Know Your Customer
Risk Assessment Guide

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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 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 Enterprise Case Management 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 promoted to a case. This user should understand how risk assessments are calculated and promoted to a case. A Business Analyst guides the Administrator to fine tune the parameters required for risk assessments.
- **Relationship Manager:** A user in this role verifies the risk assessments which are on hold status. This user is responsible for confirming customer information.
- **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 should have 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.

- *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.

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
`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

KYC Risk Assessments

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

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
- Customer Definitions
- Risk Assessment Process
- Status of Risk Assessments

Workflow of KYC Risk Assessments

Know Your Customer assesses the risk a customer poses to the 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.

Due Diligence is the process wherein the customers are risk assessed without consideration of third party verification like Identity Verification, Watch List and Negative News Search. Customers are assessed based on parameters like occupation/industry, geography, etc.

Enhanced Due Diligence is the process where third party verifications such as Identity Verification, Watch List, and Negative News Search are considered in addition to the Due Diligence parameters when risk assessing a customer.

Continuous monitoring of customers is performed through periodic review and accelerated reviews.

The different stages of the workflow of KYC are described in the following sections:

- Deployment Initiation
- Real Time Account On-boarding
- Account On-boarding

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.

Real Time Account On-boarding

When a customer approaches a bank or an FI to open an account, this workflow is executed to assess the customer before opening an account. This facilitates in the decision making for opening the account.

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.

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

- Periodic Re-review
- Accelerated Re-review

Periodic Re-review
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 re-review period is defined in the Risk Category table based on the ranges of the Customer Effective Risk (CER) score.

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

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

For more information about how to provide values for this table, refer to the *Configuration Guide* available on OTN. The Periodic Review process is considered by KYC if the value defined in the Periodic Review parameter in the jurisdiction-specific Application Parameters table is *Yes*.

Accelerated Re-review
The Accelerated Re-review workflow considers the changes in the information of the customer or the behavior detection results of the:

- Primary customer

- Interested party of the primary customer

- Account of the primary customer

- Account of the interested party

The system checks for the change of information in the Change Log Summary table and generates risk assessments if it meets the criteria.
KYC also checks the behavior detection results for a customer based on the criteria defined and assesses the customers which match the criteria. The values for the criteria are defined in the jurisdiction-specific Application Re-review Parameters table.

For the details of different rules and its associated configurable parameters, refer to the *Accelerated Re-Review Rules* section of Appendix A, "Parameters,".

For example, this workflow assesses customers if there are any change logs associated to them or if there are any alerts of score X or closing action of a alert is X or count of alerts for a customer is X, where X is a configurable parameter which can be defined through the UI by the Admin user. The rules can be enabled or disabled for a particular jurisdiction. For KYC to assess customers via Change Log rules, the Change Log has to be enabled for the installation.

For more information, refer to the *Configuration Guide* available on OTN.

Customer Definitions

The customer type determines the parameters for KYC risk assessment. It considers the following customer types:

- Individual

- Legal Entity

- Correspondent bank

Customers

- **Primary Customer:** The customer on whom the risk assessment is being carried out.

- **Interested Parties:** KYC classifies the following types of interested parties:

  - **Customer to Customer Relationship:** Customer who has relationship with the primary customer via friends, colleagues, relatives, and so on. 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.

Risk Assessment Process

While assessing customers using the workflows described above, KYC performs the following processes:

- Identification of Customers
- Identification of Interested Parties
- Customer Identification Programme (CIP)
- Watch List Scan
- Negative News Search
- Other Parameters of the Risk Models
- Determination of the Customer's Effective Risk (CER)

Identification of Customers

KYC identifies customers who are to be assessed through the process as defined in the *Risk Assessment Models* section.

Identification of Interested Parties

After the identification of customers, KYC proceeds with identification of interested parties viz Customer to Account and Customer to Customer Relationship. Refer to the section *Customers,* on page 3 for the definition of interested parties.

Customer Identification Programme (CIP)

The customer's identity verification is carried out by the KYC system, using the documents submitted by the customer. The system identifies the documents based on the levels defined by the bank or FI.

The bank or FI uses the Document Guidelines Information table to define which documents are considered Level I, II, and III for each jurisdiction and each customer type. They can provide any number of documents for each of these levels. For successful document verification, the bank or FI must provide the required number of Level I, II, and III documents as defined in the Document Verification parameter in the jurisdiction-specific Application Parameters table. Based on the number provided for this parameter, KYC performs the document verification.

Calculation of Score

If the document verification is successful, then KYC provides *0* as the score for the Customer Identification Programme.

If the customer has not provided identity verification documents or does not meet the criteria, then the system will request third-party identity verification, if the client is utilizing this feature (currently E-Funds). Identity verification (IDV) is done through a third- party who returns a score for the customer.

If the client has not provided any documents and a third-party IDV score is not provided, the system assigns a configurable default score for this parameter, which is defined in the IDV Default Score Parameter in the

jurisdiction-specific Application Parameters table through the Manage KYC Installation Parameters User Interface. For more information, refer to *Configuration Guide* and *Enterprise Case Management User Guide* available on OTN. For the Deployment Initiation workflow, KYC provides the default score for all customers which is picked up from the IDV Default Score Parameter in the jurisdiction-specific Application Parameters table.

For more information about providing a value for this parameter refer to the *Configuration Guide* available on OTN. Account On-boarding and Periodic Review workflows use the process described above for identity verification.

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, refer to Watch List section in the *Data Interface Specification (DIS) Guide* available on Doc ID 2039648.1.

Negative News Search

During risk assessments, customers are processed to verify if there are any negative news on the customer or its interested parties. This process is initiated if Negative News Search parameter has a values as *Yes*. Negative News Search is a third party verification for which data is to be provided in a pre-defined format.

Other Parameters of the Risk Models

Based on the customer type there are different parameters for which KYC assigns a score. Refer to Appendix A, "Parameters," for the parameters based on customer type.

Determination of the Customer's Effective Risk (CER)

Risk assessment parameters vary based on the customer type. This allows KYC to capture the right amount of risk a customer is posing to the bank or FI. The CER score is derived after considering all the different parameters. For more information about the different types of risk model, refer to the section *Risk Assessment Models*.

Status of Risk Assessments

Risk Assessments assessed through KYC has different status which are described below:

On Hold

KYC verifies the latest customer information by comparing the customer's last update date with the risk processing date. If the value derived is greater than the value provided in the Registration Period parameter in the jurisdiction-specific Application Parameters table, then KYC assigns the risk assessment *On Hold* status. The user mapped to the role of Relationship Manager can view these risk assessments. This allows the relationship manager to ensure that most current information is available for assessing risk.

Closed by 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 CER 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 promote 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 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:

- **Risk Assessments performed by Rule-based Risk Assessment Model** - All risk assessments which are assessed through rule-based are promoted to case irrespective of the CER score.

- **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

For more information, refer to *Configuration Guide* available on OTN.

Promote to Case

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 more information on providing values, refer to the *Configuration Guide* available on OTN.

For example: If a bank or FI defines the range for High Category as *80 to 100* and provide the user review flag as *Y*, then those risk assessments which has a score between *80 to 100* would be promoted to a case.

Cases can be investigated in the Oracle Financial Services Enterprise Case Management system.

During Promote to Case, the system transfers the necessary data for user investigation. Few information is not transferred by the system as it would be retrieved from KYC to display in the user interface.

The case type of these risk assessments is *KYC Case Type* and the subtype is the customer type (such as Individual, Correspondent Bank, and Legal Entity) which is configurable. For more information, refer to *Configuration Guide* and *Enterprise Case Management User Guide* available on OTN.

The initial priority of the cases is determined by the Risk Assessment Priority table, where the priority and definition for the ranges is available by jurisdiction.

Assessments may be promoted to a case in the following circumstances:

- All the customers are assessed using Rule-based Risk Assessment Model irrespective of CER score.

- The Customer Effective Risk (CER) score is beyond the threshold defined for due diligence.

  Note: If a customer matches a rule defined for Rule-based Risk Assessment Model irrespective of the CER score the risk assessment is promoted.

- The watch list score of a customer is beyond the limit defined.

- The difference between current CER score and previous CER score of risk assessments of a customer is more than the limit defined for risk tolerance.

Closed after User Review

This is the status of risk assessments which are promoted to a case and then closed by the user after investigation.

Closed and Purged

This is the status of a risk assessment which is purged after x number of days for both Closed by System and Closed after User Review status.

The risk assessments are purged based on the values defined in the Purge Archive parameter in the jurisdiction-specific Application Parameters table. The purge is performed based on the values provided in range of the score and also depending on the retention period of the risk assessment which is closed by system and closed after user review.

Whenever the system purges data, it captures the most important information of the risk assessment in the Risk Assessment Repository table. This data is captured to help business users with investigations.

The risk assessment details displayed for the business analyst during investigation are different for purged and non-purged risk assessments.

The data in the Risk Assessment Repository table also would be purged after x number of months based on the value provided in Purge of Risk Assessment Repository in application install parameters table.

For information on how the risk assessments are displayed for purged and non-purged risk assessments, refer to the *Enterprise Case Management User Guide* available on OTN.

CHAPTER 2 *Risk Assessment Model*

KYC assess 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 lookup 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 lookup tables, the Application Parameters table, and the Risk Assessment table. For more information about providing values, refer to the *Configuration Guide* available on OTN.

This chapter discusses the following topics:

- Real-Time Account On-boarding Risk (RAOR)
- Risk Assessment Models

Real-Time Account On-boarding Risk (RAOR)

When a customer walks in to a bank or FI to open an account this model is executed to assess the risk of a Customer if it is configured by the bank or an FI. Refer to Services guide for more details on configuring this model.

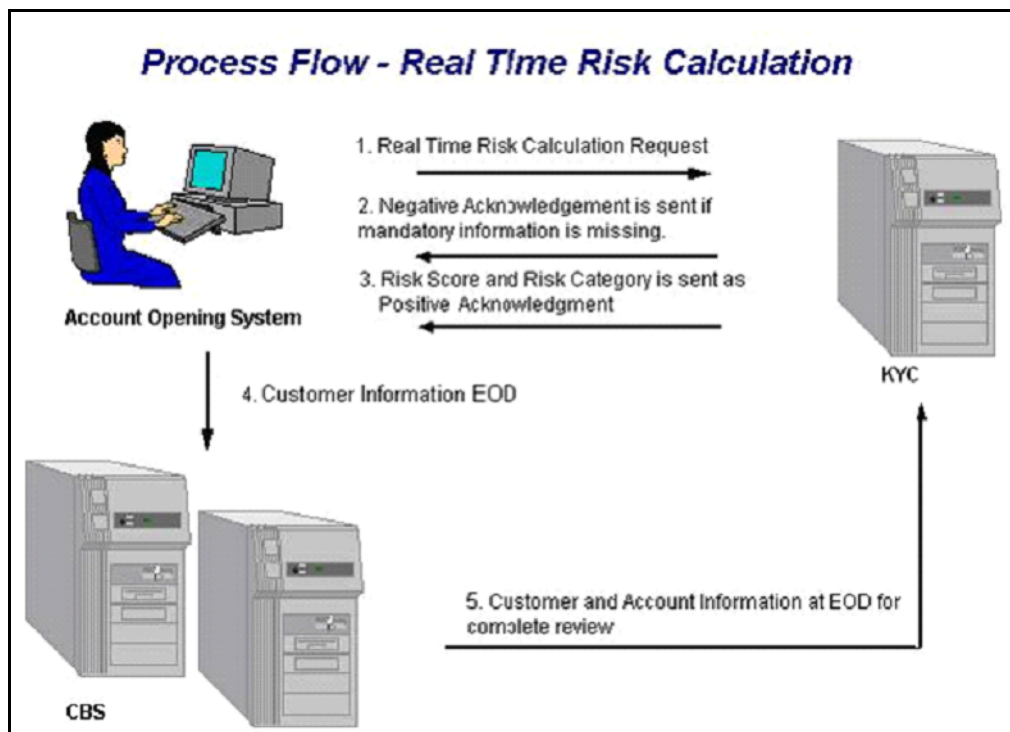The following figure describes this process:

Figure 1. RAOR

KYC assesses the risk of a customer by considering different parameters based on the customer type and relationship of the customer with the bank or FI.

- If the customer is establishing a new relationship with the bank, then KYC assesses the customer through different parameters. The parameters of RAOR are available in *Real-Time Account On-boarding Risk Parameters*.

- If the customer already has a relationship with the bank or FI, then KYC provides the latest score of the customer from the KYC Risk Assessment Process.

Risk Assessment Models

KYC risk assessment process looks for information required to determine a customer's effective risk score. In addition to the parameters defined in the models, KYC considers the following input information:

- KYC risk assessment determines which accounts should be risk 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.

- For Deployment Initiation, the system considers the Customer Add Date if it falls between the range defined in the Deployment Initiation parameter in the jurisdiction-specific Application Parameters table. Only accounts and customers whose statuses are *Active* are considered for risk assessments.

- Creation of risk assessments for joint account holders or guardians depend on the value provided for the Risk Assessments for Joint Holders and Risk Assessments for Guardians parameters in the jurisdiction-specific Application Parameters table.

- Only customers who have a controlling role on the account (the Controlling Role flag set as *Y*) are considered for risk assessments. The flag definition is available in the jurisdiction-specific Account Customer Role Type table in KYC Schema. This field is specific to KYC risk assessments.

- Risk assessment frequencies are created for a customer based on the value defined in the Risk Assessment Periodicity parameter available in the jurisdiction-specific Application Parameters table. For example, if a risk assessment was created on November 5, 2012 and the value provided is 3, the next risk assessment for this customer would be created on November 8, 2012 provided, they meet any of the criteria for risk assessment creation.

Rule-based Assessment Model

Rule-based assessment calculates a CER 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. This option can be decided using the Rule-based assessment parameter available in the jurisdiction-specific Application Parameters table. For more information about the Rule-based assessment model parameter, refer to the *Configuration Guide* available on OTN.

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, refer to *Rule-based Assessment Model Parameters*. Once a customer is assessed using the Rule-based Assessment Model, they will not be assessed further using Algorithm-based Assessment Model.

For Rule-based assessment, 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, refer to the *Configuration Guide* available on OTN. 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 CER as 60 for the customer. It also captures and display all the rules matched.

All risk assessments created using this work flow will be automatically promoted to a case irrespective of the CER score. This overrides the ranges defined in the Risk Category table User Review flag as *Y*.

Algorithm-based Assessment Model

Customers who are not assessed using the Rule-based Assessment model are assessed using Algorithm-based Assessment Model.

Algorithm-based Assessment Model calculates the risk of customers based on different parameters which are based on customer type. Refer to Appendix A, *Algorithm-based Assessment Model Parameters* for parameters of this model.

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 respective static Jurisdiction table. If the value provided by the customer for a parameter is not available, then the system considers it as Others which would have a corresponding score in the static jurisdiction table. If the customer has not provided any value for a parameter then the system would go in for Dynamic weight to distribute the weight of this parameter across other parameters. For more information about Dynamic Weight, refer to *Dynamic Weight Calculation*.

CER Score = Sum (value of the risk assessment parameter * weight)/100

Risk Assessment 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 jurisdiction-specific static table. The details of the static table associated for each parameter are defined in the following tables.

This chapter discusses the following topics:

- Risk Assessment Parameters
- Dynamic Weight Calculation

Risk Assessment Parameters

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

Table 2. Risk Assessment Parameters

Risk Assessment Parameter	Details	Calculation
Identification Verification	Refer to *Customer Identification Programme (CIP)* for more information.	The third-party verification for identity can be enabled or disabled for a bank or FI through the Identity Verification parameter in the Application Parameters table.
IDV for Interested Parties	Refer to *Customer Identification Programme (CIP)* for more information. If the primary customer has multiple interested parties the maximum score is considered.	Max of interested parties.
Geography Risk - Country of Citizenship	Risk associated with the country of citizenship of a customer. The system considers the country of citizenship from the Customer table for both primary and secondary, and the final score is the maximum score of these values.	If a customer's primary citizenship country is *Romania* and the secondary is *US*, the system considers the Jurisdiction Country Lookup table and picks the max score associated to this value.
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 considers the Jurisdiction Country Lookup table and picks the score associated to this value.
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 considers the Jurisdiction Country Lookup table and picks the score associated to this value.
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 considers the Jurisdiction Source of Wealth Lookup table and picks the score associated to this value.

Table 2. Risk Assessment Parameters

Risk Assessment Parameter	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 considers the Jurisdiction Occupation Lookup table and picks the score associated to this value.
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. **Note:** The length of relationship drives different weights for parameters based on new vs. existing.	There are different ranges for defining the length of relationship: ● Less than 12 months ● 13 to 36 months ● More than 37 months The system considers the Jurisdiction length of Relationship Lookup table based on the calculated value and picks the score associated to this value.
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 (i.e., 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 of a primary customer available in the list maintained by the bank for watch list. If there are multiple interested parties the max score would be considered as the score.	If customer is on a trust or exempt list (i.e., list with a risk <0), Watch List Risk --> 0 If not, (highest risk of the matched list x 10)
Negative News Risk	Risk associated with a customer who is available in the negative news search.	Greater than ● 10 --> 100 ● 7 -- 9 --> 75 ● 4 -- 6 --> 50 ● 1 -- 3 --> 30 ● 0 --> 0
Negative News Risk for Interested Parties	Risk associated with an interested party who is available in the negative news search.	Greater than ● 10 --> 100 ● 7 -- 9 --> 75 ● 4 -- 6 --> 50 ● 1 -- 3 --> 30 ● 0 --> 0
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 considers the Jurisdiction Country Lookup table and picks the score associated to this value.

Table 2. Risk Assessment Parameters

Risk Assessment Parameter	Details	Calculation
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 considers the Jurisdiction Country Lookup table and picks the score associated to this value.
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 considers the Jurisdiction Industry Lookup table and picks the score associated to this value.
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 considers the Jurisdiction Legal Structure Ownership and picks the score associated to Trust which is publicly held.
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. **Note:** The length of relationship drives different weights for parameters based on new vs. existing.	There are different ranges for defining the length of relationship ● Less than 12 months ● 13 to 36 months ● More than 37 months The system considers the Jurisdiction Corporation Age lookup table based on the calculated value and picks the score associated to this value.
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 and 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 then the system consider the Jurisdiction Company Type Risk table and picks the score associated to this value.
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 and picks the maximum score associated to this value.

Table 2. Risk Assessment Parameters

Risk Assessment Parameter	Details	Calculation
Risk associated with Method of Account Opening	Risk associated with different method of account opening. For example Online/Walk in/Phone etc	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/services associated to an account, account type can be defined. For example, Account Type – Savings1, Products/Services – a, b, c Account Type – Savings2, Products/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.

Dynamic Weight Calculation

The overall weight of all the parameters to be considered for risk assessments is to be equal to 100. Dynamic Weight calculation is a process which divides the weights of the parameters for which values are not available amongst those parameters for whom the values are available or provided by the banks.

Each parameter in a risk model is assigned a weight on a scale of 100 for final risk calculation. The weight sum will add up to 100.

When the value for a defined parameter is not available in the system, the system ignores the parameter and dynamically re-distributes the weights for all parameters that have a valid value. The new weights are calculated on a scale of 100, maintaining the relativity within the weights of the parameters with an available value.

For Example:

Table 3. Sample Dynamic Weight Calculation

Parameter Name	Original Weight	Value in the system	Dynamic Weight
Parameter 1	40	80	40 / (40+20+20) * 100 = 50
Parameter 2	20	60	20 / (40+20+20) * 100 = 25
Parameter 3	20	10	20 / (40+20+20) * 100 = 25
Parameter 4	20	Null or N/A	
Total	100		

During Algorithm-based Assessment Model risk calculation the system gathers the values for the parameters.

The following is the formula for the Dynamic Weight:

Original Weight of Parameter * 100 / Sum of Original Weights for all Parameters that have a value

APPENDIX A *Parameters*

This appendix discusses the following topics:

- Real-Time Account On-boarding Risk Parameters
- Rule-based Assessment Model Parameters
- Algorithm-based Assessment Model Parameters
- Accelerated Re-Review Rules

Real-Time Account On-boarding Risk Parameters

Table 4. Real Time Account On-boarding Risk Parameters

Risk Assessment Parameters	Individual	Legal Entity	Correspondent Bank
CIP Risk - Primary Customer / Joint Customer	x	x	x
CIP Risk - Interested Parties		x	x
Corporation Age risk		x	x
Existing Interested Parties Effective Risk *	x	N/A	N/A
Geo Risk - Countries of Operations		x	x
Geo Risk - Country of Headquarters		x	x
Geography Risk - Country of Citizenship	x		
Geography Risk - Country of Residence	x		
Industry Risk		x	
Length of Relationship Risk	x	x	x
Operational Risk - Markets Served by the bank			x
Risk associated to Source of Wealth	x		
Watch List Risk - Primary Customer	x	x	x
Watch List Risk - Interested Parties	x	x	x

* This would be considered if the customer for whom the request has been sent is an existing customer.

Rule-based Assessment Model Parameters

Table 5. Rule-based Assessment Model Parameters

Rules	Individual	Legal Entity	Correspondent Bank
Geo Risk - Country of Citizenship	x		
Geo Risk - Country of Residence	x		
Occupation Risk	x		
Watch List Risk	x	x	x
Geo Risk - Country of Head Quarters		x	x
Industry Risk		x	
Legal Structure And Ownership Risk		x	x
Geo Risk - Country of Operations		x	x

Algorithm-based Assessment Model Parameters

Table 6. Algorithm-based Assessment Model Parameters

Risk Assessment Parameter	Individual	Legal Entity	Correspondent Bank
CIP Risk - Primary Customer	x	x	x
CIP Risk - Interested Parties	N/A	x	x
Corporation Age Risk		x	x
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		
Industry Risk		x	
Legal Structure and Ownership Risk		x	
Length of Relationship Risk	x	x	x
Negative News Risk - Interested Parties		x	x
Negative News Risk - Primary Customer	x	x	x
Occupation Risk	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 to Source of Wealth	x		
Watch List Risk - Primary Customer	x	x	x
Watch List Risk - Interested Parties		x	x
Risk associated with Account Type	x	x	x
Risk associated with Method of Account Opening	x	x	x

Accelerated Re-Review Rules

Table 7. Accelerated Re-Review Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score	Count of Changes
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	Alert Re-review	1 Day	1 for 6.2 not configurable	NA	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	Alert Re-review	90days	5	NA	NA

Table 7. Accelerated Re-Review Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score	Count of Changes
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	Alert Re-review	1 Day	5	90	NA
Customer State Change	Reviews a Customer when the State component on a Customer address is changed more than x times during the last x days, x being configurable. Note: 1) Count of changes and Look Back Period is configurable. 2) Default values provided for Count of Changes is 3 and Look Back Period is 90 days respectively. 3) Customer can be primary customer or its interested parties or both.	Customer	Change Log	90days	NA	NA	3
Customer Country Change	Reviews a Customer when the Country component on a Customer address is changed more than x times during the last x days, x being configurable. Note: 1) Count of changes and Look Back Period is configurable. 2)Default values provided for Count of Changes is 3 and Look Back Period is 90 days respectively. 3) Customer can be primary customer or its interested parties or both.	Customer	Change Log	90days	NA	NA	3

Table 7. Accelerated Re-Review Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score	Count of Changes
Change in Customer's Citizenship	Reviews a Customer when the Citizenship of a Customer is changed at least once during the last x days, x being configurable. Note: 1) Count of changes and Look Back Period is configurable. 2) Default values provided for Count of Change is 1 and Look Back Period is 90 days respectively. 3) Customer can be primary customer or its interested parties or both.	Customer	Change Log	90days	NA	NA	1
Increase in Customer Authority on Account	Reviews a Customer when the Customer has gained an increase in authority over his Account or interested party(s) Account. Note: 1) 1 is the default and mandatory value for count of changes. 2) Default values provided for Look Back Period is 1. 3) Customer can be primary customer or its interested parties or both.	Customer	Change Log	1 Day	NA	NA	1 for 6.2 not configurable
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	Alert Re-review	1 Day	1 for 6.2 not configurable	NA	NA

Table 7. Accelerated Re-Review Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score	Count of Changes
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	Alert Re-review	90days	5	NA	NA
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	Alert Re-review	1 Day	5	90	NA

Table 7. Accelerated Re-Review Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score	Count of Changes
Account State Change	Reviews a Customer when the State component on a Customer's Account address is changed more than x times during the last x days., x being configurable. Note: 1) Count of changes and Look Back Period is configurable. 2) Default values provided for Count of Changes is 3 and Look Back Period is 90 days respectively. 3) Customer can be primary customer or its interested parties or both.	Account	Change Log	90days	NA	NA	3

Table 7. Accelerated Re-Review Rules

Rule Name	Rule Description	Rule Focus	Rule Type	Look Back Period	Count of Alerts	Alert Score	Count of Changes
Account Country Change	Reviews a Customer when the Country component on a Customer's Account address is changed more than x times during the last x days, x being configurable. Note: 1) Count of changes and Look Back Period is configurable. 2) Default values provided for Count of Changes is 3 and Look Back Period is 90 days respectively. 3) Customer can be primary customer or its interested parties or both.	Account	Change Log	90days	NA	NA	3
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	Alert Re-review	1 day	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 , refer to Chapter 2, *Risk Assessment Model.*

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	Legal Entity = Organization
125	CA113	Customer C	Correspondent Bank = Firm

Irrespective of the Risk score, the Risk Assessment will be promoted to case as the customer has met a rule which has been set by the bank or FI.

Rule Based Risk Score Calculation – Customer A - Individual

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 - Legal Entity

Table 10. Rule Based Risk Score Calculation – Customer B - Legal Entity

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 - Correspondent Bank

Table 11. Rule Based Risk Score Calculation – Customer C - Correspondent Bank

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	Legal Entity = Organization
233		Customer F	33	Correspondent Bank = Firm

Depending on the Jurisdiction the customer belongs to, the weights and scores for each value will be picked from the respective Jurisdiction Look up table.

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.

Table 13. Thresholds for Risk Category

Minimum Risk Score	Maximum Risk Score	Risk Category	User Review Required
0	40	Low	No
41	60	Medium	No
61	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 refer to, *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/Verification Step	Calculation for Customer D
CIP Risk	10	If the document verification is pass score = 0 Can request for third party verification or provide default score If Third Party IDV was initiated --> Use IDV score. If results of IDV requests are unavailable, then use default score of 20 where 20 is configurable.	As the document verification is failed the default score is 20
Watch List Primary Customer	15	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 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 KYC look-up tables for country geography risk.	Customer D's Country of Residence is US. Per Country Lookup table of respective Jurisdiction, US risk is 100 Customer D's Country of Residence Geo Risk = 100
Geography Risk associated with Country of Citizenship	5	Max Risk of countries of citizenship as it appears on the KYC look-up tables for country geography risk.	Customer D is a citizen of Romania and US. Per Country Lookup 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/Verification Step	Calculation for Customer D
Source of Wealth	10	Source of wealth values as it appears on the KYC look-up 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 KYC look-up tables for occupation.	Customer D's occupation is Gambler, therefore risk = 100
Number of Relevant or Unmarked Negative News Events	5	Greater than 10 --> 100 7 -- 9 --> 75 4 -- 6 --> 50 1 -- 3 --> 30 0 --> 0	No Negative News results returned for Customer D. Therefore, the Number of Relevant or Unmarked Negative News Events Risk = 0
Length of Relationship with the bank or FI	15	Less than 12 months --> 80 13 to 36 months --> 40 More than 37 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 Legal Entity (Organization), therefore, the Legal Entity risk model will be used.

When Customer Type = ORG or FIN, CIP /NNS/ WLS will consider Interested Parties as well which are determined based on Customer-to-Customer relationship(s) and Customer to Account relationship(s).
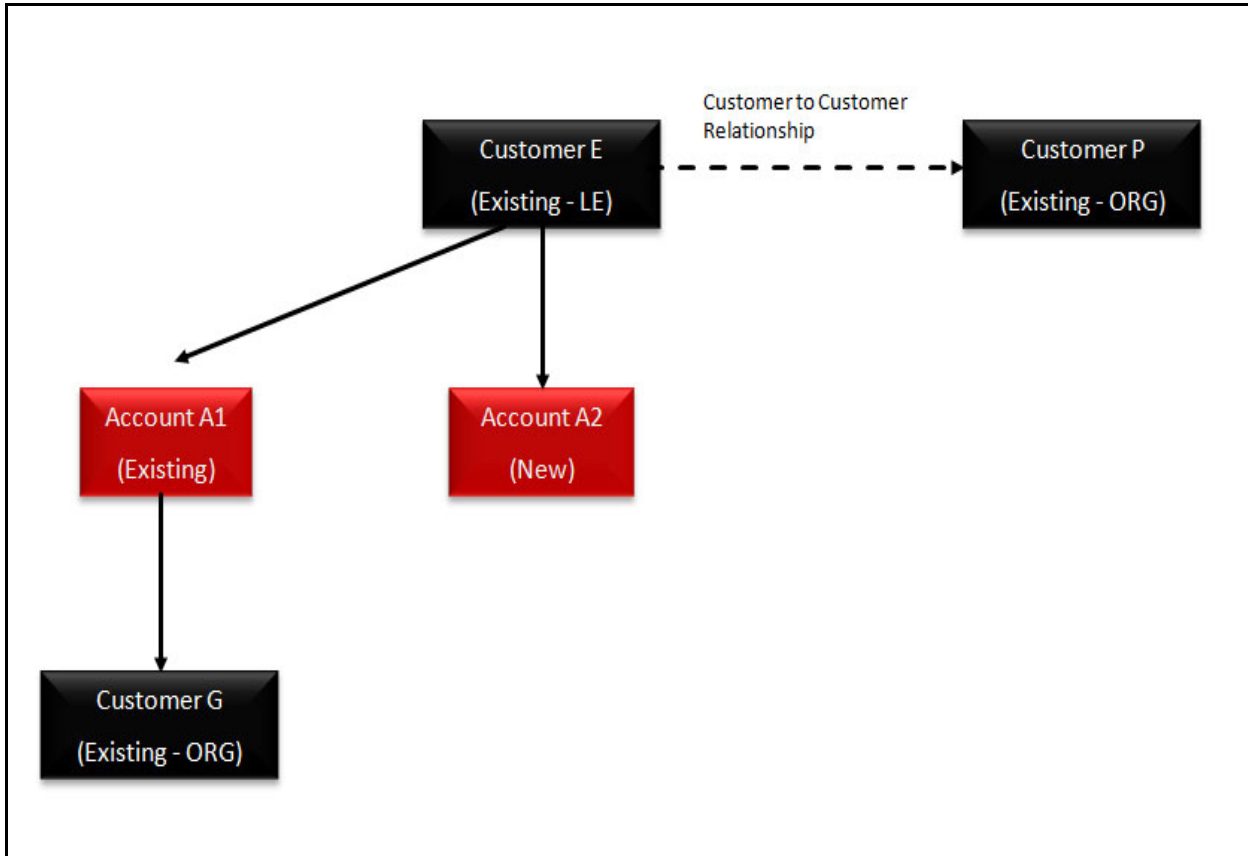
Figure 2. Schematic Representation of Relationships for Customer E

Table 15. Risk Calculation for Customer E

Parameter	Weight	Calculation/Verification Step	Calculation for Customer E
Identification Verification (IDV)	5	If the document verification is pass score = 0 Can request for third party verification or provide default score If Third Party IDV was initiated --> Use IDV score. If results of IDV requests are unavailable, then use default score of 20 where 20 is configurable.	Third Party IDV was not initiated, because documentary identity verification was sufficient. Therefore, score for this parameter = 0
Identification Verification for Interested Parties	5	For each of the interested parties, the above steps will be performed. Based on the above, it would calculate Maximum Score (Interested Party's IDV Risk) If MAXIMUM (IDV Risk) > 100, cap at 100	Customer G, P is an "Interested Party" to Customer E, based on Customer-to-Customer relationship and Customer to Account Relationship respectively. Default Score taken as IDV was not initiated and document verification was failed, the score is 20
Geography Risk associated with Country of Headquarters	7.5	Risk as it appears on the KYC look-up tables for country geography risk.	Customer E's headquarter is in US. Per Country Lookup table, US risk is 90 Customer B's Country of HQ Geo Risk = 90

Table 15. Risk Calculation for Customer E

Parameter	Weight	Calculation/Verification Step	Calculation for Customer E
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 Lookup 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
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 KYC look-up tables for industry types.	Customer E is in Telecommunications Industry. Per Industry Lookup table, Telecom. risk is 50. Customer B's Industry Risk = 50
Corporation Age	5	Less than 1 year --> 100 longer than 1 year, but less than 3 years --> 80 longer than 3 years but less than 10 years --> 40 10 years or longer --> 0	Customer E was founded 8 years ago. Customer E's Corporation Age Risk = 40
Legal Structure & Ownership	5	Risk as it appears on the KYC look-up tables for legal structure types.	Customer E is a Public Corporation. Based on Legal Structure & Ownership Lookup, Public Corporation Risk is 0. Customer B's Legal Structure & Ownership Risk = 0
Number of Relevant or Unmarked Negative News Events - Corporation	0	Greater than 10 --> 100 7 -- 9 --> 80 4 -- 6 --> 60 1 -- 3 --> 40 0 --> 0	The weight of this is 0 as the bank or FI does not want this to be a part of the risk assessment and it has not enabled this service.
Total Number of Relevant or Unmarked Negative News Events for Interested Parties	0	Greater than 10 --> 100 7 -- 9 --> 80 4 -- 6 --> 60 1 -- 3 --> 40 0 --> 0	The weight of this is 0 as the bank or FI does not want this to be a part of the risk assessment and it has not enabled this service.

Table 15. Risk Calculation for Customer E

Parameter	Weight	Calculation/Verification Step	Calculation for Customer E
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	Less than 12 months --> 80 13 to 36 months --> 40 More than 37 months --> 0	Customer E has been a Customer for 3 years Customer E's Length of Relationship with the bank or FI Risk = 40

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.

For more information, refer to section *Closed by System*.

Risk Calculation for Customer F

Customer F is Correspondent Bank (Firm), therefore, the Correspondent Bank risk model will be used.

When Customer type = ORG or FIN, CIP /NNS/ WLS will consider Interested Parties as well which are determined based on Customer-to-Customer relationship(s) and Customer to Account relationship(s).
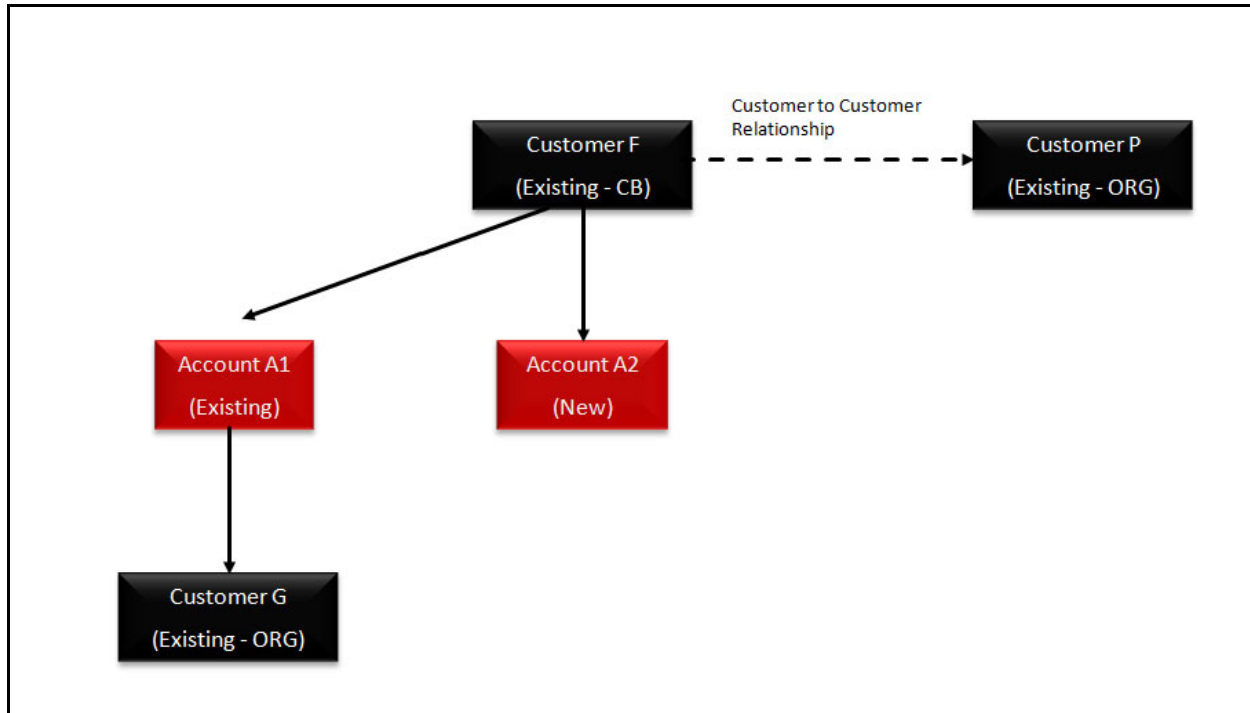
Figure 3. Schematic Representation of Relationships for Customer F

Table 16. Risk Calculation For Customer F

Parameter	Weight	Calculation/Verification Step	Calculation for Customer E
Identification Verification (IDV)	5	If the document verification is pass score = 0 Can request for third party verification or provide default score If Third Party IDV was initiated --> Use IDV score.If results of IDV requests are unavailable, then use default score of 20 where 20 is configurable.	Third Party IDV was not initiated, because documentary identity verification was sufficient. Therefore, score for this parameter = 0
Identification Verification for Interested Parties	5	For each of the interested parties, the above steps will be performed. Based on the above, it would calculate MaximumScore (Interested Party's IDV Risk)	Customer G, P is an "Interested Party" to Customer F, based on Customer-to-Customer relationship and Customer to Account Relationship respectively. Default Score taken as IDV was not initiated and document verification was failed, the score is 20
Geography Risk associated with Country of Headquarters	5	Risk as it appears on the KYC look-up tables for Country Geography Risk.	Customer F's headquarter is in UK. Per Country Lookup table, UK risk is 70 Customer F's Country of HQ Geo Risk = 70

Table 16. Risk Calculation For Customer F

Parameter	Weight	Calculation/Verification Step	Calculation for Customer E
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 Lookup table, UK risk is 70, Europe risk is 85. Customer F's Country of Operation Geo Risk = 85
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 KYC look-up 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	Less than 1 year --> 100 longer than 1 year, but less than 3 years --> 80 longer than 3 years but less than 10 years --> 40 10 years or longer --> 0	Customer E was founded 10 years ago. Customer E's Corporation Age Risk = 0
Risk associated to Public Company	5	Risk as it appears on the KYC look-up tables for legal structure types.	Customer F is a Public Corporation. Based on Legal Structure & Ownership Lookup, Public Corporation Risk is 0. Customer F's Legal Structure & Ownership Risk = 0
Number of Relevant or Unmarked Negative News Events - Corporation	0	Greater than 10 --> 100 7 -- 9 --> 80 4 -- 6 --> 60 1 -- 3 --> 40 0 --> 0	The weight of this is 0 as the bank or FI does not want this to be a part of the risk assessment and it has not enabled this service.
Total Number of Relevant or Unmarked Negative News Events for Interested Parties	0	Greater than 10 --> 100 7 -- 9 --> 80 4 -- 6 --> 60 1 -- 3 --> 40 0 --> 0	The weight of this is 0 as the bank or FI does not want this to be a part of the risk assessment and it has not enabled this service.

Table 16. Risk Calculation For Customer F

Parameter	Weight	Calculation/Verification Step	Calculation for Customer E
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	Less than 12 months --> 80 13 to 36 months --> 40 More than 37 months --> 0	Customer F has been a Customer for 5 years Customer F's Length of Relationship with the bank or FI Risk = 0
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