Client Risk Rating Methodology for GM and CIB (excl. Institutional Cash Management)

Version No	FINAL VERSION 1.1
Aligns to CRR Model Version	1.0
Risk Control Area	Anti-Financial Crime (AFC)
Business Scope	Global
Geography Scope	Global
Status	FINAL
Effective Date	09 Mar 2017

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1 EXECUTIVE SUMMARY

a) ***Document Purpose***: to explain the context and derivation of the Client Risk Rating Methodology (CRRM) for calculating a financial crime Client Risk Rating (CRR) for Global Markets (GM) and Corporate & Investment Banking (CIB) clients, but excluding Institutional Cash Management (ICM) clients. This document is maintained in-line with the ongoing iterative enhancements to the overall DB CRRM.

b) ***CRRM Purpose***: to provide a robust financial crime risk rating model which can generate CRRs that:
   a. Provide a financial crime risk rating for clients at on-boarding, which drives the level of due diligence to be undertaken
   b. Enable the prioritisation of remediation activity for existing GM and CIB (excluding ICM) clients.
   c. Provide risk based information for other financial crime controls such as periodic review due diligence processes and transaction monitoring.

c) ***Approach***: a phased iterative approach was taken to define the CRRM:
   a. Conceptual design - financial crime regulation, regulatory guidelines and DB AFC policy were referred to when designing the risk factors, risk factor weightings, risk category thresholds, risk lists and risk scoring mechanism for the CRRM, in order to understand the risks and justify the decisions made. Subject Matter Experts (SMEs) from AFC and business lines were consulted on decisions.
   b. Calibration - the CRR output was computed using the designed approach, and was iteratively calibrated on a sample basis by comparison to AFC and business line SME expectations.
   c. Validation - Calibration results were internally and externally reviewed and the subsequent risk weightings, risk thresholds and qualitative elements were accepted as valid.

d) ***Methodology***: Version 1.0 of the CRRM, see **Error! Reference source not found.**, uses four factors to provide an initial CRR. The four factors used are product type, entity type, industry type and country; which is in line with the approach taken by peers in the industry. There are other 'Special Risk Factors' that will result in a client being referred to the Local AFC Advisory team to review and confirm that any 'Special Risk Factors' identified are relevant and material, thus warrant an increase to the Initial Risk Rating, and as necessary determine a Final Risk Rating. The Special Risk Factors are applicable for; Politically Exposed Persons (PEPs), unusually complex entity structures without commercial rationale, entities that are capable of issuing bearer shares / already have bearer shares in their ownership structure, entities that are matched to adverse information, entities that operate in a specially flagged High Risk Industry (Money Service Business, Financial Technology or Gambling), entities that are linked to Special Risk Countries (SRCs), and intermediaries engaged by DB to perform services. The CRR calculates a global and local risk rating for each client. The global risk rating is the minimum standard, while the local risk rating incorporates any local risk lists or factors over and above global policy requirements.

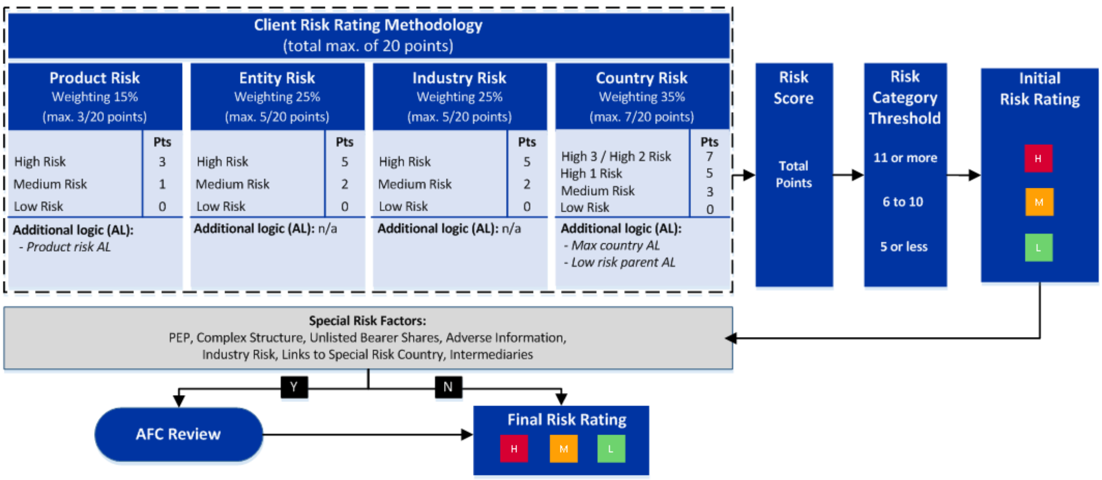

Figure 1 – CRR Methodology overview

3 INTRODUCTION

3.1 DOCUMENT PURPOSE

This document explains the Client Risk Rating (CRR), and how Client Risk Rating Methodology (CRRM) was derived. The document also describes the CRRM and how it can be applied as a risk model across all DB business lines. This document will be maintained in-line with ongoing iterative enhancements and will be version controlled accordingly.

3.2 CRR CONTEXT

The CRR is an integral part of the AFC lifecycle, see Figure 2 below. The CRR is produced as one element of the ongoing Risk Assessment (2) of a client.

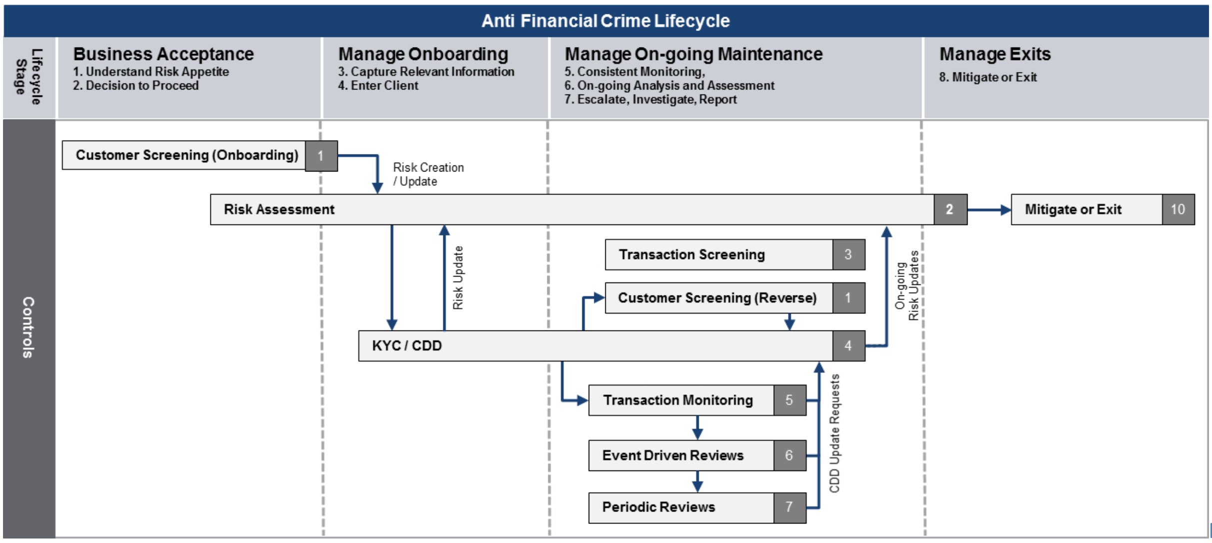

Figure 2 - AFC lifecycle

The CRR can be used by a number of other controls in the AFC lifecycle, including:

- **KYC / CDD (4)** – to determine the initial level of Client Due Diligence (CDD) to be completed at on-boarding and periodic review, and as a means of prioritising during back book remediation.
- **Transaction Monitoring (5)** – can be used as an input to segmentation models to enable more effective monitoring.
- **Event Driven Reviews (6)** – a change in client details could result in a change in the CRR which in turn may result in the need to update the CDD for the client.
- **Periodic Review (7)** – to determine the periodicity of the CDD review.
- **Mitigate or Exit (10)** – will be considered as part of mitigation and exit decisions.

The key drivers of the CRR are as follows:

a) Regulatory legislation
b) Regulatory guidelines
c) DB's Financial Crime Risk Appetite Statement
d) Internal AML and Sanctions policies and procedures
e) Internal or external risk events

3.3 CRRM SCOPE

The current scope of the CRRM is to provide a means of risk rating GM and CIB (excluding ICM) clients from the dbCAR data source.

4 THE METHODOLOGY

Version 1.0 of the CRRM, see Figure 3, uses four risk factors to provide an initial CRR. The four risk factors used are:

- Product type
- Entity type
- Industry type
- Country

These risk factors identify key characteristics of a client's inherent financial crime risk, and are in line with the approach taken by peers in the industry. Additional consideration to other financial crime risks (referred to in this document as 'special risk factors') will result in a client being referred to the relevant Local AFC advisory team to review and confirm that any 'Special Risk Factors' identified are relevant and material, thus warrant an increase to the Initial Risk Rating, and as necessary determine a Final Risk Rating. The special risk factors are applicable for:

- Politically Exposed Persons (PEPs)
- Unusually complex entity structures without commercial rationale
- Entities that are capable of issuing bearer shares / already have bearer shares in their ownership structure
- Entities that are matched to adverse information
- Entities that operate in a specially flagged High Risk Industry (Money Service Business, Financial Technology or Gambling)
- Entities that are linked to Special Risk Countries (SRCs)
- Intermediaries engaged by DB to perform services

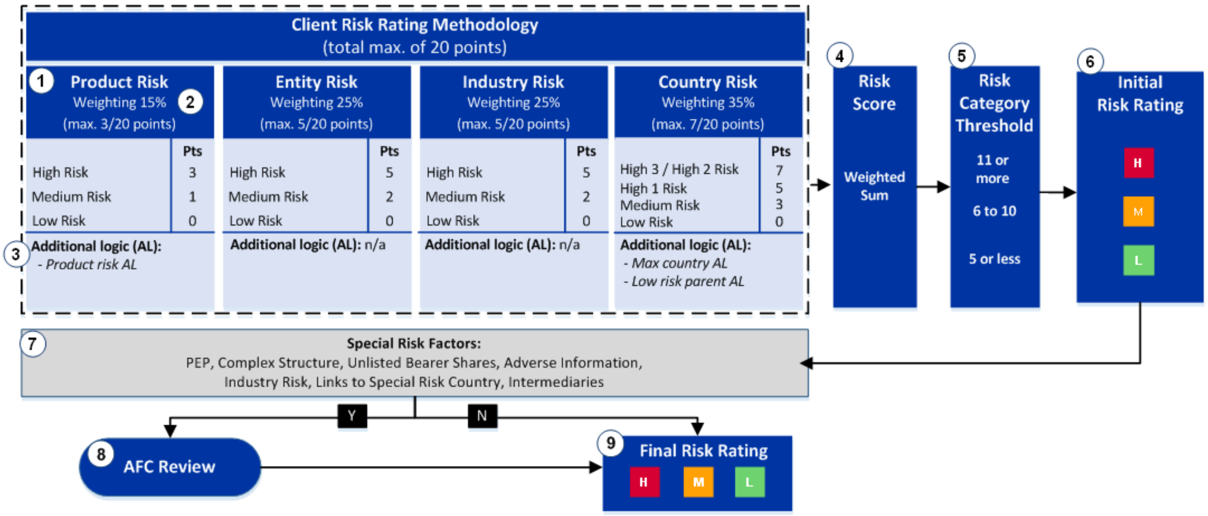

Figure 3 - CRRM

4.1 GLOBAL AND LOCAL CRR

The CRR calculates a global and local risk rating for each client. The global risk rating acts as the minimum risk rating that any other local risk ratings must achieve, while the local risk rating incorporates relevant local regulatory requirements such as risk lists or factors over and above the global policy requirements.

The global and local calculations will typically remain constant across the entity, industry and country risk factors (assuming none change throughout the relationship); but may be calculated differently considering the product risk factor.

A key principle of the global risk rating, considers all products owned by the client in any of its adoption countries, and uses the highest risk product in the client's portfolio for the global risk rating calculation. The local risk rating however considers products offered to the client in each of its adoption countries separately. A client's global CRR represents its minimum risk rating, and its local CRR in any adoption country can never be lower. Figure 4 shows an entity with four adoption locations and four different products made available to the entity. The highest risk product is used in the overall calculation for the global risk rating.

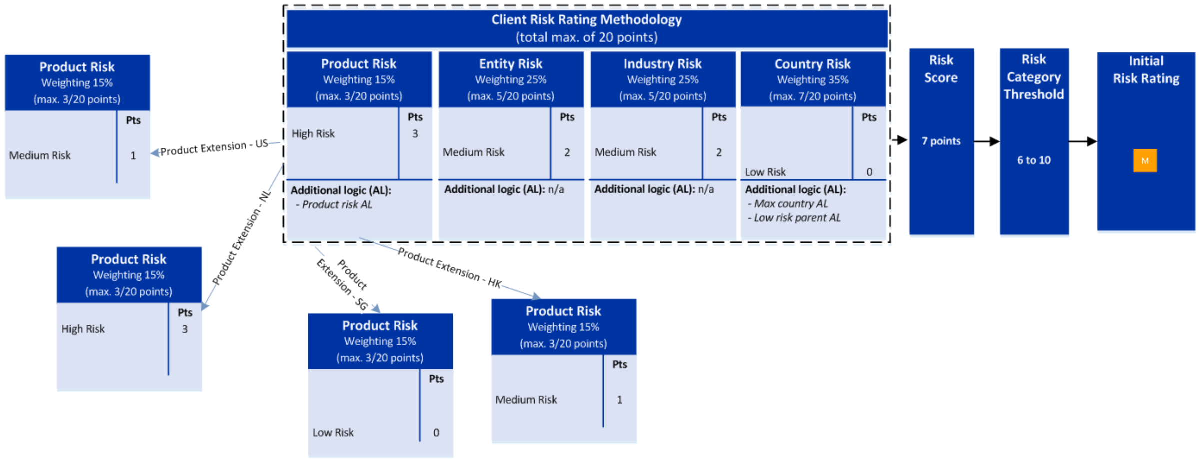

Figure 4 – Example of Global CRR, where the highest risk product is always used

The local CRR requirements for specific adoption countries can be found in Appendix 1.

4.2 CRRM COMPONENTS

Each component of the CRRM is numbered in Figure 3 and described in Table 1, with the configuration of the component in this version of the methodology. The rationale behind each configuration is described in the subsequent sections.

ID	Component	Description	CRRM Configuration
1	**Risk Factors**	The broad risk areas across which each client is assessed as High / Medium / Low Risk for financial crime (and High 3 / High 2 / High 1 / Medium / Low Risk for the country risk factor).	CRRM risk factors: • Product Risk • Entity Risk • Industry Risk • Country Risk
2	**Risk Factor Weightings**	A reflection of the relative importance of each risk factor compared to others (the higher the weighting the greater the importance of the risk factor).	CRRM risk factor weightings: • Product Risk: 15% • Entity Risk: 25% • Industry Risk: 25% • Country Risk: 35%
3	**Additional Logic (AL)**	The aggregation / combination of data fields that combine to create a risk factor, for example a client could have exposure to many countries and there	CRRM additional logic (AL): • Product Risk AL: take the points for the highest risk product used by the client (either globally or per adoption country,

ID	Component	Description	CRRM Configuration

		is therefore a need for logic to decide which country(s) to use.	for global and local risk calculations respectively)
			• Entity Risk AL: n/a
			• Industry Risk AL: n/a
			• Country Risk AL:
			  • Maximum Country Risk AL: use the highest risk country field from the client's primary operation, registration, UBO residential / domicile and ultimate parent country
			  • Low Risk Parent AL: if the client's ultimate parent has a Low Risk CRR globally (the bank must have previously on-boarded the ultimate parent for this logic to apply); and the ultimate parent's country is Low Risk, and the client is not linked to a High 3 / High 2 Risk country; then the client's country risk factor is reduced by one level (see logic diagram in Appendix 2)

4	**Risk Score**	The weighted sum of the risk factors' risk points for High / Medium / Low Risk values.	Risk score calculation: For each client in each of its adoption countries: Weighted points for Product Risk + Weighted points for Entity Risk + Weighted points for Industry Risk + Weighted points for Country Risk
5	**Risk Category Thresholds**	The minimum risk score required for a client to become part of a particular risk category.	CRRM risk category thresholds: • High Risk threshold: 11 points or more • Medium Risk threshold: 6 - 10 points • Low Risk threshold: 5 points or less
6	**Risk Categories**	Risk categories drive the level of due diligence required for a client and can influence other AFC controls.	CRRM risk categories: • High • Medium • Low
7	**Special Risk Factors**	Instigate a referral to the AFC advisory team to provide a final recommendation on the risk category, taking into consideration the Special Risk Factors, and any mitigating circumstances. On escalation, the Initial Risk Score is not increased; rather the AFC advisory team is able to increase the client's final risk score.	CRRM Special Risk Factors: • Politically Exposed Persons (PEPs) • Unusually complex entity structures without commercial rationale • Entities capable of issuing bearer shares / already have bearer shares in their ownership structure • Entities that are matched to adverse information • Entities that operate in a specially flagged High Risk Industry (Money

ID	Component	Description	CRRM Configuration
			Service Business, Financial Technology or Gambling) • Entities that are linked to Special Risk Countries (SRCs) through their registration, primary operation, parent or Ultimate Beneficial Owner (UBO) residential / domicile countries • Intermediaries engaged by DB to perform services

Table 1 - CRRM components and configuration

5 METHODOLOGY DEFINITION

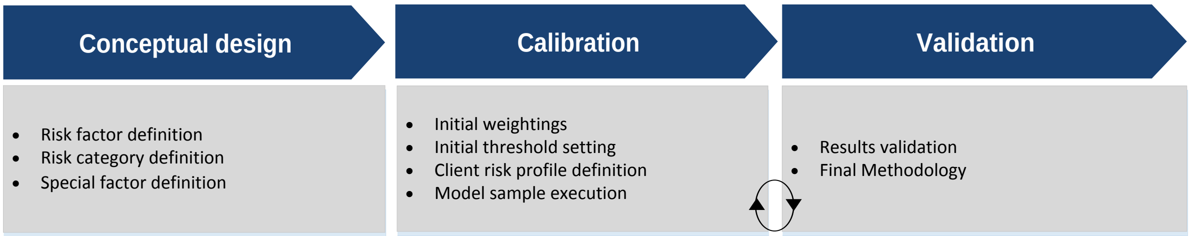

Figure 5 - Methodology definition approach

A phased approach was taken to define the CRRM:

a. <u>Conceptual design</u> - conceptual design of the methodology using financial crime regulation and guidance, DB AFC policies, and Subject Matter Experts (SMEs) from AFC and appropriate lines of business.
b. <u>Calibration</u> - after the CRR output was computed using the designed approach, it was iteratively calibrated on a sample basis by comparison to AFC and business line SME expectations.
c. <u>Validation</u> - calibration results were internally and externally reviewed and the subsequent risk weightings were accepted as valid.

5.1 CONCEPTUAL DESIGN

The first step of the conceptual design was to agree on the initial structure of the model, which involved defining the risk factors. Table 5 provides this information with the rationale for these decisions.

Factor Name	Rationale
Product Type	Differentiates between clients that use products of varying Money Laundering (ML) / Terrorist Financing (TF) potential, due to different levels of transparency, internationality, velocity of fund movement or multiple currency facilitation. The Joint Money Laundering Steering Group's (JMLSG) states that firms should evaluate their clients' products / services when undertaking ML/TF risk assessments by considering: "*can the product features be used for money laundering or terrorist financing, or to fund other crime? Do the products allow/facilitate payments to third parties? Does a customer migrating from one product to another within the firm carry a risk?*"[1]. The JMLSG goes on to list product types that are low[2] or high[3] risk. The Financial Conduct Authority (FCA) asks firms to assess "*the risks associated with different types of customer or beneficial owner, product, business line*"[4] during the client risk assessment process.

[1] Joint Money Laundering Steering Group. *Prevention of Money Laundering / Combatting Terrorist Financing. Part I*. (Section 4.32 (p. 47)). <http://www.jmlsg.org.uk/industry-guidance/article/jmlsg-guidance-current>

[2] Joint Money Laundering Steering Group. *Prevention of Money Laundering / Combatting Terrorist Financing. Part I*. (Section 4.38 (p. 49)). <http://www.jmlsg.org.uk/industry-guidance/article/jmlsg-guidance-current>

[3] Joint Money Laundering Steering Group. *Prevention of Money Laundering / Combatting Terrorist Financing. Part I*. (Section 4.35 (p. 48)). <http://www.jmlsg.org.uk/industry-guidance/article/jmlsg-guidance-current>

[4] Financial Conduct Authority. *Financial Crime: a Guide for Firms Part 1: A firm's guide to preventing financial crime.* (Box 3.3. p 21). April 2013. < https://www.handbook.fca.org.uk/handbook/document/FC1_Full_20130401.pdf >

Factor Name	Rationale
Entity Type	Differentiates between client entities of different organisational transparency and purpose, which consequently results in varying potential for illicit ML / TF activities. FCA guidance asks firms to understand the types of entities they take on as clients and to check ML/TF risks. The FCA states that it is good practice for a firm to *"obtain information about the purpose and nature of the business relationship sufficient to be satisfied that it understands the associated money-laundering risk"*[5]. The Financial Action Task Force (FATF) states that "*initial customer due diligence comprises:* *Verifying the customer's identity on the basis of reliable and independent information, data or documentation to at least the extent required by the applicable legal and regulatory framework;* *Understanding the purpose and intended nature of the business relationship and, in higher risk situations, obtaining further information*"[6].
Industry Type	Differentiates between clients that operate in industries of varying levels of regulation and inherent opportunities for money laundering / terrorist financing. The JMLSG states that different industries pose varying degrees of ML / TF risk. Examples of High Risk ML / TF industries are provided, including "*customers engaged in a business which involves significant amounts of cash, or which are associated with higher levels of corruption (e.g. arms dealing, extractive industries, construction)*" or "*customers engaged in industries that might relate to proliferation activities*"[7]. The FCA states that it is good practice to assess sector risk when dealing with High Risk clients. As an example it recommends "*considering the money-laundering risk presented by customers, taking into account a variety of factors including, but not limited to, company structures; political connections; country risk; the customer's reputation; source of wealth/funds; expected account activity; sector risk*"[8].
Country	Differentiates between clients that are linked to countries with varying inherent money laundering / terrorist financing risks; for example, due to their registration country, primary operating country, residential / domicile country of UBO or the registration country of their parent entity. The JMLSG (part 1) recommends that senior management of businesses should assess clients who are "*based in or conducting business in or through, a high-risk jurisdiction, or a jurisdiction with known higher known levels of corruption or organised crime, or drug production /distribution*"[9]. FATF states that "*for individual banks, supervisors should take into account the level of inherent risk including geographic location and countries of operation*"[10].

Table 5 - Initial risk factors and rationale

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[5] The Financial Conduct Authority. *A guide for firms Part 1: Financial crime thematic reviews* (Box 3.4. p 22). January 2015. <https://www.handbook.fca.org.uk/handbook/document/FC1_Full_20130401.pdf>

[6] The Financial Action Task Force (FATF): *Risk-Based Approach Guidance for the Banking Sector*. (section 61, p 19). <http://www.fatf-gafi.org/media/fatf/documents/reports/Risk-Based-Approach-Banking-Sector.pdf>

[7] Joint Money Laundering Steering Group. *Prevention of Money Laundering / Combatting Terrorist Financing. Part I*. (Section 4.32. p 46). <http://www.jmlsg.org.uk/industry-guidance/article/jmlsg-guidance-current>

[8] The Financial Conduct Authority. *A guide for firms Part 1: Financial crime thematic reviews.* (Box 3.3. p 21). January 2015. < https://www.handbook.fca.org.uk/handbook/document/FC1_FCA_20130401.pdf>

[9] Joint Money Laundering Steering Group. *Prevention of Money Laundering / Combatting Terrorist Financing. Part I*. (Section 4.32. p 46). <http://www.jmlsg.org.uk/industry-guidance/article/jmlsg-guidance-current>

[10] The Financial Action Task Force (FATF): *Risk-Based Approach Guidance for the Banking Sector*. (section 34, p 13). < http://www.fatf-gafi.org/media/fatf/documents/reports/Risk-Based-Approach-Banking-Sector.pdf>

Each risk factor has an associated risk list which is used to risk rate the possible values for each risk factor. Table 6 provides an overview of the risk lists and where they are defined:

Risk Factor	Risk List Overview
Product type	Based on DB maintained sub-product lists and risk ratings, defined internally and detailed on the AFC Client Risk Rating site on the KYC Policy portal.
Entity type	Based on DB maintained entity type lists and risk ratings, defined internally and detailed on the AFC Client Risk Rating site on the KYC Policy portal.
Industry type	Based on NACE code risk ratings, defined internally and detailed on the AFC Client Risk Rating site on the KYC Policy portal.
Country	Based on ISO code risk ratings, defined by an internal process based on industry standard country risk ratings provided by Promontory, and detailed on the AFC Client Risk Rating site on the KYC Policy portal.

Table 6 - Risk lists

The next step was to agree on the granularity of the risk categories, which at this stage were agreed to be High / Medium / Low (or High 3 / High 2 / High 1 / Medium / Low for the country risk factor) based on the current KYC / CDD policies[11] and procedures [12]. Once agreed, Special Risk Factors were considered as a means of differentiating specific types of clients from within their risk categories. Special Risk Factors are rules that are applied to clients with certain characteristics, which may result in an override of the risk category determined by the risk rating algorithm (Initial Risk Rating), or the client being determined to be outside of risk appetite. Clients who match any of these conditions will be referred to AFC to review and confirm that the 'Special Risk Factors' identified are relevant and material, thus warrant an increase to the Initial Risk Rating, placing the decision to increase the Final Risk Rating to Medium or High with AFC. Table 7 provides details of these Special Risk Factors and rationale.

Special Risk Factor	Rationale
Politically Exposed Persons (PEP)	Client association with PEPs are flagged for review by AFC. Extra consideration is given to clients that are PEPs, or clients who have a PEP as their Ultimate Beneficial Owner (UBO) or clients that have a PEP as their legal representatives (LR). The FCA provide guidance on how firms should risk assess PEPs. For example, they expect "*clear processes for escalating the approval of high risk and all PEP customer relationships to senior management or committees which consider AML risk and give appropriate challenge to RMs and the business*"[13]. JMLSG (Part 1) states that firms "*must apply enhanced due diligence to take account of the greater potential for money laundering in higher risk cases, specifically when the customer is not physically present when being identified, and in respect of PEPs*"[14].

[11] KYC DB Group Policy (Level 2). *4. KYC Standards - 4.6.2 AML Client Risk Classification* (p 19-20) <https://dbpolicyportal.intranet.db.com/gpag/pdf/0901e5be809c2e43/filename_is_null.pdf>

[12] KYC DB Global Key Operating Procedure (Level 4). *Chapter 5 – AML Client Risk Classification* (p 47-54)

[13] The Financial Conduct Authority. *A guide for firms Part 2: Financial crime thematic reviews* (Box 12.3, p 60). January 2015. <https://www.handbook.fca.org.uk/handbook/document/FC2_FCA_20140612.pdf >

[14] Joint Money Laundering Steering Group. *Prevention of Money Laundering / Combatting Terrorist Financing.Part I*. n.d. (p 56, core obligations section). <http://www.jmlsg.org.uk/industry-guidance/article/jmlsg-guidance-current>

Special Risk Factor	Rationale
	DB Group KYC Policy states that "*PEP status must be established upon commencement of a client relationship. Identified client relationships with PEP involvement will be treated as PEP Relationship, and require annual review of the client relationship by the Business*" [15].
Complex Structures	Entities with unusually complex organisational structure without clear commercial rationale are flagged for review by AFC. They are considered to present a higher level of risk because of obfuscated operations. JMLSG (Part 1) recommends consideration for "*complex business ownership structures, which can make it easier to conceal underlying beneficiaries, where there is no legitimate commercial rationale*"[16]. FCA guidance on client due diligence states that a bank should understand and document any complexities in a client's structure. It describes good practice as when a *"firm understands and documents the ownership and control structures (including the reasons for any complex or opaque corporate structures) of customers and their beneficial owners."*[17]
Issuer of Bearer Shares	Entities that are capable of issuing bearer shares and entities that already have bearer shares in their ownership structure are flagged for review by AFC in order to confirm the nature of bearer shares issued. A review of the nature of bearer shares issued / the ability to issue bearer shares in structure and the registration regime is required to verify whether a higher level of risk is presented due to lack of ownership transparency (i.e. if the bearer shares are unregistered, unlisted or not held with a custodian). The JMLSG (part 1) explains "*extra care must be taken in the case of companies with capital in the form of bearer shares, because in such cases it is often difficult to identify the beneficial owner(s). Companies that issue bearer shares are frequently incorporated in high risk jurisdictions. Firms should adopt procedures to establish the identities of the holders and material beneficial owners of such shares and to ensure that they are notified whenever there is a change of holder and/or beneficial owner*"[18]. DB Group KYC Policy states that "*additional focus shall be on*: *a clear and detailed understanding of the entire entity type structure; identification and verification of all relevant UBOs and other natural persons, who control or benefit from the entity type structure; and a clear understanding of the purpose for the selection of the specific entity type form*"[19].
Adverse Information	Entities that have been linked to adverse information are flagged for review by AFC in order to consider the materiality of the adverse information. Adverse information may be from external sources (e.g. news stories) or internal AFC investigations; and is essential for managing reputational risk. The FCA's guidance on risk assessment recommends that firms check for information relating to a client's reputation. It states "*consideration of money-laundering risk associated with individual business relationships takes account of factors such as: the customer's or beneficial*

[15] KYC DB Group Policy (Level 2). *4. KYC Standards - 4.1.Risk Parameters – 4: PEP and "RCA"* (p 9) <https://dbpolicyportal.intranet.db.com/gpag/pdf/0901e5be809c2e43/filename_is_null.pdf>

[16] Joint Money Laundering Steering Group. *Prevention of Money Laundering / Combatting Terrorist Financing.Part I*. n.d. (Section 4.32, p 46). <http://www.jmlsg.org.uk/industry-guidance/article/jmlsg-guidance-current>

[17] The Financial Conduct Authority. *A guide for firms Part 1: Financial crime thematic reviews* (Box 3.4, p 22). April 2013. <https://www.handbook.fca.org.uk/handbook/document/FC1_Full_20130401.pdf>

[18] The Joint Money Laundering Steering Group. *Prevention of money laundering and combating terrorist financing* (section 5.3.152, p 88) November 2014. <http://www.jmlsg.org.uk/industry-guidance/article/jmlsg-guidance-current>

[19] KYC DB Group Policy (Level 2). *4. KYC Standards - 4.10. Special Entity Types (p 23)* <https://dbpolicyportal.intranet.db.com/gpag/pdf/0901e5be809c2e43/filename_is_null.pdf>

Special Risk Factor	Rationale
	owner's reputation"[20].DB Group KYC Policy states that "a *client carries a high AML client risk classification if the client/UBO/LR/AS is subject to material adverse information, reputational concern (e.g. validated Name List Screening hit or other suspicious indicators)"* [21].
Industry Risk	Entities that operate in a specially flagged High Risk Industry are flagged for reviewed by AFC. These High Risk Industries are Money Service Business, Financial Technology and Gambling, which are associated with an exceptionally High Risk of ML / TF. The DB KYC Global Key Operating Procedure state that "*Special Business Types are specific types of businesses with additional KYC process requirements due to the challenges that can be faced in determining and understanding the nature of their business and their increased ML / TF risk factors. For the purpose of this KOP, Special Business Types are limited to Gambling entities, Money Service Business (MSBs) and Financial Technology entities (FinTech)"*[22].
Special Risk Countries (SRCs)	Entities that are linked to SRCs are flagged for review by AFC because conducting business involving Special Risk Countries poses unique and substantial risks to DB. DB Special Risk Country (SRC) Policy states that for transactions that involve SRCs, the bank should "*apply enhanced scrutiny to the business relationship or transaction in order to protect DB Group against the increased reputational risk and the risk of non-compliance with relevant law*"[23]. Prohibited and Restricted SRCs are identified in *Appendix 1 of DB Special Risk Country Policy*[24]
Intermediaries	The DB Global KYC Level 2 Policy that states "*Where third parties engaged by DB to perform services such as placement agents, referral agents, introducers, finders, intermediaries, introducing brokers, facilitators, authorised representatives, such relationships should be escalated to AFC (to determine whether such third parties are actually Business Development Consultants (BDCs)). These relationships present an increased Bribery & Corruption risk as identified in the Business Development Consultants Principles – Deutsche Bank Group*"[25].

Table 7 - Special Risk Factors and rationale

Special Risk Factors instigate a referral to the AFC advisory team to provide a final recommendation on the risk category, taking into consideration the relevance and materiality of the Special Risk Factors, and any mitigating circumstances. On escalation, the Initial Risk Rating is not increased; rather the local AFC advisory team is able to increase the client's Final Risk Rating, and a recommendation on how to proceed is made to the Business via the Client On-boarding (COB) team.

5.2 CALIBRATION AND VALIDATION OF CONCEPTUAL DESIGN

[20] The Financial Conduct Authority. *A guide for firms Part 1: Financial crime thematic reviews* (Box 3.3, p 21). April 2013. <https://www.handbook.fca.org.uk/handbook/document/FC1_Full_20130401.pdf>

[21] KYC DB Group Policy (Level 2). *4. KYC Standards – 4.5.2 Enhance Due Diligence* (p 17) <https://dbpolicyportal.intranet.db.com/gpag/pdf/0901e5be809c2e43/filename_is_null.pdf>

[22] Level 4 KYC Global Key Operating Procedure v2 (Section 49, p 43)

[23] Special Risk Country Policy DB Group (Level 2) – DRAFT (p 4)

[24] Special Risk Country Policy DB Group (Level 2) – DRAFT (Appendix 1)

25 KYC Global Policy (Level 2) – (Section 7 Intermediaries)

Figure 6 shows the iterative calibration and validation of the CRRM conceptual design, and is followed by an explanation of each step in Table 8. These steps were followed to arrive at the methodology defined in Section 4.

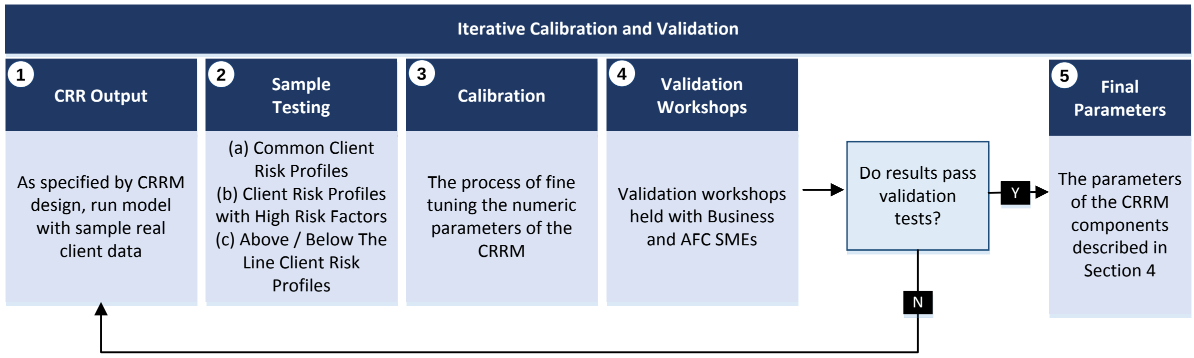


Figure 6 - Iterative calibration and validation

ID	Process Stage	Description
1	CRR Output	A CRR for a client is computed using the designed CRRM, and is ready for validation and calibration on a sample basis.
2	Sample Testing	The following samples were selected for validation and calibration by business and AFC SMEs: • The top ten most common client risk profiles present in the population were selected; and a random sample of clients from each of these top ten groups was selected for validation and calibration of the risk factor weightings. • Client risk profiles that had one risk factor rated as High Risk (the risk rating of the remaining three risk factors is immaterial) were selected; and a random sample of clients that had one High Risk factor, for each risk factor in turn, were selected for validation and calibration of the risk factor weightings. • Client risk profiles that resulted in a risk score close to the threshold between two risk categories were selected; and a random sample of such clients were selected for validation and calibration of the thresholds.
3	Calibration	The process of tuning the numeric parameters of the CRRM.
4	Validation Workshops with Business & AFC SMEs	CRR sample output was systematically assessed against business and AFC expectations; where expectations were not met the risk factor weightings or thresholds were re-calibrated before the next iteration of validation.
5	Final Components	The parameters of the CRRM components described in Section 4 (The Methodology).

Table 8 - Iterative calibration and validation

The decisions made at each process stage are detailed in the *CRRM Decisions Log*, and summarised in Table 9.

Iteration Number	Process Stage	Recommendations
1	**Calibration (weightings)**	Initially each risk factor was equally weighted and assigned the following points based on the risk factor values as a starting point for more detailed calibration: • High Risk value = 5 points • Medium Risk value = 2 points • Low Risk value = 0 points

1	**Calibration (thresholds)**	• Risk category thresholds were set in order to determine a proposed risk category for the sample CRR output. Initially, the risk category thresholds were set by assuming equal risk factor weightings, and using the following logic:
		  ◦ The Medium Risk category threshold of 8 points is the risk score of a client that has four Medium Risk factors assuming equal risk factor weightings (i.e. 2 + 2 + 2 + 2 = 8)
		  ◦ The High Risk category threshold of 11 points is the risk score of a client that has at least one High Risk factor, and at least three Medium Risk factors, assuming equal risk factor weightings (i.e. 5 + 2 + 2 + 2 = 11)
		• The thresholds that were set using equal weightings (i.e. 8 - 10 points for Medium Risk; 11 points or more for High Risk) were applied to the weighted risk scores and resulted in the following overall logic:
		  ◦ Low Risk ratings result from cases where:
		    ➢ There are four Low Risk factors
		    ➢ There are three Medium Risk factors and one Low Risk factor
		    ➢ There are three Low Risk factors and one High Risk factor
		  ◦ Medium Risk ratings result from cases where:
		    ➢ There are four Medium Risk factors
		    ➢ There are two Medium Risk factors, one High Risk factor and one Low Risk factor
		    ➢ The Entity, Industry and Geography risk factors are Medium Risk, and the Product risk factor is High Risk
		    ➢ Geography and Product risk factors are High Risk while the Entity and Industry risk factors are Low Risk
		  ◦ High Risk ratings result from cases where:
		    ➢ There are four High Risk factors
		    ➢ There are three High Risk factors
		    ➢ There are two High Risk factors and two Medium Risk factors

1	**Additional Logic / Special Risk Factors**	The Special Risk Factors (See Table 7) were introduced to ensure: • Alignment to industry standards • Alignment to regulatory guidelines • Use of qualitative methods of determining financial crime risk exposure Based on knowledge of industry standards, additional logic was considered for the following: • Downgrade the country risk of clients that operate in their home market and do not have links to foreign countries • Downgrade the country risk of clients that have a parent entity that has been previously on-boarded, is known to be Low Risk and is in a Low Risk country • Downgrade the industry risk of clients that are listed on a DB recognised stock exchange or regulated by a DB recognised regulator

<table>
<tr><th>Iteration Number</th><th>Process Stage</th><th>Recommendations</th></tr>
<tr><td>2</td><td>Calibration (weightings)</td><td>Based on the evaluation of scenarios during workshops with the Business and AFC, weightings were arrived at which considered Country the highest risk pillar, followed by Industry, Entity and Product:

• Product Risk: 15% (i.e. maximum of 3 points)
• Entity Risk: 20% (i.e. maximum of 4 points)
• Industry Risk: 30% (i.e. maximum of 6 points)
• Country Risk: 35% (i.e. maximum of 7 points)

Peer organisations are known to have similarly weighted product risk lower than other risk factors because product risk is based on what a client has access to, while other controls, such as transaction monitoring, are in place to determine how the products are ultimately used. Peer organisations are also known to have weighted country risk higher than other risk factors, due to its distinct prominence is regulatory legislation and guidelines.</td></tr>
<tr><td>2</td><td>Validation</td><td>The following two additional rules were progressed to model testing due to being consistent with peer organisation practices:
• Downgrade the country risk of clients that operate in their home market and do not have links to foreign countries
• Downgrade the country risk of clients that have a parent entity that has been previously on-boarded, is known to be Low Risk and is in a Low Risk country

The following additional rule was not progressed for further model testing because DB recognised entities are already rated Low Risk as part of the entity risk factor:
• Downgrade the industry risk of clients that are listed on a DB recognised stock exchange or regulated by a DB recognised regulator</td></tr>
<tr><td>3</td><td>Calibration (weightings)</td><td>Weightings were refined following feedback from the Business and AFC resulting from the calibration exercise where sample CRRM output was reviewed:

• Product Risk: 15% (i.e. maximum of 3 points)
• Entity Risk: 25% (i.e. maximum of 5 points)
• Industry Risk: 25% (i.e. maximum of 5 points)
• Country Risk: 35% (i.e. maximum of 7 points)

These weightings were validated by comparing to peer organisations and by analysing the proportion of risk ratings that matched SME expectations, while further investigating the materiality of any mismatches.</td></tr>
<tr><td>3</td><td>Calibration (thresholds)</td><td>The Medium Risk threshold of 8 points was considered too high due to the following cases being in the Low Risk category, where as Medium Risk was more deemed more appropriate for most scenarios:
• Three Medium Risk factors and one Low Risk factor (= 5 to 7 points)
• Geography is High Risk with three Low Risk factors (=7 points)
• The Medium Risk threshold was therefore reduced to 6 points in order for most of the cases described above to be in the Medium Risk category.</td></tr>
</table>

Iteration Number	Process Stage	Recommendations
4	**Additional Logic / Special Risk Factors**	"High Risk Industry" was introduced as a Special Risk Factor in order to fully align to DB Key Operating Procedures (KOPs).
4	**Validation**	The Calibration exercise was completed following the iterative process described above, and the CRRM in terms of all quantitative elements (risk calculations, risk weightings, risk thresholds) and all qualitative elements (special risk factors) were validated internally by AFC FIU and AFC KYC Policy and externally by PwC
5	**Additional Logic / Special Risk Factors**	The following additional rule was not progressed for further model testing because GM and CIB clients by their international (and therefore not domestic) nature were often multiple adoption countries, and after testing it was found that the impact the Home Market Rule was limited. As a result the 'Home Market Rule' was removed from the final iteration of the model. The rule may be re-considered in future iterations of the model: Downgrade the country risk of clients that operate in their home market and do not have links to foreign countries
5	**Calibration (weightings)**	The Country Risk pillar was refined following feedback from AFC, resulting from the calibration exercise where sample CRRM output was reviewed. Recognising that the definition of 'High' risk captured a broad range of countries with varying degrees of financial crime risks posed to DB, additional classification was considered beneficial within the context of the Country Risk List (used by other risk models programmes). Within the CRR is it possible to identify higher risk countries by adopting a 3-level approach, in-line with the more strategic direction of a points-based analysis of every country (future phase). The overall weighting of the Country Risk pillar remained as 35% (i.e. maximum of 7 points), but the High Risk category was split into High 1, High 2 and High 3 as follows: • High 2 or High 3 Risk value = 7 points • High 1 Risk value = 5 points • Medium Risk value = 3 points • Low Risk value = 0 points High 3 countries are those considered in the Special Risk Countries policy, and are also captured as a 'Special Risk Factor' for escalation to Local AFC.

Table 9 - Timeline of key decisions

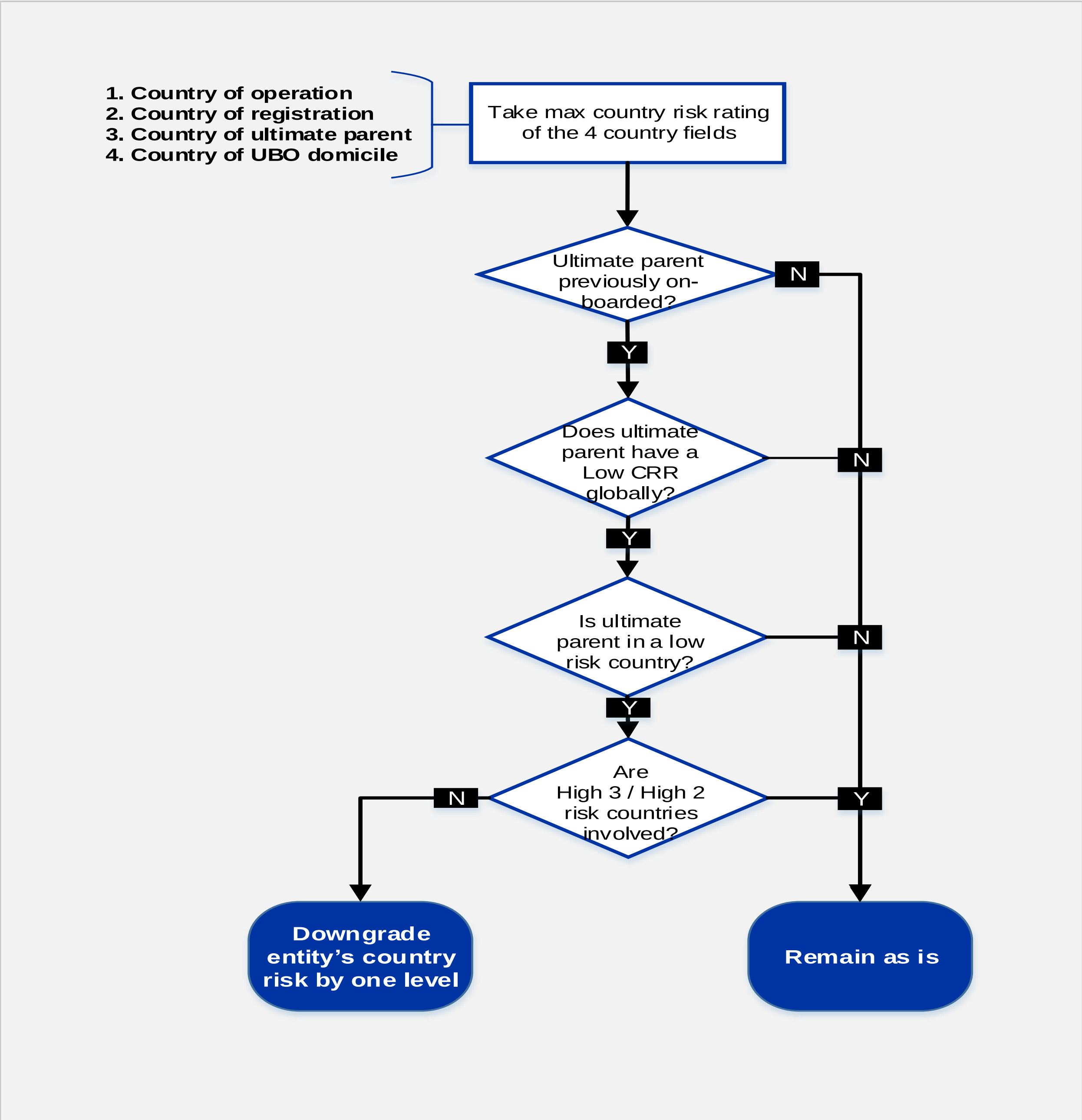
6 APPENDICES

6.1 APPENDIX 1 – LOCAL REQUIREMENTS

ID	Country	Regulation Local requirement implemented in the CRRM	Local requirement implemented in the CRRM
1	Canada	**Department of Finance, Canada – Assessment of inherent risks of ML and Terrorist Financing, Canada**	A country specific Industry (NACE code) risk list to be added to CRRE where under the local regulation the risk is deemed higher than the global standard
2	Germany	**BAFin Administrative procedures** Entity and Industry types of Charity and Foundations lower risk than the Global CRR position	No local requirement to be implemented. Entity types (Charities and Foundations) are considered High Risk in the Entity risk list used by global CRRM as a minimum standard, Local AFC to review individual clients as required
3	India	**KYC Master Direction 25 Feb 2016** **Reserve Bank of India circulation on high risk industries Dec 2010** The following are high risk industries Gems and jewellery Film Financing Multi-level markets Charities subject to donations Real estate development and construction	A country specific Industry (NACE code) risk list has been added to CRRM where under the local regulation the risk is deemed higher than the global standard.
4	Indonesia	**PPATAK/02/15 - Regulation. Head of financial Transaction & Analysis Centre. Categories of users with potential to carry out Money Laundering (Articles 7 & 8)** The following products are high risk Fixed Income Custody Investor Services High Industries including, but not limited to Real Estate Shipping Other business published in guidelines	A country specific Industry (NACE code) risk list and Product list has been added to CRRM where under the local regulation the risk is deemed higher than the global standard.
5	Italy	**Bank of Italy (AML Regulator) Gianos 'best practice' in Italy**	No local requirement to be implemented. Gianos (local CRR) will continue to be used in addition to calculation from CRRM for purposes of local regulatory reporting .
6	Netherlands	Beleidsregel mbt integriteitsbeleid tav zakelijke vastgoed activiteiten Staatscourant N212641 16 Feb2011 (**DNB Guidance on Anti Money Laundering & Counter Terrorist Financing Act & the Sanctions Act V3 Apr 2015)** Entity type 'Trust' is High risk High risk industries Commercial Real Estate Corporate Service	A country specific Industry (NACE code) risk list has been added to CRRM where under the local regulation the risk is deemed higher than the global standard. Note – Entity type of Trust is high risk globally. An escalation to AFC is required where a specific NACE has been identified . Requirement to override the risk of the client to High.
7	Russia	**Bank of Russia (Regulator) & Federal Law** - specific regulatory requirements pertaining to risk assessment of the client Including but not limited to Paragraph 2 & 3 of Annex of BoR Aug 7,2003 No1317-I; Federal Law 115 -FZ & 281 FZ and Regulation 375P	No local requirement to be implemented Local risk assessment and reporting to continue to managed in country independently of the CRRM
8	UAE	**Central Bank of the UAE notice No 2922-2008** The following are high risk Dealer in precious metals and stones Dealers in real estate Dealers in luxury goods Auction houses Private banking customers Non-resident account holder	A country specific Industry (NACE code) risk list has been added to CRRM where under the local regulation the risk is deemed higher than the global standard. Private banking customers and non resident account holders are identified during due diligence for escalation to AFC. They do not form part of the CRR calculation.

6.2 APPENDIX 2 – LOW RISK PARENT RULE

Clients with a Low Risk ultimate parent that is already known by DB pose less financial crime risk than those without. The Low Risk Parent rule is additional logic for the country risk factor; and downgrades a client's country risk rating by one level if the client's ultimate parent has a Low Risk CRR globally (the bank must have previously on-boarded the ultimate parent for this logic to apply); and the ultimate parent's country is Low Risk, and the client is not linked to a High 3 / High 2 Risk country.



6.3 APPENDIX 3 – OPEN ISSUES

ID	Open Issue
1	Risk Lists used by the CRR model are under ongoing review. At the time of writing, the position with the risk lists is; Product - There is a recognised issue where dbCAR cannot distinguish certain products as a 'sub category' and the default product used will therefore over-ride to the main category Entity - There is a recognised issue where the Entity types presented to COB teams for CIB and GM clients does not provide sufficient detail and as a result entities are being classified too broadly, resulting in a possible incorrect Entity definition Industry - The 'Prohibited, High and Medium Risk Industry' risk list maps to a significant number of industry standard 'NACE' codes (which in turn has been modified to suit DB's business model), the mapping of which requires an ongoing assessment of AFC risk ratings