	**Calculation**
Industry Risk	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	Risk associated with the legal structure (Trust) 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	Risk associated with the age of the corporation in the industry. The system calculates the length of relationship by comparing the Date of Incorporate from Customer table with the risk processing date.	There are different ranges for defining the length of relationship. The minimum and maximum range are configurable. For example: ● Less than 12 months ● 13 to 36 months ● More than 37 months 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	Risk associated with difference markets served as stated by the customer for its operations. The system considers 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 system picks the maximum score associated to this value.
Risk Associated to Public Company	Risk associated with 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.
Risk Associated with the Products Offered	Risk associated to 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 with the risk processing date. If the expiry date is not provided the system considers for 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 system picks the maximum score associated to this value.

Table 2. Parameter/Rule

Parameter/Rule	Details	Calculation
Risk associated with Method of Account Opening	Risk associated with different method of account opening. For example, Online, Walk in, Phone.	If a Customer A opens an account A 1, he also has 3 other accounts, A2, A3, A4. 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.
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 to an account, account type can be defined. For example, Account Type – Savings1, Products or Services – a, b, c 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.

CHAPTER 4

Managing KYC Assessments

The KYC Assessments user interface enables you to view all the risk assessments being performed. 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.

KYC Assessments page contains the following areas of information:

- KYC Assessment Page Components
- Searching for KYC Assessments
- Manual Promotion of KYC Risk Assessments to Cases
- Overriding the KYC Risk Score (Applicable Only if You have Oracle Financial Services Enterprise Case Management Installed)
- Overriding the Next Periodic Re-review Date (Applicable Only if You have Oracle Financial Services Enterprise Case Management Installed)
- Viewing Customer Details
- Viewing Risk Information Details

KYC Assessment Page Components

The KYC Assessment page contains the following components:

- KYC Assessment Search Bar
- KYC Assessments List Matrix

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.

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. **Note**: By default, Created From date is automatically populated with 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. **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. This field allows the use of wildcards when searching. **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.
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 baed on the risk assessment source. The different type of risk assessment source available for searching are as follows: ● Accelerated Rereview Alerts ● Default Review ● Deployment Initiation ● 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 matches the values you entered. The Risk Assessment ID search is mutually exclusive with all other filter criteria.

KYC Assessments List Matrix

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

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

The KYC Assessments List matrix displays 20 risk assessments by default. To view additional KYC assessments returned by search, use the pagination controls to move to additional pages of KYC assessments.

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 assessments 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. Also serves as a hyperlink to the Customer details in a popup window. The customer details displayed is 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.
Risk Score	Displays the most recent risk score. 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: ● Accelerated Review ● Account On Boarding ● Deployment Initiation ● 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: ● Auto Closed ● Closed ● Closed and Purged ● Promote to Case
Assessment Date	Displays the date on which the risk assessment was assessed.
Case ID	Displays the Case ID for risk assessments which are or were in *Promote to Case* status.
Case Status	Displays the case status of risk assessments which are or were in *Promote to Case* status.

Searching for KYC Assessments

You can search 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 of the criteria in Simple/Advanced Search.

   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 matched the criteria.

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

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

Caution: 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.

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 search, 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.

Manual Promotion of KYC Risk Assessments to Cases

Manual Promotion of KYC risk assessments are done by the KYC investigator and is done only for risk assessments which 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 closed status and if ECM is installed with BD.

The **Promote to Case** action on the KYC Risk Assessments List grid enables you to perform this action. 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 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 which 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 which is locked by another for case creation. If you select a risk assessment which 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:

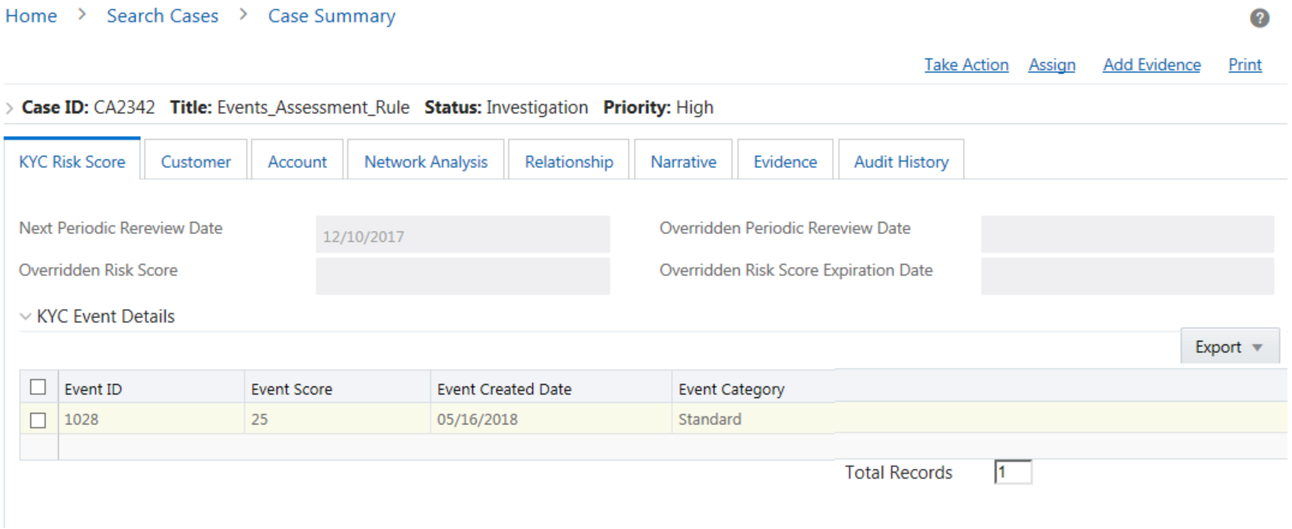
1. Navigate to the KYC home page.
2. Click **KYC Assessments and Cases** in the LHS menu.
3. Click **KYC Assessments** in the **Investigation** menu. The **KYC Assessment Search and List** page appears.
4. Select the check box against the risk assessment that you want to promote.to case.
5. Click **Promote 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 UI.

Overriding the KYC Risk Score (Applicable Only if You have Oracle Financial Services Enterprise Case Management Installed)

You can override the KYC Risk Score using the KYC Risk Score tab in the Case Summary page. Even if you override the risk score, the actual KYC Risk Score which is considered during risk assessment is the KYC Risk Score which is calculated by the system.

When a case is closed in ECM, the following details are sent to the KYC system:

- User who closes the case
- KYC Risk Score as on Case Closure date
- Risk Score Expiration Date



Case ID: CA2342 **Title:** Events_Assessment_Rule **Status:** Investigation **Priority:** High

Next Periodic Rereview Date	12/10/2017	Overridden Periodic Rereview Date	
Overridden Risk Score		Overridden Risk Score Expiration Date	

☐	Event ID	Event Score	Event Created Date	Event Category
☐	1028	25	05/16/2018	Standard

Total Records 1

Figure 3. KYC Risk Score Tab

You can override the KYC Risk Score only if you close the current case which is under investigation. After you close the case, the KYC system overrides the Risk Score once the Regular processing batch is run.

To close the case, do the following:

1. Click the **Take Action** link in the Case Summary page.
2. In the Take Action page, click **Save**.

Overriding the Next Periodic Re-review Date (Applicable Only if You have Oracle Financial Services Enterprise Case Management Installed)

You can override the Next Periodic Rereview Date using the KYC Risk Score tab in the Case Summary page. Initially, the case is in **New** status and the Next Periodic Rereview Date field is blank. If you provide another date in the field, this value overrides the date generated by the system based on the risk category, and it is available in the KYC system during case closure.

Note:

- The Next Periodic Rereview Date can also be a future date.
- If the system date is greater than or lesser than the Overriden Periodic Rereview Date, then the Overriden Periodic Rereview Date is taken as the next rereview date.
- If the Accelerated Rereview Date is before either the system date or the Overridden Periodic Rereview Date, then the Accelerated Rereview Date is taken as the Next Periodic Rereview Date.

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:

- 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 an insurance.

Viewing Risk Information Details

The Risk Information Details pop-up window allows you to view additional details about the risk score. These details include the following sections:

- KYC Risk Score Details
- Rule Based Risk Assessment
- Algorithm Based Risk Assessment.

For more information on the above sections, see *Risk Assessment Model*.

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.

This appendix discusses the following topics:

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

Rule-based Assessment Model Parameters

The following parameters are applicable for the Rule-based model:

Table 5. Rule-based Assessment Model Parameters

Rules	Individual	Other Organization	Financial Institution
Country of Primary Citizenship	x		
Geo Risk - Country of Primary Citizenship	x		
Country of Secondary Citizenship	x		
Country Of Residence	x		
Geo Risk - Country of Residence	x		
Occupation Risk	x		
Watch List Risk	x	x	x
Industry Risk		x	
Country of Head Quarters		x	x
Legal Structure And Ownership Risk		x	x
Country of Operations		x	x
Corporation Age Risk		x	x
Geo Risk - Countries of Operations		x	x

Algorithm-based Assessment Model Parameters

The following parameters, except Length of Relationship Risk, are applicable for the Algorithm-based model:

Table 6. Algorithm-based Assessment Model Parameters

Rules	Individual	Other Organization	Financial Institution
Geo Risk - Countries of Operations		x	x
Geo Risk - Country of Citizenship	x		
Geo Risk - Country of Headquarters		x	x
Geo Risk - Country of Residence	x		
Geo Risk - Country of Taxation	x		
Operational Risk - Markets Served by the bank			x
Operational Risk - Products Offered by the bank			x
Risk Associated to Public Company		x	x
Risk Associated with Source of Wealth	x		
Watch List Risk - Primary Customer	x	x	x
Watch List Risk - Interested Party		x	x
Risk Associated with Account Type	x	x	x
Risk Associated with Method of Account Opening	x	x	x

Table 6. Algorithm-based Assessment Model Parameters

Rules	Individual	Other Organization	Financial Institution
CIP Risk - Primary Customer	x	x	x
CIP Risk - Interested Party		x	x
Risk Associated with Corporate Age		x	x
Risk Associated with Length of Relationship		x	x
Risk Associated with Occupation	x		
Risk Associated with Industry		x	x
Risk Associated with Legal Structure and Ownership		x	x

Accelerated Rereview Rules

The following parameters are applicable for the accelerated rereview rules:

Table 7. Accelerated Rereview Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score
Suspicious Customer Alert	Reviews a Customer when the Customer has an alert generated by the system, which is closed as Actionable. Actionable is a closing classification for an action performed by the user. Note: 1) Default and Mandatory number of alert is 1. 2) Look back period default value is 1 and configurable. 3) Customer can be primary customer or its interested parties or both.	Customer	AR	5 days	2	NA
Frequent Customer Alert	Reviews a Customer when the Customer has more than x (x being configurable) alert(s) generated by system, which is closed as In-determinant or Non-Actionable. In-determinant or Non-Actionable is a closing classification for an action performed by the user. Note: 1) Number of alert(s) and Look back period is configurable. 2) Default values provided for Count of Alert(s) is 5 and Look Back Period is 90 days. 3) Customer can be primary customer or its interested parties or both.	Customer	AR	5 days	5	NA

Table 7. Accelerated Rereview Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score
High Score Customer Alert	Reviews a Customer when the Customer has x number of alert(s) generated by system which has an Alert score of x, x being configurable. Note: 1) Alert Score, Count of alert(s) and Look back period is configurable. 2) Default values provided for Alert Score is 90, Count of alert(s) is 5 and Look Back Period is 1. 3) Customer can be primary customer or its interested parties or both.	Customer	AR	10 days	5	90
Suspicious Account Alert	Reviews a Customer when the Customer's Account has an alert generated by the system which is closed as Actionable. Actionable is a closing classification for an action performed by the user. Note: 1) Default and Mandatory number of alert is 1. 2) Look back period default value is 1 and configurable. 3) Customer can be primary customer or its interested parties or both.	Account	AR	5 days	2	NA
Frequent Account Alert	Reviews a Customer when the Customer's Associated Account has more than x (x being configurable) alert(s) generated by system which is closed as In determinant or Non-Actionable. In-determinant or Non-Actionable is a closing classification for an action performed by the user. Note: 1) Number of alert(s) and Look back period is configurable. 2) Default values provided for Count of Alert(s) and Look Back Period is 5 and 90 days respectively. 3) Customer can be primary customer or its interested parties or both.	Account	AR	5 days	2	NA

Table 7. Accelerated Rereview Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score
High Score Account Alert	Reviews a Customer when the Customer's Associated Account has x number of alert(s) generated by system which has alert score of x, in x number of days, x being configurable. Note: 1) Alert Score, Count of Alerts and Lookback period is configurable. 2) Default values provided for Alert Score is 90, Count of Alerts is 5 and Look Back Period is 1. 3) Customer can be primary customer or its interested parties or both.	Account	AR	5 days	2	90
Regulatory Report action/s on a Customer Alert	Reviews a Customer when the Customer has an alert generated by system for which a regulatory report action is performed. Note: 1) Look back period and the Regulatory Report actions to be considered is configurable. 2) Default values provided for Look Back Period is 1. 3) Customer can be primary customer or its interested parties or both. 4) The regulatory report actions to be considered is to be defined in Regulatory Report Actions parameter in Manage KYC Application Parameters User Interface under Administration.	Customer	AR	5 days	2	NA
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: ● City ● Country ● Postal Code ● Region ● State ● Street Line 1 to 6. Each of these columns are a part of Customer Address table.	Customer	CL	NA	NA	NA

Table 7. Accelerated Rereview Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score
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: ● Occupation ● Organization Legal Structure ● Public or Private ● Employer Name ● Full Name ● Display Name ● Middle Name ● Organization Name ● Employer Industry ● Country of Taxation ● Wealth Source ● Customer Status Each of these columns are a part of Customer table.	Customer	CL	NA	NA	NA
Customer Market Served Change Log	Review a customer when there is any change in the data elements of Customer Market Served. The elements which are a part of this rule are: ● Addition of a new market being served ● Expiration of the market which was served before	Customer	CL	NA	NA	NA

Table 7. 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 customer country. The elements which are a part of this rule are Country and Relationship type. These data elements are a part of 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: ● Addition of a new product offering ● 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 context of a new role being added to the account.	Customer	CL	NA	NA	NA

Table 7. Accelerated Rereview Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score
Customer to Customer Change Log	Reviews a customer if there is any change in the Customer to Customer relationship in context of a new relationship being added to a customer and the modifications to 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 7. 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 head quarters values.	Customer	RSKR	NA	NA	NA

Table 7. Accelerated Rereview Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score
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

Table 7. Accelerated Rereview Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score
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
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

Table 7. Accelerated Rereview Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score
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 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

Table 7. Accelerated Rereview Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score
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 risk score of the public company.	Customer	RSKR	NA	NA	NA

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 type. For more information, see Chapter 2, *Risk Assessment Model.*

This appendix discusses the following topics:

- Rule Based Risk Assessment
- Algorithm Based Risk Assessment

Rule Based Risk Assessment

Rule Based Risk Assessment risk score derivation for each customer type is explained below.

The following table has details of the Risk Assessment ID, Case ID, Customer, and Customer Type used for explaining the Rule Based Risk Assessment scoring process.

Table 8. 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

Rule Based Risk Score Calculation – Customer A - Individual

The following table shows the risk score calculations for customer A:

Table 9. 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

Maximum score of the values of the rules matched = max (45, 60, 50)

Rule Based Risk Score Calculation – Customer B - Other Organization

The following table shows the risk score calculations for customer B:

Table 10. 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

Maximum score of the values of the rules matched = max(30, 45)

Rule Based Risk Score Calculation – Customer C - Financial Institution

The following table shows the risk score calculations for customer C:

Table 11. 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

Maximum score of the values of the rules matched = max (45, 65)

Algorithm Based Risk Assessment

Algorithm Based Risk Assessment risk score derivation for each customer type is explained below.

The following table has details of the Risk Assessment ID, Case ID, Customer, and Customer Type used for explaining Algorithm Based Risk Assessment scoring process.

Table 12. 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.

Thresholds for Risk Category

The following table 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: This configuration can be updated via the Risk Category UI per jurisdiction. Depending on the Customer's jurisdiction the risk category will be defined by the system. For more information, see *Oracle Financial Services FCCM Configuration Guide* available on OTN.

Risk Calculation for Customer D

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

Table 14. Risk Calculation for Customer D

Parameter	Weight	Calculation or Verification Step	Calculation for Customer D
Watch List Primary Customer	15	If customer is on a trust or exempt list (that is, 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
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 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 US. Per Country Parameter Risk Score Jurisdiction table, US risk is 50, Romania 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 US. Per Country Parameter Risk Score Jurisdiction table, US risk is 50, Romania risk is 100. Customer D's Country of Citizenship Geo Risk = Max of (50,100)

Table 14. Risk Calculation for Customer D

Parameter	Weight	Calculation or Verification Step	Calculation for Customer D
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
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 13 - 36 months --> 60 37 - 120 months --> 40 More than 120 months --> 0	Customer D has been a client for 12 months. 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 controlling role on	Customer D has 2 accounts – Credit Card and Savings Account for which the score are 60 and 25 respectively. 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 controlling role on	Customer D has 2 accounts which has been opened via Online and Walk in and the scores are 70 and 20 respectively.Customer D's Method of Account Opening Risk is 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

70.5 would be rounded off to 71 and the category allocated is High. Customer D would have a case created as per the configuration in *Table 14*.

Risk Calculation for Customer E

Customer E is a Legal Entity (Other Organization), therefore, the Legal Entity 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).

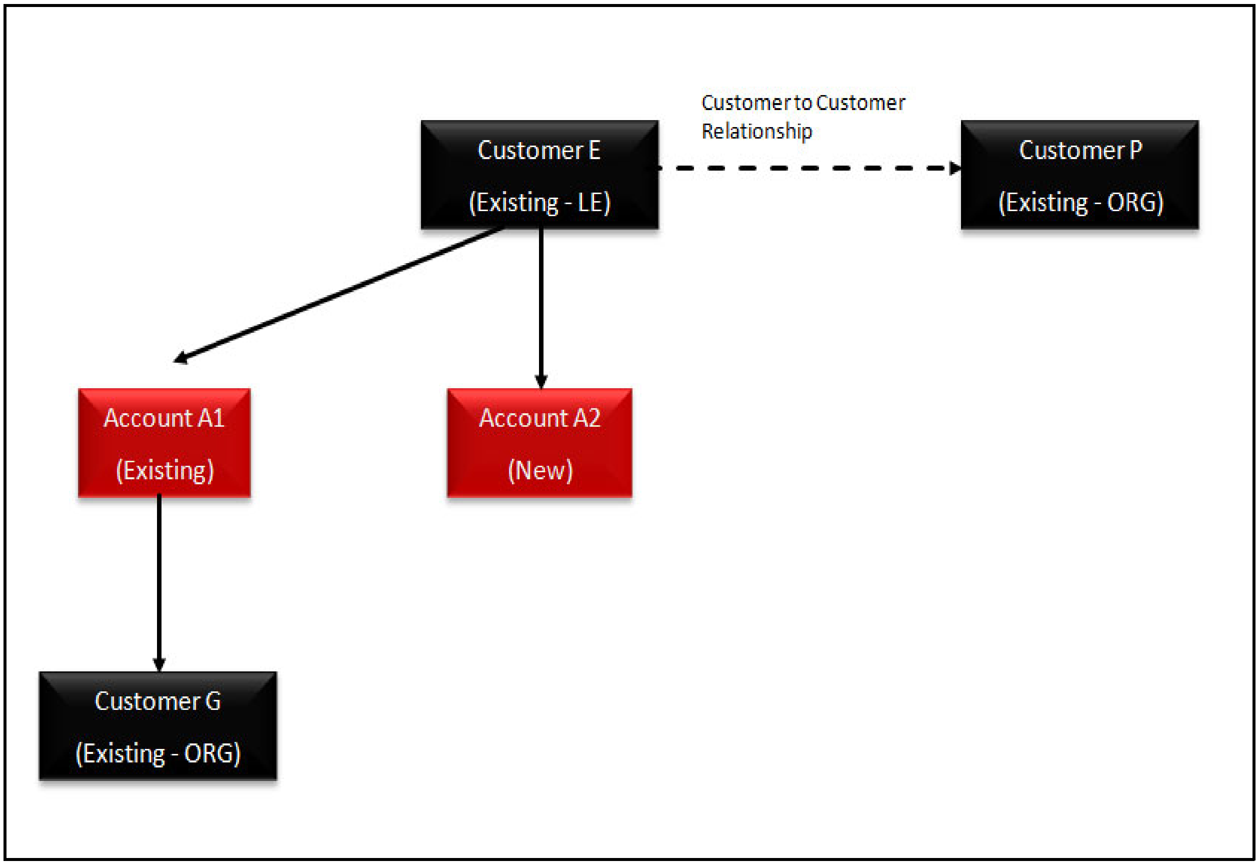

Customer to Customer Relationship
Customer E
(Existing - LE)
Customer P
(Existing - ORG)
Account A1
(Existing)
Account A2
(New)
Customer G
(Existing - ORG)

Figure 4. Schematic Representation of Relationships for Customer E

The following table shows the risk score calculations for customer E:

Table 15. Risk Calculation for Customer E

Parameter	Weight	Calculation or Verification 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 US. Per Country Parameter Risk Score Jurisdiction table, US risk is 90 Customer B’s Country of HQ Geo Risk = 90
Geography Risk associated with Countries of Operation	7.5	Maximum risk of countries in which the corporation conducts business	Customer E operates in Romania and US. Per Country Parameter Risk Score Jurisdiction table, US risk is 50, Romania risk is 100. Customer E’s Country of Operation Geo Risk = 100
Watch List for Primary Customer	20	If customer is on a trust or exempt list (i.e., list with a risk <0), Watch List Risk --> 0 Else, (highest risk of the matched list x 10)	Customer E appears on a PEP list and the risk level is 40 Customer E’s Watch List Match Risk = 40

Table 15. Risk Calculation for Customer E

Parameter	Weight	Calculation or Verification Step	Calculation for Customer E
Watch List for Interested Parties	10	For each customer (and non-customer) directly associated with the current customer (i.e., through CUST_ACCT, not CUST_CUST), calculate INTERESTED PARTIES WATCH LIST 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. 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
Industry	15	Risk as it appears on the Parameter Risk Score Jurisdiction tables for industry types.	Customer E is in 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 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)
Risk Associated with Method of Account Opening	5	Maximum Risk of all the accounts a customer has controlling role on	Customer E has 2 accounts which has 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 13 - 36 months --> 60 37 - 120 months --> 40 More than 120 months --> 0	Customer E has been a Customer for 36 months. 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. The risk score is rounded off to 46.

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.

Risk Calculation for Customer F

Customer F is a Correspondent Bank (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).

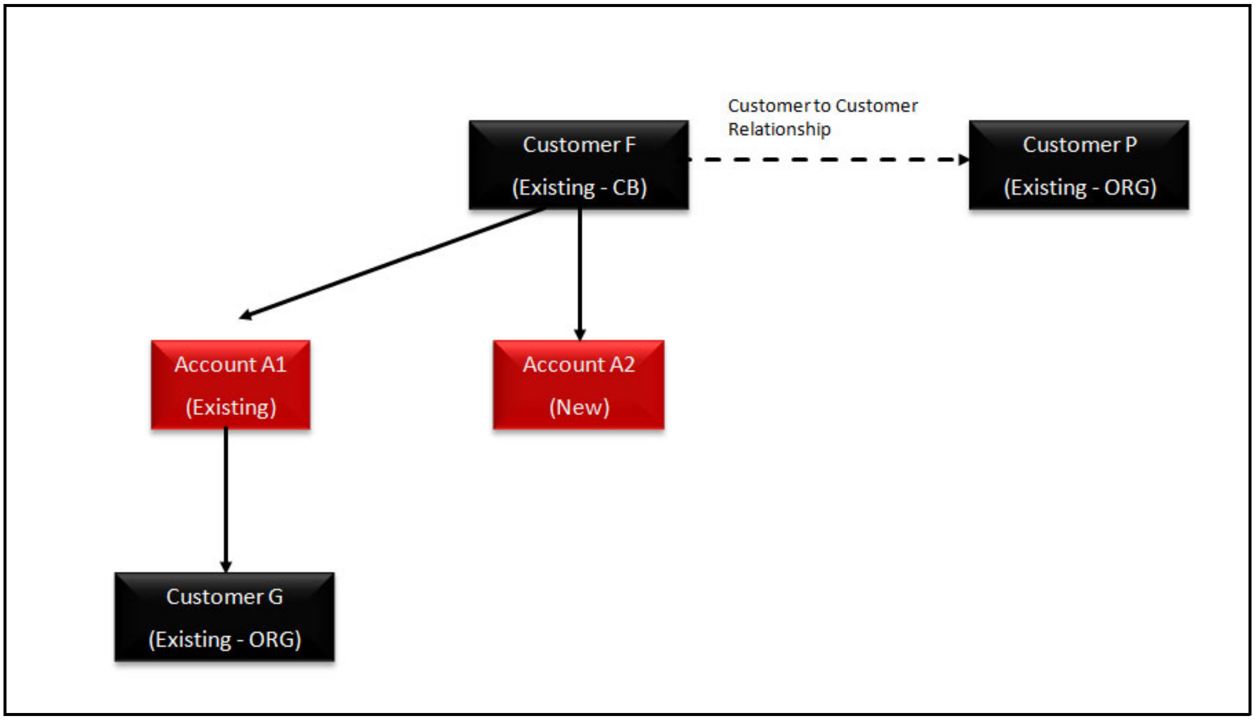


Figure 5. Schematic Representation of Relationships for Customer F

The following table shows the risk score calculations for customer F:

Table 16. 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 UK. Per Country Parameter Risk Score Jurisdiction table, UK risk is 70 Customer F's Country of HQ Geo Risk = 70
Geography Risk associated with Countries of Operation	10	Maximum risk of countries in which the corporation conducts business	Customer F operates in Europe and UK Per Country Parameter Risk Score Jurisdiction table, UK risk is 70, Europe risk is 85. Customer F's Country of Operation Geo Risk = 85

Table 16. Risk Calculation For Customer F

Parameter	Weight	Calculation or Verification Step	Calculation for Customer F
Watch List for Primary Customer	10	If customer is on a trust or exempt list (i.e., 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 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. Maximum (30,20)
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 12 months. Customer E's Corporation Age Risk = 80
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. Based on Legal Structure & Ownership Parameter Risk Score Jurisdiction, Public Corporation Risk is 0. Customer F's Legal Structure & Ownership Risk = 0
Risk Associated with Account Type	5	Maximum Risk of all the accounts a customer has 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 controlling role on	Customer F has 2 accounts which has 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 the 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