

# Pillar 3 Report 2019

*RBC Investor Services Bank S.A.*

RBCIS BANK BOARD APPROVAL: 02 APRIL 2020

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Investor &  
Treasury Services

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## List of Acronyms

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AFS	Available For Sale
AIFMD	Alternative Investment Fund Management Directive
AIRB	Advanced Internal Rating Based
ALCO	Assets & Liabilities Committee
ALM	Asset-Liability Management
AML	Anti-Money Laundering
BCL	Banque Centrale du Luxembourg
BCM	Business Continuity Management
BCP	Business Continuity Plan
BoD	Board of Directors
BPS	Basis points
BRRD	Banking Recovery and Resolution Directive
CDS	Credit Default Swap
CEO	Chief Executive Officer
CET1	Common Equity Tier 1
CFO	Chief Financial Officer
COO	Chief Operating Officer
CRD	Capital Requirements Directive
CRO	Chief Risk Officer
CSSF	Commission de Surveillance du Secteur Financier
CT	Corporate Treasury
CVA	Credit Valuation Adjustment
DRP	Disaster Recovery Planning
EAD	Exposure At default
EBA	European Banking Authority
ECB	European Central Bank
EMIR	European Market Infrastructure Regulation
ERM	Enterprise Risk Management
EORM	Enterprise Operational Risk Management
ESRB	European Systemic Risk Board
EVE	Economic Value of Equity
ExCo	Executive Committee
FX	Foreign Exchange
GRM	Group Risk Management
GTCM	Global Trading Credit Management
GTI	Global Technology Infrastructure
HQLA	High Quality Liquid Asset
ICAAP	Internal Capital Adequacy Assessment Process
ICCM	Institutional Client and Credit Management
ILAAP	Internal Liquidity Adequacy Assessment Process
IRRBB	Interest Rate Risk in the Banking Book
JST	Joint Supervisory Team
KRI	Key Risk Indicator
LCP	Liquidity Contingency Plan
LCR	Liquidity Coverage Ratio

LCT	Liquidity Crisis Team
MTM	Mark To Market
NIBT	Net Interest Before Taxes
NIE	Non-Interest Expense
NII	Non-Interest Income
NPL	Non Performing Loan
NSFR	Net Stable Funding Ratio
OCR	Overall Capital Ratio
OSFI	Office of the Superintendent of Financial Institutions
P2G	Pillar 2 Guidance
P2R	Pillar 2 Requirement
P&L	Profit and Loss
PA&C	Positive Advice and Counsel
PD	Probability of default
RAF	Risk Appetite Framework
RAS	Risk Appetite Statement
REPE	Real Estate Private Equity
REPO	Repurchase Agreement
ROE	Return on Equity
RP	Recovery Plan
RPCC	Recovery Plan Crisis Committee
RPI	Recovery Plan Indicators
RSF	Required stable funding
RWA	Risk-Weighted Assets
SIRR	Structural Interest rate risk
SLA	Service Level Agreement
SREP	Supervisory Review and Evaluation Process
SSA	Sovereign supranational agency
SSM	Single Supervisory Mechanism
SWIFT	Society for Worldwide Interbank Financial
TMS	Treasury and Market Services
TSCR	Total SREP Capital Ratio
VaR	Value at Risk
YoY	Year over Year
YTD	Year To Date

## EBA tables and templates<sup>1</sup>

Tables	Reference	Name	CRR(2) Articles	Reference
1	EU OVA	Institution risk management approach	Article 435 (1)	Section 1
2	EU CRA	General qualitative information about credit risk	Article 435 (1)	Section 4
3	EU CCRA	Qualitative disclosure requirements related to CCR	Article 435 (1)	Section 4.6
4	EU MRA	Qualitative disclosure requirements related to market risk	Article 435 (1)	Section 5
5	EU LIA	Explanations of differences between accounting and regulatory exposures amounts	Article 436 (b)	Section 2
6	EU CRB-A	Additional disclosure related to the credit quality of assets	Article 442 (a) (b)	Section 4.2
7	EU CRC	Qualitative disclosure requirements related to CRM techniques	Article 453 (a)-(e)	Section 4.4
8	EU CRD	Qualitative disclosure requirements on institution's use of external credit ratings under the standardized approach for credit risk	Article 444 (a)-(d)	Section 4.5
9	EU CRE	Qualitative disclosure requirements related to IRB models	Article 452 (a)-(c)	Not applicable
10	EU MBB	Qualitative disclosure requirements for institutions using the IMA	Article 455	Not applicable

<sup>1</sup> In accordance with the publication EBA/GL/2016/11 Version 2, EBA/GL/2017/01, EBA/GL/2015/22 and BCBS Pillar 3 disclosure requirements – consolidated and enhanced framework (IRRBB section)

Templates	Reference	Name	CRR(2) Articles	Reference
1	EU LI1	Differences between accounting and regulatory scopes of consolidation and the mapping of financial statement categories with regulatory risk categories	Article 436 (b)	Section 2
2	EU LI2	Main sources of differences between regulatory exposure amounts and carrying values in financial statements	Article 436 (b)	Section 2
3	EU LI3	Outline of the differences in the scopes of consolidation (entity by entity)	Article 436 (b)	Section 2
4	EU OV1	Overview of RWAs	Article 438 (c)-(f)	Section 3.3.3
5	EU CR10	IRB (specialized lending and equities)	Article 153 (5) or 155 (2), Article 438	Not applicable
6	EU INS1	Non-deducted participations in insurance undertakings	Article 438 (c)-(d) & Article 49 (1)	Not applicable
7	EU CRB-B	Total and average net amount of exposures	Article 442 (c)	Section 4.2.1
8	EU CRB-C	Geographical breakdown of exposures	Article 442 (d)	Section 4.2.2
9	EU CRB-D	Concentration of exposures by industry and counterparty types	Article 442 (e)	Section 4.2.3
10	EU CRB-E	Maturity of exposures	Article 442 (f)	Section 4.2.4
11	EU CR1-A	Credit quality of exposures by exposure class and instrument	Article 442 (g)-(h)	Section 4.2.5
12	EU CR1-B	Credit quality of exposures by industry or counterparty types	Article 442 (g)	Section 4.2.5
13	EU CR1-C	Credit quality of exposures by geography	Article 442 (g)	Section 4.2.6



Templates	Reference	Name	CRR(2) Articles	Reference
14	EU CR1-D	Ageing of past due exposures	Article 442 (g)	Section 4.3.2
15	EU CR1-E	Non-performing and forbore exposures	Article 442 (g)-(i)	Section 4.3.3
16	EU CR2-A	Changes in the stock of general and specific credit risk adjustments	Article 442 (i)	Not applicable
17	EU CR2-B	Changes in the stock of defaulted and impaired loans and debt securities	Article 442 (i)	Not applicable
18	EU CR3	CRM techniques – Overview	Article 453 (f)-(g)	Section 4.4.3
19	EU CR4	Credit risk exposure and CRM effects	Article 453 (f)-(g)	Section 4.5.2
20	EU CR5	Standardized approach	Article 444 (e)	Section 4.5.3
21	EU CR6	Qualitative disclosure requirements related to IRB models	Article 452 (e)-(h)	Not applicable
22	EU CR7	Effect on the RWAs of credit derivatives used as CRM techniques	Article 453 (g)	Not applicable
23	EU CR8	RWA flow statements of credit risk exposures under the IRB approach	Article 438 (d) & Article 92 (3)	Not applicable
24	EU CR9	IRB approach – Backtesting of PD per exposure class	Article 452 (i)	Not applicable
25	EU CCR1	Analysis of CCR exposure by approach	Article 439 (e, (f), (i) & Article 92 (3)	Section 4.6.2
26	EU CCR2	CVA Capital charge	Article 439 (e)-(f)	Section 4.6.3
27	EU CCR8	Exposures to CCPs	Article 439 (e)-(f)	Not applicable
28	EU CCR3	Standardized approach – CCR exposures by regulatory portfolio and risk	Article 444 (e)	Section 4.6.5
29	EU CCR4	IRB approach – CCR exposures by portfolio and PD scale	Article 452 (e)	Not applicable

Templates	Reference	Name	CRR(2) Articles	Reference
30	EU CCR7	RWA flow statements of CCR exposures under the IMM	Article 92 (3)-(4) & Article 438 (d)	Not applicable
31	EU CCR5-A	Impact of netting and collateral held on exposures values	Article 439 (e)	Section 4.6.6
32	EU CCR5-B	Composition of collateral for exposures to CCR	Article 439 (e)	Not applicable
33	EU CCR6	Credit derivatives exposures	Article 439 (g)-(h)	Not applicable
34	EU MR1	Market risk under the standardized approach	Article 455	Section 5.10
35	EU MR2-A	Market risk under the IMA	Article 455 (e)	Not applicable
36	EU MR2-B	RWA flow statements of market risk exposures under the IMA	Article 455 (e)	Not applicable
37	EU MR3	IMA values for trading portfolios	Article 455 (d)	Not applicable
38	EU MR4	Comparison of VaR estimates with gains/losses	Article 455 (g)	Not applicable
39	EU LIQ1	LCR Disclosure template	Article 435 (1) (f)	Section 6.3.2
40	IRRBB1	Quantitative information on IRRBB	Not applicable	Section 7.3.4
41	EU AE1	Encumbered and unencumbered assets	Article 443	Section 9
42	EU AE2	Collateral received and own debt securities issued	Article 443	Section 9
43	EU AE3	Sources of encumbrance	Article 443	Section 9

RBC Investor Services Bank S.A., hereafter referred to as the “Bank” or “RBCIS Bank”, is a banking group headquartered in Luxembourg, part of the RBC Investor & Treasury Services business segment of Royal Bank of Canada.

RBC Investor Services Bank S.A. is the principal Eurozone subsidiary of Royal Bank of Canada (“RBC”). RBCIS Bank is headquartered in Luxembourg and operates through branches in Ireland, Italy, Switzerland, United Kingdom and Hong Kong as well as through its subsidiaries in France, Belgium, Ireland, Singapore, Malaysia and Hong Kong. RBCIS Bank is independently capitalized and is rated AA- by Standard & Poor’s.

As a European significant banking group incorporated in Luxembourg, RBCIS Bank is directly subject to the prudential supervision of the European Central Bank (ECB). This report meets the consolidated disclosure requirements, or Pillar 3 disclosures, enclosed in Part Eight of the Regulation (EU) 2019/876 known as Capital Requirement Regulation (CRR2) (amending the Regulation (EU) No 575/2013 (CRR) as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) 648/2012), , the circular CSSF 14/583, the CSSF Regulation 18-03, which are the transpositions of the CRR into national law, thereby setting the regulatory prudential framework applicable to credit institutions, and the circular CSSF 17/673 on the adoption of the European Banking Authority (EBA) Guidelines on disclosure requirements under Part Eight of Regulation.

The quantitative tables included in this document are expressed in millions of euros (EUR mm) unless otherwise stated. Also, these tables may sometimes show small differences due to the use of concealed decimals. These differences do not affect the true and fair view of this document.

Through this report, references are made to the annual financial statements which are filed with the *Registre du Commerce et des Sociétés* in Luxembourg.

## Introduction

The aim of the Pillar 3 Disclosure Report 2019 is to give in-depth information to the stakeholders on the RBCIS Bank's risk management.

This Pillar III Disclosure Report is organized as follows:

- The Section 1 describes the structure and functioning of RBCIS Bank group's risk organisation and governance;
- The Section 3 covers the Bank's own funds, capital adequacy and group solvency;
- The Section 4 is dedicated to the credit risk management and outlines the organisation, the methodological procedures and provides detailed breakdowns of the Bank's credit risk exposures;
- The Section 5 describes methodological procedures for the management of market risk while disclosing the Bank's corresponding risk profile;
- The Section 6 highlights the liquidity risk ;
- The Section 7 provides details on the Interest Rate Risk in the Banking Book;
- The Section 8 presents the operational risk framework and related key risk figures;
- The Section 9 pertains to asset encumbrance;
- The Section 10 relates to the remuneration policy and practices.

## Key figures as of October 31, 2019

Table 0-1 – Key figures – Capital ratios

	2017	2018	2019
CET1 Capital ratio	22.44%	21.35%	25.20%
Tier 1 ratio	22.44%	21.35%	25.20%
Total Capital Ratio	22.44%	21.35%	25.20%

Graph 0-1 - Key figures – Leverage ratio

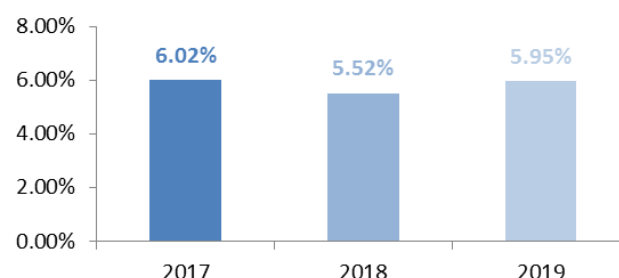
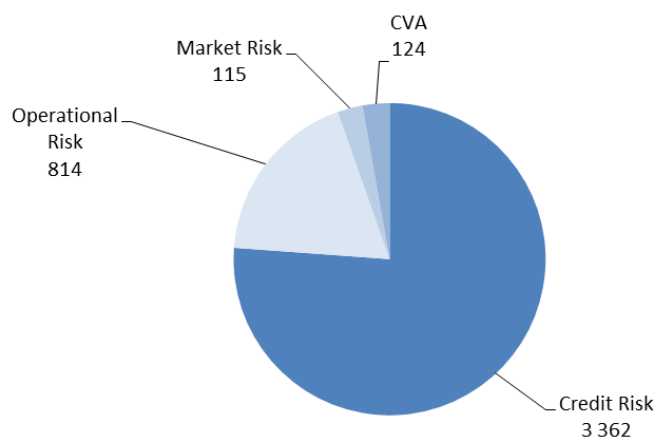


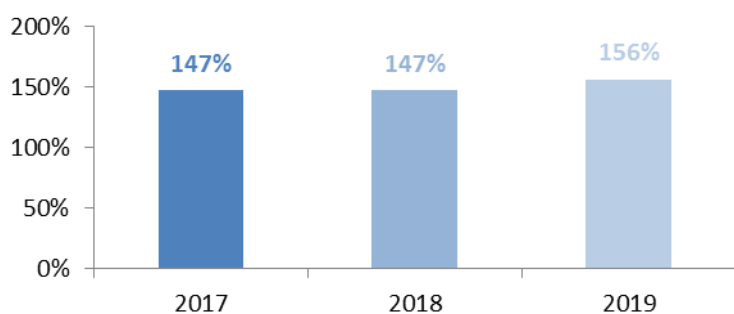
Table 0-2 – Regulatory Capital

	2017	2018	2019
CET1	1,000.8	1,042.9	1,112.5
Additional Tier 1	0.0	0.0	0.0
Tier 2	0.0	0.0	0.0
<b>Total</b>	<b>1,000.8</b>	<b>1,042.9</b>	<b>1,112.5</b>

**Graph 0-2 – Distribution of RWA’s by type**



**Graph 0-3 – Liquidity Coverage Ratio**



**Table 0-3 – Return on assets**

	2018	2019
RBC IS Bank consolidated	0.39%	0.15%

**Other information**

Complementary information on country by country data can also be found in financial statements (notably notes 11 on Staff Expenses and note 39 on profit and loss items by country).

# 1 General information on Risk management

## 1.1 Interaction between business model and risk profile

RBCIS Bank uses the concept of Risk Posture to describe how the business model interacts with the overall risk profile. Risk Posture is an aspect of the Enterprise Risk Appetite Framework used within the Enterprise and Business Segment strategic planning processes.

Risk Posture is a forward looking expression of the impact of strategic priorities on Risk Profile over a one year timeframe, using the following scale:

### Contracting Risk Posture

- Plan to reduce the level of risk being taken, and contract Risk Profile to achieve strategic priorities;
- May or may not entail a decrease in Risk Appetite.

### Stable Risk Posture

- Maintain current approach to risk, and strategic priorities can be achieved; without significant impact on current Risk Profile.

### Expansionary Risk Posture

- Plan to take on more risk (considering all types of risk, including strategic and operational), and plan to increase Risk Profile to achieve strategic priorities;
- May or may not entail an increase in Risk Appetite.

The Risk Posture review approved by the June 2019 Board of Directors of RBCIS Bank assessed the Risk Posture of RBCIS Bank as “Stable”.

The overall rating for RBCIS Bank is derived from the results of underlying three primary Risk domains:

Table 1-1 – Overall rating of primary risk domains

Risk Area	2018	2019	Description / Drivers of year-over-year change (if any)?
Overall	Stable	Stable	Key features of current RBCIS Bank 5 years strategy remain relevant following the 2019 refresh, with confirmed focus on Off Shore Markets Luxembourg and Ireland.
Operational Risk	Stable	Stable	The stable posture is reflecting the fact that a number of key projects will lower the platform’s operating risk when the increase of Straight Through Processing (STP) brought by these projects will materialize. These projects should also allow to improve the control environment and streamline the target operating model. However, in parallel, these strategic deliverables increase execution risk associated with technology, in a context of complex IT infrastructure and change management environment.

Risk Area	2018	2019	Description / Drivers of year-over-year change (if any)?
Credit Risk	Expanding	Stable	No major change in overall credit risk limits / risk appetite. No major changes expected to credit risk profile, which is expected to remain essentially driven by client deposits' related Treasury Management in HQLA assets with low credit risk. Moderate changes expected in control environment, with implementation of strategic solution for intraday exposures and preventive overdraft management expected to be implemented in 2020.
Market Risk	Stable	Stable	Although total FVOCI portfolio reduced until end of December 2018 due to lack of opportunity, the Risk posture remains stable and the limits have not been lowered, in order to allow for Re-investments. The Re-investments started beginning of 2019 mainly in Fixed bonds with maximum maturity 2 years, to mitigate the interest rate change and to be ready when interest rate environment becomes more favorable.

During the financial year 2019, RBCIS Bank has not executed any transactions with material impact to the risk profile of the Bank.

## 1.2 Description of the risk governance structure

### 1.2.1 Overall internal control

RBCIS Bank has established a clear and robust risk governance framework in order to manage, control and provide assurance with respect to risk. That framework includes the following roles and responsibilities.

#### 1.2.1.1 Board of Directors

The Board of Directors defines the risk strategy and guiding principles of RBCIS Bank, as outlined in CSSF circular 12/552 Chapter 4. It entrusts the authorized management with the implementation of these internal governance principles through internal written policies. The Board of Directors monitors the implementation by the authorized management of its internal governance strategies. To this end, it approves the related policies laid down by the authorized management. Meetings of the Board of Directors have taken place four times during the financial year 2019, in line with the governance principles of RBCIS Bank.

#### 1.2.1.2 Risk Committee of the Board of Directors

The Risk Committee is established under the specific authority of the Board of Directors into which it reports after each quarterly meeting. The purpose of the Risk Committee is to assist the Company in its mission to assess the adequacy between the risks incurred, the Company's ability to manage these risks and the internal and regulatory own funds and liquidity reserves in order to increase the effectiveness of the Board of Directors and enable its members to fulfil their supervisory mission and to take on their responsibilities pursuant to circular CSSF 12/552 (as amended).

The Risk Committee has not received from the Board of Directors any delegated decision powers, which remain entirely with the Board of Directors.

The Risk Committee will:

- a) advise and support the Board regarding the definition and monitoring of the Company's overall current and future risk appetite and strategy taking into account all types of risks;
- b) confirm risk policies of the Authorized Management and oversee the implementation of the strategies for all relevant risks of the Company;
- c) provide the Board with recommendations on necessary adjustments to the risk strategy;
- d) oversee the alignment between all material financial products and services offered to clients and the business model and risk strategy of the company;
- e) assess the recommendations of internal or external auditors and follow up on the appropriate implementation of measures taken;
- f) assist the Board in the establishment of sound remuneration policies and practices;
- g) deliberate on a regular basis on the (i) state of risk management and compliance with the prudential rules laid down in this respect, (ii) quality of the work carried out by the risk control function.

#### 1.2.1.3 Executive Management Committee of RBCIS Bank

The Executive Committee (being Authorized Management of RBCIS Bank) led by the CEO, has overall management responsibility with respect to the legal entity including risk matters. The Executive Committee reports to the Board of Directors and/or the Risk Committee on all risk related matters.

RBCIS Bank has appointed one member of the Executive Committee as Chief Risk Officer responsible for the Risk Function who, on behalf of the Executive Committee, has established the internal governance and organizational arrangements related to risk management as required by local regulation and as deemed appropriate, taking into account the size and complexity of the Bank's activities.



The Executive Committee has the responsibility to assess at least annually the adequacy of the Bank's capital and liquidity versus the level of Bank's overall risks and submits the related ICAAP and ILAAP reports, together with the other reports required in the circular CSSF 12/552, to the Board of Directors, for its overall assessment as to capital and liquidity adequacy.

In support of risk management, additional committees have been established with the main committees being the Asset and Liabilities Committee (ALCO) and the Investor & Treasury Services Credit and Operational Risk Committees at the level of the Investor & Treasury Services (I&TS) business segment of which RBCIS Bank is part.

The Local Executive Committees, in each geography, apply and ensure compliancy with the Central Administration Manual, issued by the Board of Directors of RBCIS Bank, in line with local regulations.

#### **1.2.1.4 I&TS Operational Risk Committee (I&TS ORC) and Credit Risk Committee (I&TS CRC)**

The missions of the RBC Investor & Treasury Services Operational Risk Committee (ORC) and Credit Risk Committee (CRC) are to provide oversight of Operational Risk and Credit risk in the Investor and Treasury Services businesses globally, including RBCIS Bank legal entities. Both Committees have a delegation of authority to decide on Operational and Credit risk matters on behalf of the I&TS Operating Committee (e.g. policies, limits, mitigation actions). They provide positive advice, strategic direction and broad guidance in order to manage all material Operational and Credit risks impacting RBCIS Bank. The CRC also looks after any emerging risks and counterparties that are part of the Watch List that may negatively impact the I&TS investment portfolio, a part of which is maintained within the Bank. The I&TS ORC and CRC are composed of members from RBC and RBC Investor Services Business and Risk Management areas and include members of the authorized management of RBCIS Bank.

#### **1.2.1.5 RBCIS Bank Assets & Liabilities Committee (ALCO)**

The purpose of the ALCO is:

- To review and recommend broad policy frameworks pertaining to Bank's balance sheet and capital management, interest rate risk management, liquidity and funding, and subsidiary balance sheet management.
- To provide regular central oversight and monitoring of the Bank balance sheet-related risks, including capital adequacy, structural interest rate risk, structural foreign exchange risk, liquidity and funding risk.
- To provide direction and review advice regarding the management of these areas in light of expected returns, competitive and regulatory environments, and economic and business forecasts.
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The ALCO reviews reports and monitors compliance on the Bank's exposure to balance sheet-related risks, including interest rate risk, liquidity and funding risk and capital adequacy. The ALCO reports to the Bank's Board of Directors on balance sheet related new strategic initiatives. The ALCO reviews and recommends for approval to the Bank's Board of Directors or its committees any capital transactions to be undertaken. The ALCO will be chaired by the Bank Treasurer or in his absence, the Chief Financial Officer of the Bank (Deputy Chair).

The ALCO is responsible for ensuring that the balance sheet structure and profile of the Bank is consistent with its strategic objectives and objectives of the RBC Group. All material balance sheet initiatives will be reviewed and approved by the ALCO, with advice and counsel provided by the relevant RBC center of expertise to the ALCO.

### 1.2.1.6 Three Lines of Defense Governance Model

RBCIS Bank promotes risk awareness and proactive management of risk. In support of sound risk management, key roles and responsibilities follow the Three Lines of Defense Governance model described below.

#### First Line of Defense

Employees at all levels of the organization are responsible for managing the day-to-day risks that arise in the context of their mandate. The First Line of Defense is provided by employees across the businesses and Functional Units who are responsible for providing products and services, and for the execution of activities. The First Line has the ownership and accountability for:

- Risk identification, assessment, mitigation, monitoring and reporting in accordance with established risk policies and Risk Appetite;
- Ensuring appropriate and adequate capabilities to manage risks relevant to the Segment;
- Alignment of business and operational strategies with good Conduct and Risk Appetite.

#### Second Line of Defense

The Second Line of Defense is provided by areas with independent oversight accountabilities residing in Functional Units. In order to underline the independent character of Risk, Compliance and Finance, the Chief Risk Officer, Chief Compliance Officer and Chief Finance Officer, acting in the role of authorized officers of RBCIS Bank, have independent and direct access to the Board of Directors of RBCIS Bank. Furthermore, the Second Line:

- Establishes the enterprise level risk management frameworks, and provides risk guidance,
- Provides oversight for the effectiveness of First Line risk management practices,
- Monitors and independently reports on the level of risk against the established appetite measures and associated constraints.

The Second Line of Defense oversight is provided by specific areas within the following key Functional Units:

#### Risk Management Function

The mission of the Risk Management Unit is to oversee that identification, assessment, mitigation, monitoring and reporting of all material risks types are performed within the Group, in order to ensure at all times that the risk exposure is in compliance with regulatory constraints and aligned with the business strategy and risk appetite.

It is headed by the Chief Risk Officer (CRO) of RBCIS Bank, with established functional roles for Credit Risk Management, Market Risk Management, Operational Risk Management, Liquidity Risk Management, Cyber and Technology Risk Management and Enterprise Risk Management. In addition to the risk roles in RBCIS Bank, risk management roles are established in Subsidiaries and Branches of RBCIS Bank where deemed appropriate in line with local regulation and internal requirements. Risk Management roles in Subsidiaries/Branches of RBCIS Bank have a reporting line into the CRO of RBCIS Bank.

#### Compliance (including AML)

Compliance provides independent control and oversight of the management of RBC's regulatory compliance risk and controls, as they relate to laws, regulations and regulatory expectations relevant to the activities of RBC and subsidiaries in the jurisdictions in which we operate.

#### Other Functional Units

While the following Functional Units perform some First Line activities, they also have designated a role in supporting RBCIS Bank’s risk management program, as follows:

Finance has overall responsibility for ensuring RBCIS Bank’s compliance with the regulatory requirements. Risk-based performance measurement and reporting is a key Finance responsibility.

Legal Group has a significant role in the management and control of legal Risk. This includes monitoring and reporting of significant legal risks facing RBC. Legal group provides legal advice and support on a wide range of risk issues.

Human Resources is jointly responsible with Compliance for the establishment and maintenance of RBC’s Code of Conduct. Human Resources establishes practices supporting a good Conduct and supports the implementation of these practices in the Business and Functional Units. Through the development of workplace policies and the delivery of programs and services, Human Resources also have a role in the reduction of operational risks related to employees.

### Third Line of Defense

The Third Line of Defense is provided by Internal Audit. The Third Line provides independent assurance to senior management and the Board of Directors on the effectiveness of risk management policies, processes and practices in all areas of RBCIS Bank.

## 1.2.2 The Risk Appetite Statement

### 1.2.2.1 Approved Limits of Risk as per the RBC Risk Appetite Statement

The RBCIS Bank Risk Appetite Framework is a key element of RBC’s overall risk management program for the identification, measurement, control and reporting of the top and emerging risks faced by the organization. RBCIS Bank is in the business of taking risk and balances risk-reward trade-offs to ensure the long-term viability of the organization by remaining within established Risk Appetite. RBC’s Risk Appetite Statements define clear boundaries for the organization’s Risk Profile and set the overall tone for RBC’s approach to risk taking in a manner that is easy to communicate, understand and embrace. Risk Appetite Statements are underpinned by Risk Appetite measures and their associated constraints, as outlined in below overview of the Risk Appetite Statement.

Table 1-2 – Number of measures in the Risk Appetite Framework

Risk Appetite Statement	Number of Measures
1. Manage earnings volatility and exposure to future losses under normal and stressed conditions	5
2. Avoid excessive concentration of risk	7
3. Ensure sound management of operational and regulatory compliance risk	21
4. Ensure capital adequacy and sound management of liquidity and funding risk	15

### 1.2.3 Changes of the heads of internal control, risk management, compliance and internal audit.

During 2019, the following changes have taken place at the level of internal control functions:

- A new Chief Risk Officer has been appointed ;
- A new Head of Compliance has been hired and appointed Chief Compliance Officer and MLRO in March 2019.

### 1.3 Risk culture at RBCIS Bank

#### 1.3.1 Risk Conduct and Culture

RBC's Values and risk-aware culture of "Doing What's Right" effectively support the long term success of the organization. RBC's Values set the tone of our organizational culture, and translate into desired behaviors as articulated in our Code of Conduct and Leadership Model. Our Risk Management Principles provide a risk lens for these desired behaviors, enabling us to focus on a sub-set of behaviors and Outcomes referred to as our Conduct.

RBC defines Conduct as the manifestation of culture through the behaviors, judgment, decisions and actions of the organization and its individuals. In the context of this Framework, the focus of Conduct is two-fold:

1. RBC's expectation that employees' and the third party service providers that RBC engages and the organization's behaviors, judgments, decisions, and actions lead to positive Outcomes for clients, employees, financial markets, and RBC's reputation; and
2. RBC's monitoring and reporting on the Conduct-related Outcomes for clients, employees, financial markets, and RBC's reputation.

The following key Conduct-related concepts are depicted below:

- RBC's organizational direction influences our strategy, organizational practices, and Risk Culture, and sets expectations for positive Outcomes for our clients, our employees, the financial markets, and our reputation.
- Our strategies, organizational practices (including Sales Conduct and Practices), and Risk-aware Culture influence behaviors, judgments, decisions, and actions (i.e., Conduct) at an organizational and individual level.
- Our Conduct drives actual Outcomes for our clients, our employees, financial markets, and our reputation.
- Lessons learned support appropriate organizational responses to poor Conduct Outcomes (stemming from Conduct Risks and/or Misconduct) so practices that influence organizational and individual Conduct can be corrected and enhanced.

The RBC Code of Conduct can be accessed as follows:

<https://www.rbc.com/our-company/assets-custom/pdf/Code-Of-Conduct.pdf>

## 1.4 Scope and nature of risk reporting

The scope and nature of primary RBCIS Risk Reporting and Measurement Systems are described as follows:

- A monthly Risk Report is submitted to the Executive Committee of RBCIS Bank.
- A quarterly Risk Report is submitted to the Risk Committee of the Board of RBCIS Bank.
- A quarterly Risk Appetite Report is also presented at the Risk Committee of the Board of RBCIS Bank.
- A yearly Risk Report is submitted to the Risk Committee of the Board of RBCIS Bank when the Board critically assesses and approves the internal governance arrangement of the group, as required by point 20 of the Circular CSSF 12/552. At the same time, the Internal Capital Adequacy Assessment Process (ICAAP) and Internal Liquidity Adequacy Assessment Process (ILAAP) is prepared annually and submitted to the Board of RBCIS Bank for approval.

The content of the quarterly Risk Reporting covers, amongst others, the following key items:

- Risk Type Summary covering all risk allocated within the RBCIS Risk Pyramid;
- Operational Risk including Financial Crime and Security Risk, Legal and Regulatory Risk and Processing and Execution Risk and the Operational Profile and Key Risk Indicators;
- Risk Register – Risk Statements and Trend;
- Credit Risk, including top overdrafts, authorized limits and exposures and loans;
- Capital Adequacy per legal entity, Non-Trading Market and Liquidity Risk and Market Risk in relation to AFS portfolio and VAR.

The RBCIS Bank's Recovery Plan report is submitted each year to the Board of RBCIS Bank for update and approval.

External reports are developed and submitted to the Single Supervisory Mechanism (SSM), the Central Bank of Luxembourg (CBL) as required by regulation and other relevant laws and other relevant local regulators in which Subsidiaries and Branches operate.

It should be noted that the day to day Risk monitoring involves the production of reports by sub risk type that are run intraday / daily / weekly, covering in particular market risk, credit and liquidity risk.

## 1.5 Policies regarding systematic and regular reviews of risk management strategies

Requirements regarding reporting and risk measurement are outlined within applicable Risk Policies. The requirements to those are defined consistently as per the RBCIS Bank Risk Policy Management Requirements Policy which sets the minimum requirements for the content, management, governance and communication of all Group Risk Management (GRM) documents, including frameworks, policies, standing orders, standards and procedures (collectively referred to as policy documents) within RBCIS Bank. These requirements seek to promote a consistent RBCIS Bank approach to communication, access, governance and management of policy documents for all risk types.

This policy has been established to ensure:

- Consistent definition and standards for RBCIS Bank policy documents aligned to the 'RBC Enterprise Policy Management Requirements'.
- Clear articulation of approach to local vs. enterprise-wide requirements; and
- Common requirements for governance, approval and review frequency for RBCIS Bank policy documents.

**Table 1-3 – RBCIS Bank Risk Management Framework**

<b>Enterprise Risk Management</b>
RBCIS Bank Addendum to ERM Framework
RBC Enterprise Risk Management Framework
RBC Enterprise Risk Appetite Framework
RBCIS Bank Addendum to RBC Enterprise Risk Appetite Framework
<b>Operational Risk</b>
RBC Enterprise Operational Risk Management Framework
RBC Enterprise Risk Conduct and Culture Framework
RBC Enterprise Framework on Business Continuity Management
<b>Credit Risk</b>
RBCIS Bank Addendum to Credit Risk Framework
RBC Enterprise Credit Risk Framework
<b>Market, Liquidity and Model Risk</b>
RBC Enterprise Market Risk Framework
RBCIS Bank Addendum to RBC Market Risk Framework
RBC Enterprise Liquidity Risk Management Framework
RBCIS Bank - Liquidity Management Framework Addendum
<b>Information and Communication Technology Risk</b>
RBC Enterprise Information Technology Risk Management Framework

## 1.6 Management Statement regarding risk management arrangements

The Executive Management Committee and the Board of Directors of RBCIS Bank confirm, for the purpose of Article 435 CRR, that the risk management systems are adequate with regard to the risk profile and strategy of the institution.

## 1.7 Stress Testing Description

Stress testing and reverse stress testing are conducted and reported, among other, within the annual Internal Capital Adequacy Assessment Process (ICAAP).

ICAAP, as a component of the Pillar 2, supplements the Pillar 1 regulatory frameworks for minimum capital requirements and focuses on the adequacy of internal capital on a forward-looking basis.

Authorized Management assesses the adequacy of internal capital of RBCIS Bank on a consolidated basis and conducts a comprehensive assessment of internal capital requirements under the following perspectives.

Under the Economic Internal Perspective, RBCIS Bank assessed whether all risks that may impact the economic viability of the bank are covered by capital based on i) the outcome of the assessment of the Risk and Control Framework, ii) the forecasted evolution of the bank identified in the Strategic, Financial and Capital Planning and iii) applying the approach and methodology established in RBCIS Bank ICAAP framework.

Under the normative perspective RBCIS Bank performed a multi-year assessment of its ability to fulfil all of its capital-related quantitative regulatory and supervisory requirements and demands, and to cope with other external financial constraints, on an ongoing basis, in baseline as well as in stressed scenario.

In terms of Stress Testing, RBCIS Bank continues to use a well-established Internal Stress Testing methodology developed over the past years. It is based on four scenarios as follows:

1. An economic downturn impacting the Eurozone aligned on a scenario developed by RBC Europe Limited;
2. An idiosyncratic crisis within our Mother Company RBC;
3. A large scale outage in our Malaysian operating center triggered by an operational event;
4. A scenario combining a severe recession in the Euro zone and an idiosyncratic crisis within RBC.

Scenario 4 is the worst case scenario that prompts the most punitive impacts; however the resulting capital ratio continues to comply with the regulatory requirement and does not cross the internal minimum threshold identified in the Risk Appetite.

It should be noted that the Recovery Plan enabling Authorized Management to manage a crisis which would threatens capital or liquidity adequacy, as well as viability, has been reviewed in Q4 2019.

This Recovery Plan, which has been tested under severe stress conditions, confirmed that the recovery measures defined in the plan would actually allow restoring the capital and liquidity situation of RBCIS Bank, which would subsequently be able to operate sustainably and viably.

The Authorized Management is therefore satisfied that our available capital at October 31, 2019 is adequate to cover our business requirements in 2020.

## 1.8 Strategies and processes to manage, hedge and mitigate risks

The following general principles apply to the management of risk at RBCIS Bank including its Branches and Subsidiaries:

1. Effectively balance risk and reward to enable sustainable growth.

RBCIS Bank balances risk and reward to capitalize on opportunities within our business strategy and risk appetite, avoid excessive concentrations of risk through diversification and risk transfer, manage earning volatility, and ensure the long-term viability and profitability of the organization.

2. Responsibility for risk management is shared.

Collectively as One RBCIS Bank following the Three Lines of Defense risk governance model, employees at all levels of the organization are responsible for managing the day-to-day risks that arise in the context of their roles.

3. Undertake only risks we understand. Make thoughtful and future-focused risk decisions.

In order to create long term value for our shareholders, clients, employees and communities, we exercise rigor in our risk assessments, analyze emerging risk factors and trends, ensure transparency in risk discussions, and improve processes and tools for simpler, better, faster decision-making without exposing us to undue risks.

4. Always uphold our Purpose and Vision, and consistently abide by our Values and Code of Conduct to maintain our reputation and the trust of our clients, colleagues and communities.

Guided by our Collective Ambition, we exhibit Good Conduct and do business openly and fairly. We never compromise quality or integrity for growth. We adhere to the “Know Your Client” standards, and ensure transparency and suitability of the products and services offered. We comply with all laws and regulatory requirements, and support transactions and relationships with proper and complete documentation.

5. Maintain a healthy and robust control environment to protect our stakeholders.

To achieve our operational and financial performance goals while maintaining our reputation and integrity, and operating within the parameters of applicable laws and established risk appetite, we employ effective processes and controls and resiliency practices to minimize harm from internal and external threats, avoid business interruptions, and ensure timely resolution of control issues.

6. Use judgment and common sense.

Policies and procedures cannot cover all circumstances. Employees should apply judgment and common sense, and when in doubt, escalate. Management should hire the right people for the right jobs and provide proper training and support.

7. Always be operationally prepared and financially resilient for a potential crisis.

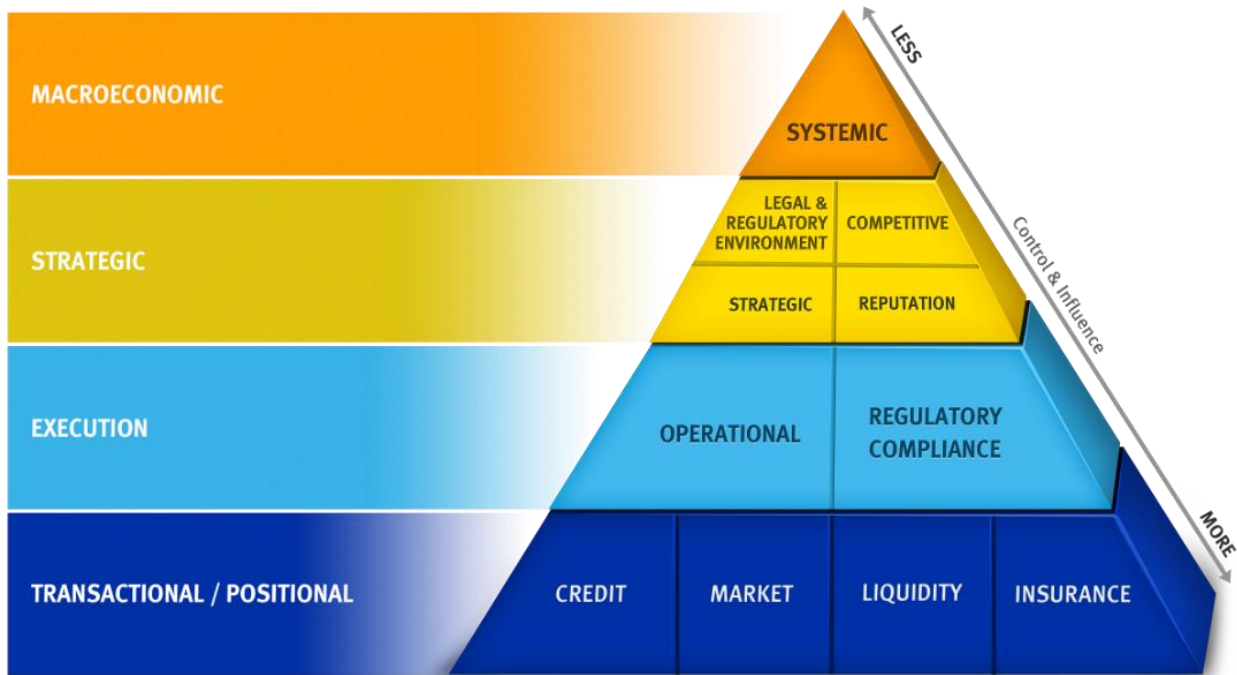
RBCIS Bank strives to maintain effective protocols and escalation strategies to respond to all risks that we face, including regulatory, macroeconomic, market and other stakeholder developments. This includes maintaining operational readiness and financial resilience to effectively operate during and following a financial crisis. It is also critical to maintain agility and readiness to respond to potential disruptors to the financial industry.

8. RBC'S RISKS – THE RISK PYRAMID

RBCIS Bank's Risk Pyramid identifies the Principal Risks the organization faces. The Risk Pyramid provides a common language and discipline for the identification and assessment of risk in existing businesses, new businesses, products or initiatives, and acquisitions and alliances. It is maintained by Group Risk Management (GRM) and reviewed regularly to ensure all key risks are reflected and ranked appropriately.



Figure 1-1 – Risk pyramid



The placement of the risk types within the Risk Pyramid is a function of two primary criteria:

- Risk Drivers: Key factors that would have a strong influence on whether or not one or more of our risks will materialize,

and

- Control & Influence: The risk types are organized vertically from the top of the pyramid to its base according to the relative degree of control and influence RBCIS is considered to have over each Risk Driver.

**Strategies to manage, hedge and mitigate risks**

RBCIS Bank pursues the management, hedging and mitigation of risks through various measures of which Risk Review and Approval Processes and Authorities and Limits are most relevant.

**Risk Review and Approval Processes**

Risk review and approval processes provide an important control mechanism. These processes consider the nature, size and complexity of the risk involved. Requirements for the review and approval of risks are set out in enterprise level risk policies and procedures. For example:

Table 1-4 - Applicable Risk Review and Approval Procedures and Tools

Activity	Applicable Risk Review and Approval Procedures and Tools
<b>Projects and Initiatives</b>	<ul style="list-style-type: none"> <li>• RBC uses a number of recognized project frameworks to guide new projects which provide guidance on the degree of rigor necessary for successful program governance.</li> <li>• Project Approval Requests (PAR) are executed to support the project evaluation and approval process. A PAR must be completed for any significant project or initiative. Tools such as the Integrated Risk Profile (IRP) are used in conjunction with the PAR process to assess the risks introduced by the project or initiative.</li> </ul>
<b>Products and Services</b>	<ul style="list-style-type: none"> <li>• New products and services are subject to initial and subsequent risk reviews per applicable approval policy.</li> <li>• Transactions, products, client relationships and third party products or relationships with potentially significant reputation risk further undergo a structured review and approval process.</li> </ul>

### Authorities and Limits

RBCIS Bank has established risk authorities and limits for those risks along the base of the Risk Pyramid (such as credit, market, and liquidity risk) which we pursue as part of our business strategy and over which we have the most control and influence. However, risk limits are not established for other risks (e.g. systemic, strategic, etc.) that RBCIS Bank faces but does not actively pursue.

In addition, with regards to credit risk, for each geographic location where RBCIS Bank has business activities creating credit risk exposure:

- Credit risk is managed by applying the principles and standards outlined in this framework. The risk function representative in the local Executive committee is responsible for ensuring application of the Credit Risk Management Framework and RBCIS Bank Addendum.
- Credit risk monitoring/reporting will be included on a regular basis in the agenda of the local Executive Committee. Local management will report its credit risk exposure to the Board of Directors of the entity and to Risk Function of its mother company.
- In entities with no dedicated risk representative, Risk Function of the mother company of the entity will carry out control on credit risk on a regular basis.
- RBCIS Bank Risk function will provide a complete and consolidated overview of credit risk exposure on a regular basis to
  - Executive Committee of RBCIS Bank
  - Board and Risk Committee of RBCIS Bank
  - RBC Group Risk Management
  - RBC I&TS Credit Risk Committee.

Further measures to Risk Mitigation apply at the level of Operational risk management in all of its activities by leveraging the main elements of the Operational Risk Management Framework outlined below:

- Risk and Control Self-Assessment (RCSA) – Performed both at the Bank level and at a regional business unit or process level, these assessments provide an integrated source of Operational risk and control information.
- External Operational Risk Event Review – Provides ‘lessons learned’ and emerging industry trends. GRM Operational Risk team performs internal analysis to investigate whether or not controls are in place to mitigate against such events and recommends additional actions, where required.
- Internal Operational Risk Event Management – Operational risk events, including those resulting in actual losses and non-monetary events are monitored by Operational Control team (with oversight

from GRM Operational Risk). The focus is on a complete understanding of root cause and mitigation plans for these events with a view to mitigating repeat occurrences.

- Operational Risk Issue and Actions Tracking and Monitoring – Operational risk issues and actions identified as a result of RCAs / risk events are entered into RBC’s global Enterprise Operational Risk Management database, Open Pages, and tracked by Operational Control team until resolution.
- Key Risk Indicator (KRI) Program – KRIs are set and monitored for each business on a continuous basis with thresholds set annually. Risk indicators are metrics that monitor risk exposures and risk drivers, particularly changes in risk level over time.
  - Key attributes of risk indicators are appropriately documented by risk indicator owners and stored in a repository that enables ongoing monitoring. Risk indicator documentation articulates the measure (e.g., metric definition, applicable formulas, data filters, cut-off times), monitoring frequency (minimum annually), data source, and at least one clearly defined threshold.
  - Risk indicator owners ensure that thresholds are aligned to Risk Appetite (RA) and trigger management action when breached. Relevant operational risk information.
  - Segments establish escalation processes and protocols commensurate with the materiality of risk exposures. Escalation processes define actions to be taken and provide appropriate levels of management with operational risk exposure information to review and take required actions in a timely manner.
  - Risk indicator owners investigate underlying reasons for threshold breaches, notable trends, and anomalies. Investigations focus on determining what, if any, remedial actions (including escalations) are required. Where remedial actions are required, an issue and action plan is documented and tracked to closure.
- New product/ Initiatives Risk Assessment: Every new initiative, including changed/ new product go through an assessment of potential contribution to future end state operational risk. Mitigations are identified and monitored throughout the initiative lifecycle in order to stay within risk appetite once delivered.

In addition to the above Enterprise Operational Risk Management practices, GRM Operational Risk Management team (and, where applicable, Operational Control) is informed of other risk types through Function specific programs in order to form an opinion on the complete risk profile across the RBC defined 16 operational risk types. This would be the case for the following one (non-exhaustive list):

- Business Continuity Management
- IT Risk and Information Security
- Regulatory Compliance
- Anti-Money Laundering
- Third Party risk

## 2 Linkages

The principles of consolidation for our regulatory group are identical to those applied for our financial statements.

The template EU LI1 below provides an outline of the difference in the basis of consolidation for accounting and prudential purposes and also breaks down how the amounts reported in our financial statements, once the regulatory scope of consolidation is applied, are to be allocated to the different risk frameworks laid out in Part Three of the CRR(2). Consequently we split our regulatory balance sheet into the parts subject to credit risk, counterparty credit risk, securitization positions in the regulatory banking book, market risk as well as the part which is not subject to capital requirements or deduction from capital. Specific assets and liabilities may be subject to more than one regulatory risk framework, therefore the sum of values in in column (c) to (g) may not equal to that in column (b).

Template 1 - EU LI1: Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories

		A	b	c	d	e	f	g
		Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items:				
				Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
<b>Assets</b>								
	Cash and balances at central banks	8 708.4	8 708.4	8 708.4	-	-	-	-
	Financial assets held for trading	471.4	471.4	-	471.4	-	471.4	-
	Financial assets designated at fair value through profit or loss	-	-	-	-	-	-	-
	Available-for-sale financial assets	1 445.3	1 445.3	1 445.3	-	-	-	-
	Loans and receivables	7 172.9	7 172.9	7 172.9	-	-	-	-
	Held-to-maturity investments	-	-	-	-	-	-	-
	Derivatives – Hedge accounting	-	-	-	-	-	-	-
	Fair value changes of the hedged items in portfolio hedge of interest rate risk	-	-	-	-	-	-	-

	A	b	c	d	e	f	g
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items:				
			Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
Investments in subsidiaries, joint ventures and associates	-	-	-	-	-	-	-
Assets under reinsurance and insurance contracts	-	-	-	-	-	-	-
Tangible assets	32.7	32.7	32.7	-	-	-	-
Intangible assets	152.1	152.1	-	-	-	-	152.1
Tax assets	17.6	17.6	17.6	-	-	-	-
Other assets	222.7	222.7	222.7	-	-	-	-
Non-current assets and disposal groups classified as held for sale	-	-	-	-	-	-	-
<b>Total assets</b>	<b>18 223.2</b>	<b>18 223.2</b>	<b>17 599.6</b>	<b>471.4</b>	-	<b>471.4</b>	<b>152.1</b>
<b>Liabilities</b>							
Financial liabilities held for trading	474.0	474.0	-	157.9	-	157.9	-
Financial liabilities designated at fair value through profit or loss	-	-	-	-	-	-	-
Financial liabilities measured at amortized cost	16 192.1	16 192.1	68.0	-	-	-	-
Derivatives – Hedge accounting	-	-	-	-	-	-	-
Fair value changes of the hedged items in portfolio hedge of interest rate risk	-	-	-	-	-	-	-
Liabilities under insurance and reinsurance contracts	-	-	-	-	-	-	-
Provisions	74.1	74.1	-	-	-	-	-
Tax liabilities	2.1	2.1	-	-	-	-	-
Share capital repayable on demand	-	-	-	-	-	-	-
Other liabilities	187.9	187.9	-	-	-	-	-
Liabilities included in disposal groups classified as held for sale	-	-	-	-	-	-	-
<b>Total liabilities</b>	<b>16 930.3</b>	<b>16 930.3</b>	<b>68.0</b>	<b>157.9</b>	-	<b>157.9</b>	-

The template EU LI2 presents description of the difference between the financial statements' carrying value amounts under the regulatory scope of consolidation and the exposure amounts used for regulatory purposes. Off balance sheet amounts are included in the exposure amounts considered for regulatory purposes, while the items that are subject to deductions from capital are not risk weighted and are thus excluded from the table below.

Template 2 - EU LI2: Main sources of differences between regulatory exposure amounts and carrying values in financial statements

	a	b	c	d	e
	Total	Items subject to:			
		Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to the securitization framework	Subject to the market risk framework
Assets carrying value amount under the scope of regulatory consolidation (as per EU LI1)	18 071.1	17 599.6	471.4	-	471.4
Liabilities carrying value amount under the regulatory scope of consolidation (as per EU LI1)	225.9	68.0	157.9	-	157.9
Total net amount under the regulatory scope of consolidation	17 845.2	17 531.6	313.6	-	313.6
Off-balance-sheet amounts	1 703.0	1 703.0	-	-	-
Differences in valuations	-	-	-	-	-
Differences due to different netting rules, other than those already included in row 2	30.9	-	30.9	-	30.9
Differences due to consideration of provisions	-	-	-	-	-
Differences due to prudential filters	-	-	-	-	-
Differences due to Credit Conversion Factor (CCF)	1 398.6	1 398.6	-	-	-
Other differences	-	-	-	-	-
<b>Exposure amounts considered for regulatory purposes</b>	<b>18 118.7</b>	<b>17 836.0</b>	282.7	-	<b>282.7</b>

The template EU LI3 provides an outline of the differences in the scopes of consolidation on an equity-by-entity-basis.

Template 3 - EU LI3: Outline of the differences in the scopes of consolidation – entity by entity

Name of the entity	a	b	c	d	e	f
	Method of accounting consolidation	Method of regulatory consolidation				Description of the entity
		Full consolidation	Proportional consolidation	Neither consolidated nor deducted	Deducted	
RBC Investor Services Belgium	IFRS	X				Financial corporations other than credit institutions
RBC Investor Services Bank France S.A.	IFRS	X				Credit institutions
RBC Investor Services France S.A.	IFRS	X				Financial corporations other than credit institutions
RBC Investor Services Holding (Hong Kong)	IFRS	X				Financial corporations other than credit institutions
RBC Corporate Services Hong Kong limited	IFRS	X				Financial corporations other than credit institutions
RBC Investor Services Trust Hong Kong Limited	IFRS	X				Financial corporations other than credit institutions
RBC Investor Services Ireland Limited	IFRS	X				Financial corporations other than credit institutions
RBC Investor Services Malaysia Sdn. Bhd.	IFRS	X				Financial corporations other than credit institutions
RBC Investor Services Trust Singapore Limited	IFRS	X				Financial corporations other than credit institutions
RBC Investor Services UK LLP	IFRS	X				Financial corporations other than credit institutions

## 3 Own Funds, Capital Adequacy & Group Solvency

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### 3.1 Regulatory context

Basel III Accords set the standards and provided necessary guidelines for European and national regulators to define the legislation and regulations for banking supervision and minimum regulatory capital requirements. The three-pillar based Accord renders mandatory for all banks to define, approve and implement their own approaches to measure capital requirements for credit, market and operational risk exposures under the Pillar I. Also, it induces banks to implement risk management best practices and to define complementary measures through economic capital calculation for risks not covered under the Pillar I of the accord.

RBCIS Bank is subject to the supervision of its consolidating regulator the European Central Bank (ECB) and the application of the provisions of Regulation (EU) 2019/876 known as Capital Requirement Regulation (CRR2) (amending the Regulation (EU) No 575/2013 (CRR) as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) 648/2012), and Directive 2019/878 (known as “Capital Requirement Directive CRD V”) amending Directive 2013/36/EU (also called “CRD IV”) as regards exempted entities, financial holding companies, mixed financials holding companies, remuneration, supervisory measures and powers and capital conservation measures, jointly known under the term “CRD V package”.

The CRD IV (Directive 2013/36/EU) was transposed into Luxembourg Law in the Law of 23 July 2015, published on 31 July 2015. This law supplements the “Law of the Financial Sector” of April 1993. Circular CSSF 15/620 specifies the main changes brought about by this so-called “CRD IV Law” that entered into force on 4 August 2015.

### 3.2 Current regulatory framework for capital adequacy

#### 3.2.1 Regulatory minimum capital requirements

The CRR requires banks to comply with the following minimum capital requirements

- CET1 capital ratio of 4.5%
- Tier 1 capital ratio of 6%
- Total capital ratio of 8%

#### 3.2.2 Total SREP Capital Requirement (TSCR)

RBCIS Bank was required as of 1 January 2019 to maintain on a consolidated basis a total SREP capital requirement (TSCR) of 10.00%, as that ratio is defined in section 1.2 of Guidelines EBA/GL/2014/13.

The TSCR of 10.00% includes:

- The minimum own funds requirement of 8% to be maintained at all times in accordance with Article 92(1) of Regulation (EU) 2019/876 amending Regulation 575/2013 of the European Parliament and of the Council; and
- An own funds requirement of 2% (Pillar 2 Requirement- P2R) required to be held in excess of the minimum own funds requirement and to be maintained at all time in accordance with Article 16(2)(a) of Regulation (EU) N°1024/2013, to be made up entirely of Common Equity Tier 1 capital.



### 3.2.3 Overall Capital Requirement (OCR)

RBCIS Bank was also subject to the Overall Capital Requirement (OCR) as that ratio is defined in section 1.2 of Guidelines EBA/GL/2014/13, which includes, in addition to the TSCR, the combined buffer requirement as defined in point (6) of Article 128 of Directive 2013/36/EU as amended by Directive (EU) 2019/878 of the European Parliament and of the Council, to the extent is legally applicable. The OCR was set to 16.00% for RBCIS Bank Consolidated for calendar year 2019.

#### 3.2.3.1 Combined Buffer requirements

Capital buffer requirements represent additional capital to be held on top of minimum regulatory requirements. The levels and the phasing-in of the buffer requirements are subject to national discretion.

The mandatory buffers introduced are the capital conservation buffer (CCB) of 2.5%, the countercyclical capital buffer (CCyB) and the buffer for globally systemically important institutions (G-SII) of 1-3.5%.

The institution specific CCyB will under normal circumstances, be in the range 0-2.5%, depending on the buffer rate in the countries where the institution has it relevant exposures. In addition, CRD IV allows for a systemic risk buffer (SRB) to be added, as well as a buffer for other systematically important institutions (O-SIIs).

#### 3.2.3.2 Other Systematically Important Institution

On 17 October 2017, RBCIS Bank was notified by the Commission de Surveillance du Secteur Financier that it was designated as Other Systematically Important Institution (O-SII) in application of the law of 23 July 2015 amending the law of 5 April 1993 on the financial sector (LFS), complemented by the EBA Guidelines (EBA/GL/2014/10) of the 16 December 2014 on the criteria to determine the conditions of application of Article 131(3) CRD in relation to the assessment of other systematically important institutions.

The calibration of the O-SII buffer rate takes into account the actual distribution of scores to different buffer levels following the requirements set out in article 59-9(1) LFS prior the application of macro-prudential judgement. The threshold used to determine the buffer levels is set at 325 basis points for a buffer of 0.5%. On this basis and by application of supervisory judgment, the overall buffer for RBCIS Bank had been set at 0.5%.

CSSF reiterated this decision in its regulation issued as of December 4, 2018 (“Règlement CSSF N° 18-06 concernant les établissements d’importance systémique agréés au Luxembourg”).

### 3.2.4 Pillar 2 Guidance (P2G)

RBCIS Bank had to comply on a consolidated basis with Pillar 2 Capital Guidance (P2G) of 2.50%, to be made up entirely of Common Equity Tier 1 capital and to be held over and above:

- The minimum Common Equity Tier 1 ratio required under Article 92(1)(a) of Regulation (EU) 2019/876 amending Regulation 575/2013;
- The own funds requirement of 2.00% (Pillar 2 Requirement- P2R) required to be held in excess of the minimum own funds requirement and to be maintained at all times in accordance with Article 16(2)(a) of Regulation (EU) N°1024/2013, to be made up entirely of Common Equity Tier 1 capital;
- The combined buffer required as defined in point (6) of Article 128 of Directive (EU) 2019/878 amending Directive 2013/36/EU, to the extent it is legally applicable.

### 3.2.5 RBCIS Bank Regulatory Capital Requirements in 2019

Table 3-1 – RBCIS Bank Capital Requirements in 2019

	CET1	Tier 1	Total
Pillar 1 Regulation (EU) 2019/876 amending Regulation N° 575/2013 Article 92	4.50%	6.00%	8.00%
Pillar 2 Requirement (P2R) Regulation (EU) N°1024/2013 - Art. 16 (2)(a)	2.00%	2.00%	2.00%
<b>Total SREP Capital Ratio (TSCR)</b>	<b>6.50%</b>	<b>8.00%</b>	<b>10.00%</b>
Capital Conservation Buffer (CCB) Directive (EU) 2019/878 amending Directive 2013/36/EU - Art. 129	2.50%	2.50%	2.50%
Countercyclical Buffer (CCyB) Directive (EU) 2019/878 amending Directive 2013/36/EU - Art. 130	0.50%	0.50%	0.50%
Global Systemically Important Institutions Buffer (G-SII) Directive (EU) 2019/878 amending Directive 2013/36/EU - Art. 131	Not applicable		
Other Systemically Important Institutions Buffer (O-SII) Directive (EU) 2019/878 amending Directive 2013/36/EU - Art. 131	0.50%	0.50%	0.50%
Systemic Risk Buffer Directive (EU) 2019/878 amending Directive 2013/36/EU - Art. 133	0.00%	0.00%	0.00%
<b>Overall Capital Ratio (OCR)</b>	<b>10.00%</b>	<b>11.50%</b>	<b>13.50%</b>
Pillar 2 Guidance SREP Decision	2.50%	2.50%	2.50%
<b>Overall Capital Ratio (OCR) including P2G</b>	<b>12.50%</b>	<b>14.00%</b>	<b>16.00%</b>
Internal Buffer	1.00%	1.00%	1.00%
<b>Overall Capital Ratio (OCR) including P2G and Internal buffer</b>	<b>13.50%</b>	<b>15.00%</b>	<b>17.00%</b>

### 3.3 Regulatory capital adequacy (Pillar I)

Capital adequacy and capital ratios measured are monitored monthly against internal thresholds by the Capital Measurement team in the Corporate Treasury department. Any breaches would be escalated immediately. The ALCO and Risk Committee receive monthly reports detailing capital requirements. The Board is updated on a quarterly basis.

During 2019, the capital ratios and leverage ratios of RBCIS Bank and its related subsidiaries have complied with the prescribed regulatory requirements and internal minimum ratios contained in the Capital Management Policy.

As at October 31, 2019, the CET1/total capital ratio of the bank stands at **25.20%** (excluding year-end profit as stated per regulation).

Table 3-2 – RBCIS Bank Eligible Capital and Capital Ratio

	RBCIS Bank Conso Oct 31st, 2019
Paid-up capital	554.1
Eligible Reserves / Retained Earnings	710.6
Deductions from capital	(152.2)
<b>CET 1 / Total Regulatory Capital</b>	<b>1 112.5</b>
Credit Risk	269.0
Operational Risk	65.1
Market Risk	9.2
CVA	9.9
<b>Total Capital Requirement</b>	<b>353.2</b>
<b>Tier 1/ Total capital Ratio</b>	<b>25.20%</b>

### 3.3.1 Regulatory capital

The elements that are included in the numerator of the ratio are described in the Circular (EU) 2019/876 (CRR2) amending Circular 575/2013 (CRR) and the Capital Regular Directive (EU) 2019/878 – known as CRD V amending Capital Regulatory Directive 2013/36/EU - known as CRD IV. The Bank’s regulatory capital as of October 31<sup>st</sup>, 2019 is solely composed of Common Equity Tier One (CET1) capital, including :

- Paid-up capital
- Share premium
- Retained earnings (which does not include FY2018 profit)
- Accumulated other comprehensive income
- Other reserves
- Minority interest

Deductions applied to determine the regulatory capital are from Intangible assets (including goodwill) and irrevocable payment commitment.

### 3.3.2 Transfer of own funds or repayment of liabilities

There is no known material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities among parent undertakings and its subsidiaries.

The following table details the transitional own funds disclosure in accordance with the Annex VI of the Regulation (EU) No 1423/2013:

Table 3-3 – Transitional own funds requirements

		(a) Amount At Disclosure Date	(b) Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Article Reference	(c) Amounts Subject to Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Treatment or Prescribed Residual Amount of Regulation
	Common Equity Tier 1 capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	581.5	26 (1), 27, 28, 29, EBA list 26 (3)	N/A
	of which: Instrument type 1	N/A	EBA list 26 (3)	N/A
	of which: Instrument type 2	N/A	EBA list 26 (3)	N/A
	of which: Instrument type 3	N/A	EBA list 26 (3)	N/A
2	Retained earnings	474.4	26 (1) (c)	N/A
3	Accumulated other comprehensive income (and any other reserves)	199.4	26 (1)	N/A
3a	Funds for general banking risk	N/A	26 (1) (f)	N/A
4	Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase out from CET1	N/A	486 (2)	N/A
	Public sector capital injections grandfathered until 1 January 2018	N/A	483 (2)	N/A
5	Minority interests (amount allowed in consolidated CET1)	9.4	84, 479, 480	N/A
5a	Independently reviewed interim profits net of any foreseeable charge or dividend	N/A	26 (2)	N/A
<b>6</b>	<b>Common Equity Tier 1 (CET1) capital before regulatory adjustments</b>	<b>1 264.7</b>		<b>N/A</b>
	Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	N/A	34, 105	N/A
8	Intangible assets (net of related tax liability) (negative amount)	(152.2)	36 (1) (b), 37, 472 (4)	N/A
9	Empty set in the EU	N/A		N/A
10	Deferred tax assets that rely on future profitability excluding those arising from temporary difference (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	N/A	36 (1) (c), 38, 472 (5)	N/A

		(a) Amount At Disclosure Date	(b) Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Article Reference	(c) Amounts Subject to Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Treatment or Prescribed Residual Amount of Regulation
11	Fair value reserves related to gains or losses on cash flow hedges		33 (a)	N/A
12	Negative amounts resulting from the calculation of expected loss amounts	N/A	36 (1) (d), 40, 159, 472 (6)	N/A
13	Any increase in equity that results from securitized assets (negative amount)	N/A	32 (1)	N/A
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	N/A	33 (1) (b) (c)	N/A
15	Defined-benefit pension fund assets (negative amount)	N/A	36 (1) (e), 41, 472 (7)	N/A
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	N/A	36 (1) (f), 42, 472 (8)	N/A
17	Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	N/A	36 (1) (g), 44, 472 (9)	N/A
18	Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	N/A	36 (1) (h), 43, 45, 46, 49 (2) (3), 79, 472 (10)	N/A
19	Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	N/A	36 (1) (i), 43, 45, 47, 48 (1) (b), 49 (1) to (3), 79, 470, 472 (11)	N/A
20	Empty set in the EU	N/A		N/A
20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	N/A	36 (1) (k)	N/A
20b	of which: qualifying holdings outside the financial sector (negative amount)	N/A	36 (1) (k) (i), 89 to 91	N/A
20c	of which: securitization positions (negative amount)	N/A	36 (1) (k) (ii), 243 (1) (b), 244 (1) (b), 258	N/A
20d	of which: free deliveries (negative amount)	N/A	36 (1) (k) (iii), 379 (3)	N/A

		(a) Amount At Disclosure Date	(b) Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Article Reference	(c) Amounts Subject to Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Treatment or Prescribed Residual Amount of Regulation
21	Deferred tax assets arising from temporary difference (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	N/A	36 (1) (c), 38, 48 (1) (a), 470, 472 (5)	N/A
22	Amount exceeding the 15% threshold (negative amount)	N/A	48 (1)	N/A
23	of which: direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	N/A	36 (1) (i), 48 (1) (b), 470, 472 (11)	N/A
24	Empty set in the EU	N/A		N/A
25	of which: deferred tax assets arising from temporary difference	N/A	36 (1) (c), 38, 48 (1) (a), 470, 472 (5)	N/A
25a	Losses for the current financial year (negative amount)	-	36 (1) (a), 472 (3)	N/A
25b	Foreseeable tax charges relating to CET1 items (negative amount)	N/A	36 (1) (l)	N/A
26	Regulatory adjustments applied to Common Equity Tier 1 in respect of amounts subject to pre-CRR treatment	N/A		N/A
26a	Regulatory adjustments relating to unrealized gains and losses pursuant to Articles 467 and 468	N/A		N/A
26b	Amount to be deducted from or added to Common Equity Tier 1 capital with regard to additional filters and deductions required pre-CRR	N/A	48100.0%	N/A
27	Qualifying AT1 deductions that exceed the AT1 capital of the institution (negative amount)	N/A	36 (1) (j)	N/A
28	Total regulatory adjustments to Common Equity Tier 1 (CET1)	(152.2)		N/A
29	<b>Common Equity Tier 1 (CET1) capital</b>	<b>1 112.5</b>		<b>N/A</b>
	Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and the related share premium accounts	N/A	51, 52	N/A
31	of which: classified as equity under applicable accounting standards	N/A		N/A
32	of which: classified as liabilities under applicable accounting standards	N/A		N/A
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1	N/A	486 (3)	N/A

		(a) Amount At Disclosure Date	(b) Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Article Reference	(c) Amounts Subject to Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Treatment or Prescribed Residual Amount of Regulation
	Public sector capital injections grandfathered until 1 January 2018	N/A	483 (3)	N/A
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interest not included in row 5) issued by subsidiaries and held by third parties	N/A	85, 86, 480	N/A
35	of which: instruments issued by subsidiaries subject to phase-out	N/A	486 (3)	N/A
<b>36</b>	<b>Additional Tier 1 (AT1) capital before regulatory adjustments</b>	-		<b>N/A</b>
	Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct and indirect holdings by an institution of own AT1 instruments (negative amount)	N/A	52 (1) (b), 56 (a), 57, 475 (2)	N/A
38	Holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to artificially inflate the own funds of the institution (negative amount)	N/A	56 (b), 58, 475 (3)	N/A
39	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	N/A	56 (c), 59, 60, 79, 475 (4)	N/A
40	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	N/A	56 (d), 59, 79, 475 (4)	N/A
41	Regulatory adjustments applied to Additional Tier 1 capital in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase-out as prescribed in Regulation (EU) No 585/2013 (i.e. CRR residual amounts)	N/A		N/A
41a	Residual amounts deducted from Additional Tier 1 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013	N/A	472, 473(3)(a), 472 (4), 472 (6), 472 (8) (a), 472 (9), 472 (10) (a), 472 (11) (a)	N/A
41b	Residual amounts deducted from Additional Tier 1 capital with regard to deduction from Tier 2 capital during the transitional period pursuant to article 475 of Regulation (EU) No 575/2013	N/A	477, 477 (3), 477 (4) (a)	N/A

		(a) Amount At Disclosure Date	(b) Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Article Reference	(c) Amounts Subject to Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Treatment or Prescribed Residual Amount of Regulation
41c	Amounts to be deducted from added to Additional Tier 1 capital with regard to additional filters and deductions required pre-CRR	N/A	467, 468, 481	N/A
42	Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)	N/A	56 (e)	N/A
43	Total regulatory adjustments to Additional Tier 1 (AT1) capital	-		N/A
44	Additional Tier 1 (AT1) capital	-		N/A
<b>45</b>	<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>1 112.5</b>		<b>N/A</b>
	Tier 2 (T2) capital: instruments and provisions			
46	Capital instruments and the related share premium accounts	N/A	62, 63	N/A
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2	N/A	486 (4)	N/A
	Public sector capital injections grandfathered until 1 January 2018	N/A	483 (4)	N/A
48	Qualifying own funds instruments included in consolidated T2 capital (including minority interest and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third party	N/A	87, 88, 480	N/A
49	of which: instruments issued by subsidiaries subject to phase-out	N/A	486 (4)	N/A
50	Credit risk adjustments	N/A	62 (c) & (d)	N/A
<b>51</b>	<b>Tier 2 (T2) capital before regulatory adjustment</b>	<b>-</b>		<b>N/A</b>
	Tier 2 (T2) capital: regulatory adjustments			
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	N/A	63 (b) (i), 66 (a), 67, 477 (2)	N/A
53	Holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institutions designed to artificially inflate the own funds of the institution (negative amount)	N/A	66 (b), 68, 477 (3)	N/A
54	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	N/A	66 (c), 69, 70, 79, 477 (4)	N/A



		(a) Amount At Disclosure Date	(b) Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Article Reference	(c) Amounts Subject to Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Treatment or Prescribed Residual Amount of Regulation
54a	Of which new holdings not subject to transitional arrangements	N/A		N/A
54b	Of which holdings existing before 1 January 2013 and subject to transitional arrangements	N/A		N/A
55	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amounts)	N/A	66 (d), 69, 79, 477 (4)	N/A
56	Regulatory adjustments applied to Tier 2 in respect of amounts subject to pre CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amounts)	N/A		N/A
56a	Residual amounts deducted from Tier 2 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013	N/A	472, 472(3)(a), 472 (4), 472 (6), 472 (8), 472 (9), 472 (10) (a), 472 (11) (a)	N/A
56b	Residual amounts deducted from Tier 2 capital with regard to deduction from Additional Tier 1 capital during the transitional period pursuant to article 475 of Regulation (EU) No 575/2013	N/A	475, 475 (2) (a), 475 (3), 475 (4) (a)	N/A
56c	Amounts to be deducted from or added to Tier 2 capital with regard to additional filters and deductions required pre-CRR	N/A	467, 468, 481	N/A
<b>57</b>	<b>Total regulatory adjustments to Tier 2 (T2) capital</b>	-		<b>N/A</b>
<b>58</b>	<b>Tier 2 (T2) capital</b>	-		<b>N/A</b>
<b>59</b>	<b>Total capital (TC = T1 + T2)</b>	<b>1 112.5</b>		<b>N/A</b>
59a	Risk-weighted assets in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amount)	-		N/A
	Of which:... items not deducted from CET1 (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line, e.g. Deferred tax assets that rely on future profitability net of related tax liability, indirect holdings of own CET1, etc.)	-	472, 472 (5), 472 (8) (b), 472 (10) (b), 472 (11) (b)	N/A

		(a) Amount At Disclosure Date	(b) Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Article Reference	(c) Amounts Subject to Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Treatment or Prescribed Residual Amount of Regulation
	Of which:...items not deducted from AT1 items (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line, e.g. Reciprocal cross holdings in T2 instruments, direct holdings of non-significant investments in the capital of other financial sector entities, etc.)	-	475, 475 (2) (b), 475 (2) ©, 475 (4) (b)	N/A
	Items not deducted from T2 items (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line, e.g. Indirect holdings of own T2 instruments, indirect holdings of non-significant investments in the capital of other financial sector entities, indirect holdings of significant investments in the capital of other financial sector entities, etc.)	-	477, 477 (2) (b), 477 (2) (c), 477 (4) (b)	N/A
<b>60</b>	<b>Total risk-weighted assets</b>	<b>4 414.4</b>		<b>N/A</b>
	Capital ratios and buffers			
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	25.20%	92 (2) (a), 465	N/A
62	Tier 1 (as a percentage of total risk exposure amount)	25.20%	92 (2) (b), 465	N/A
63	Total capital (as a percentage of total risk exposure amount)	25.20%	92 (2) (c)	N/A
64	Institution-specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements plus a systemic risk buffer, plus the systemically important institution buffer (G-SSI or O-SII buffer), expressed as a percentage of total risk exposure amount) 1)	3.03%	CRD 128, 129, 140	N/A
65	of which: capital conservation buffer requirement	2.50%		N/A
66	of which: countercyclical buffer requirement	0.03%		N/A
67	of which: systemic risk buffer requirement	-		N/A
67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	0.50%	CRD 131	N/A
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount) 2)	7.53%	CRD 128	N/A
69	[non-relevant in EU regulation]	-		N/A
70	[non-relevant in EU regulation]	-		N/A
71	[non-relevant in EU regulation]			N/A

		(a) Amount At Disclosure Date	(b) Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Article Reference	(c) Amounts Subject to Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Treatment or Prescribed Residual Amount of Regulation
	Amounts below the thresholds for deduction (before risk-weighting)	-		
72	Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	-	36 (1) (h), 45, 46, 472 (10), 56 (c), 59, 60, 475 (4), 66 (c), 69, 70, 477 (4)	N/A
73	Direct and indirect holdings of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	-	36 (1) (i), 45, 48, 470, 472 (11)	N/A
74	Empty set in the EU	-		N/A
75	Deferred tax assets arising from temporary difference (amount below 10 % threshold, net of related tax liability where the conditions in Article 38 (3) are met)	<b>4.3</b>	36 (1) (c), 38, 48, 470, 472 (5)	N/A
	Applicable caps on the inclusion of provisions in Tier 2			
76	Credit risk adjustments included in T2 in respect of exposures subject to standardized approach (prior to the application of the cap)	-	62	N/A
77	Cap on inclusion of credit risk adjustments in T2 under standardized approach	-	62	N/A
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	-	62	N/A
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	-	62	N/A
	Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)			
80	- Current cap on CET1 instruments subject to phase-out arrangements	-	484 (3), 486 (2) & (5)	N/A
81	- Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	484 (3), 486 (2) & (5)	N/A
82	- Current cap on AT1 instruments subject to phase-out arrangements	-	484 (4), 486 (3) & (5)	N/A
83	- Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	484 (4), 486 (3) & (5)	N/A

		(a) Amount At Disclosure Date	(b) Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Article Reference	(c) Amounts Subject to Regulation (EU) 2019/876 amending Regulation (EU) N° 575/2013 Treatment or Prescribed Residual Amount of Regulation
84	- Current cap on T2 instruments subject to phase-out arrangements	-	484 (5), 486 (4) & (5)	N/A
85	- Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	484 (5), 486 (4) & (5)	N/A

### 3.3.2.1 Bridge between IFRS equity and CET1 capital

A bridge between IFRS equity and CET1 capital is provided in the table below:

Table 3-4 - Bridge between IFRS equity and CET1 capital

EUR mm	RBCIS Bank Conso Oct 31st, 2019
Balance sheet equity	1 292.9
- Profit non audited (excluded)	28.0
Balance sheet equity without profit	1 264.9
<b>CET 1 before deductions</b>	<b>1 264.9</b>
Goodwill	(84.2)
Intangible assets	(68.0)
Prudential filters	(0.2)
Irrevocable payment Commitment	(0.1)
<b>Common Equity Tier 1 capital</b>	<b>1 112.5</b>

#### “Prudential filters”

In accordance with Circular (EU) 2019/876 (“CRR2”) amending Circular 575/2013 (CRR - Article 48) and Capital Regulatory Directive (EU) 2019/878 – known as CRDV amending Capital Regulatory Directive 2013/36/EU - known as CRD IV, prudential filters related to “revaluation of financial available for sales” are not anymore applicable under Basel III principles.

The relevant prudential filters concern the following elements:

- 100% of the unrealised gains amounting to 0,2MEUR resulting from the application of the transitory regime according to CSSF Regulation n°18-03.

#### Inclusion and exclusion of specific entries of the prudential trading book

As of 31 October 2019, it is not within the Bank’s policies to engage in speculative or trading transactions. In the rare cases where a transaction is categorised as trading (due to its nature), the Management Committee must approve the transaction which must then be monitored by the Finance department.

### 3.3.3 Minimum capital requirements

Table 3-5 – Minimum Capital Requirements

	Minimum Capital requirements	Pillar 2 Requirements	CCB	CCyB	O-SII	Total Requirement* *OCR	
Common Equity Tier 1 capital	4.5%	2.00%	2.5%	0.5%	0.5%	<b>10.00%</b>	
Tier 1 capital	6.0%	2.00%	2.5%	0.5%	0.5%	<b>11.50%</b>	
Own funds	8.0%	2.00%	2.5%	0.5%	0.0%	<b>13.50%</b>	
EUR mm							Surplus versus Total Requirement
Common Equity Tier 1 capital	198.6	88.3	110.4	22.1	22.1	<b>441.4</b>	<b>671.2</b>
Tier 1 capital	264.9	88.3	110.4	22.1	22.1	<b>507.7</b>	<b>604.9</b>
Own funds	353.1	88.3	110.4	22.1	22.1	<b>595.9</b>	<b>516.7</b>

### 3.3.4 Overview of RWAs

The table below provides an overview of total Risk Weighted Assets in Pillar 1 as of October 31<sup>st</sup>, 2019. The capital requirements amounts have been obtained by applying 8% to the corresponding weighted risks.

Template 4 – EU OV1 - Overview of RWAs

EUR mm			RWA		Minimum capital requirements
			Oct 31, 2019	Jul 31, 2019	Oct 31, 2019
	1	<b>Credit risk (excluding counterparty credit risk) (CCR)</b>	<b>2 934.7</b>	<b>3 061.8</b>	<b>234.8</b>
Art 438(c)(d)	2	Of which standardized approach (SA)	2 934.7	3 061.8	234.8
Art 438(c)(d)	3	Of which the advanced IRB (AIRB) approach	-	-	-
Art 438(c)(d)	4	Of which the foundation IRB (FIRB) approach	-	-	-
Art 438(d)	5	Of which equity IRB under the simple risk-weighted approach or the IMA	-	-	-
<b>Article 107, Art.438(c)(d)</b>	<b>6</b>	<b>Counterparty credit risk</b>	<b>427.4</b>	<b>494.4</b>	<b>34.2</b>
Art 438(c)(d)	7	Of which Marked to market	427.4	494.4	34.2
Art 438(c)(d)	8	Of which Original exposure	-	-	-
Art 438(c)(d)	9	Of which standardized approach for counterparty credit risk	-	-	-
Art 438(c)(d)	10	Of which internal model method (IMM)	-	-	-
Art 438(c)(d)	11	Of which risk exposure amount for contributions to the default fund of a CCP	-	-	-
Art 438(c)(d)	12	Of which CVA	123.7	88.7	9.9

Art 438( e )	13	Settlement risk	-	-	-
Art 449(o)(i)	14	Securitization exposures in banking book (after cap)	-	-	-
	15	Of which IRB ratings-based approach (RBA)	-	-	-
	16	Of which IRB Supervisory Formula Approach (SFA)	-	-	-
	17	Of which Internal assessment approach (IAA)	-	-	-
	18	Of which standardized approach (SA)	-	-	-
Art 438 ( e )	19	Market risk	114.7	143.6	9.2
	20	Of which standardized approach (SA)	114.7	143.6	9.2
	21	Of which internal model approaches (IMA)	-	-	-
Art 438 ( e )	22	Large exposures	-	-	-
Art 438(f)	23	Operational risk	813.9	813.9	65.1
	24	Of which Basic Indicator Approach	-	-	-
	25	Of which Standardized Approach	813.9	813.9	65.1
	26	Of which Advanced Measurement Approach	-	-	-
Art 437(2), Art 48 and Art 60	27	Amounts below the thresholds for deduction (subject to 250% risk weight)	-	-	-
Article 500	28	Floor adjustment	-	-	-
	29	Total	4 414.4	4 602.4	353.1

At the end of 2019, RBCIS Bank's total RWAs amounted to 4.4 billion. RWA are concentrated on Credit risk and Operational risk, representing respectively 76% and 18% of the total Bank RWA. Market risk and CVA represents respectively 3% and 3% of the total Bank RWA.

RBCIS Bank uses the standardized approach for calculating its capital requirements with respect to credit, market and operational risk, and to publish its Capital ratios.

### 3.3.5 Specialized lending and equity exposures in the banking book

As of October 31<sup>st</sup>, 2019, RBCIS bank does not have exposure to specialized lending, neither hold equity exposures in the banking book.

### 3.3.6 Trading Book

Trading book related position risk is not disclosed as deemed not material. We also note there are no trading book large exposures exceeding limits.

### 3.3.7 Countercyclical capital buffer disclosure template

In accordance with Article 440 (a) and (b) in the CRR, the following tables disclose the amount of the institution's specific countercyclical buffer as well as the geographical distribution of credit exposures relevant for its calculation in the standard format as set out in Commission Delegated Regulation (EU) 2015/1555.

### 3.3.7.1 Institution-specific countercyclical capital buffer

Table 3-6 - Institution-specific countercyclical capital buffer

<b>Total Risk Exposure Amount</b>	<b>4 414.4</b>
Institution specific countercyclical buffer rate	0.072%
Institution specific countercyclical buffer requirement (EUR)	0.1

### 3.3.7.2 Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer

The scope of the below table is limited to credit exposures relevant for the calculation of the Countercyclical Capital Buffer (CCyB). Only countries which credit exposures relevant for CCyB have been reported.



Table 3-7 - Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer

	General credit exposures		Trading book exposure		Securitization exposure		Own funds requirements				Own funds requirement weights	Countercyclical capital buffer rate
	Exposure value for SA	Exposure value IRB	Sum of long and short position of trading book	Value of trading book exposure for internal models	Exposure value for SA	Exposure value for IRB	Of which General credit exposures	Of which trading book exposures	Of which securitization exposures	Exposure value for IRB		
Australia	0.2	-	-	-	-	-	0.0	-	-	-	-	0.000%
Belgium	4.2	-	-	-	-	-	0.2	-	-	-	-	0.000%
Bermuda	0.0	-	-	-	-	-	0.0	-	-	-	-	0.000%
Brunei	0.0	-	-	-	-	-	0.0	-	-	-	-	0.000%
Canada	2.0	-	-	-	-	-	0.0	-	-	-	-	0.000%
Cayman Islands	21.0	-	-	-	-	-	1.7	-	-	-	-	0.000%
China	0.0	-	-	-	-	-	0.0	-	-	-	-	0.000%
France	0.0	-	-	-	-	-	0.0	-	-	-	-	0.000%
Germany	0.0	-	-	-	-	-	0.0	-	-	-	-	0.000%
Great Britain	345.6	-	-	-	-	-	27.5	-	-	-	-	0.000%
Guernsey	126.1	-	-	-	-	-	9.5	-	-	-	0.09	1.000%
Hong Kong	2.5	-	-	-	-	-	0.2	-	-	-	-	0.000%
Ireland	0.5	-	-	-	-	-	0.0	-	-	-	0.0	2.500%
Italy	55.6	-	-	-	-	-	4.4	-	-	-	-	0.000%
Liechtenstein	43.5	-	-	-	-	-	3.7	-	-	-	-	0.000%
Luxembourg	21.4	-	-	-	-	-	1.7	-	-	-	-	0.000%
Singapore	0.0	-	-	-	-	-	0.0	-	-	-	-	0.000%
Spain	763.4	-	-	-	-	-	60.9	-	-	-	-	0.000%
Stateless	5.1	-	-	-	-	-	0.3	-	-	-	-	0.000%
Switzerland	0.0	-	-	-	-	-	0.0	-	-	-	-	0.000%
United Arab Emirates	0.0	-	-	-	-	-	0.0	-	-	-	-	0.000%
United States	131.8	-	-	-	-	-	10.5	-	-	-	-	0.000%
<b>Total</b>	<b>228.9</b>	-	-	-	-	-	<b>11.0</b>	-	-	-	-	<b>0.000%</b>
	<b>1 751.8</b>	-	-	-	-	-	<b>131.7</b>	-	-	-	<b>0.10</b>	<b>0.072%</b>

### 3.4 Leverage ratio

The leverage ratio (LR) is introduced by the Basel Committee to serve as a simple, transparent and non-risk-based ratio to complete the existing risk-based capital requirements. The Basel III leverage ratio is defined as the capital measure (the numerator) divided by the exposure measure (the denominator), with this ratio expressed as a percentage and having to exceed a minimum of 3%. RBCIS Bank internal minimum requirement is set at 3.5%.

The Bank takes into account the leverage ratio in its capital and financial planning to ensure that its forecasted strategic plan is consistent with this requirement. The leverage ratio is discussed on a regular basis at top management level and is part of the Bank's Risk Appetite framework.

As of October 31<sup>st</sup>, 2019, RBCIS Bank leverage ratio stands at 5.95%, well above the 3.5% internal minimum requirement.

Table 3-8 – Leverage ratio

EUR mm	RBCIS Bank Conso Oct 31st, 2019
Tier 1 capital	1 112.5
Leverage ratio exposure	18 694.8
<b>Leverage ratio</b>	<b>5.95%</b>

During 2019, the leverage ratios of RBCIS Bank and its related subsidiaries have complied with the prescribed regulatory requirements and internal minimum ratios contained in the Capital Management Policy.

The following table discloses the breakdown of the total exposure measure as well as a reconciliation with the relevant information disclosed in published financial statements, as required by Article CRR 451 (1)(b).

Template EU LR1 - LRSum: Summary reconciliation of accounting assets and leverage ratio exposures

		Applicable amount
1	Total assets as per published financial statements	18 223.2
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	146.4
3	(Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference)	-
4	(Adjustment for temporary exemption of exposures to central bank (if applicable))	-
5	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio total exposure measure in accordance with Article 429a(1)(i) of RRegulation (EU) (EU) No 575/2013 (CRR))	-
6	Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting	
7	Adjustment for eligible cash pooling transactions	
8	Adjustments for derivative financial instruments	-
9	Adjustment for securities financing transactions (SFTs)	-
10	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	398.0

11	(Adjustment for prudent valuation adjustments and general provisions which have reduced Tier 1 capital)	-
EU-11a	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with Article 429a(1)(c) of CRR)	-
EU-11b	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with Article 429a(1)(j) of CRR)	-
12	Other adjustments	(72.8)
<b>13</b>	<b>Leverage ratio total exposure measure</b>	<b>18 694.8</b>

The following table discloses the breakdown of the total exposure measure for Leverage ratio.

Template EU LR2 - LRCom: Leverage ratio common disclosure

		CRR leverage ratio exposures
<b>On-balance sheet exposures (excluding derivatives and SFTs)</b>		
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	17 601.9
2	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-
4	(Adjustment for securities received under securities financing transactions that are recognised as an asset)	-
5	(General credit risk adjustments to on-balance sheet items)	-
6	(Asset amounts deducted in determining Tier 1 capital)	(152.1)
<b>7</b>	<b>Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of lines 1 to 6)</b>	<b>17 449.7</b>
<b>Derivative exposures</b>		
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	317.0
EU-8a	Derogation for derivatives: replacement costs contribution under the simplified standardised approach	-
9	Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	530.0
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach	-
EU-9b	Exposure determined under Original Exposure Method	-
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)	-
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)	-
EU-10b	(Exempted CCP leg of client-cleared trade exposures) (Original exposure method)	-
11	Adjusted effective notional amount of written credit derivatives	-
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-
<b>13</b>	<b>Total derivatives exposures (sum of lines 8 to EU-12)</b>	<b>847.1</b>
<b>Securities financing transaction (SFT) exposures</b>		
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	-
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	-
16	Counterparty credit risk exposure for SFT assets	-
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 of CRR	-
17	Agent transaction exposures	-

EU-17a	(Exempted CCP leg of client-cleared SFT exposure)	-
<b>18</b>	<b>Total securities financing transaction exposures (sum of lines 14 to EU-17a)</b>	<b>-</b>
<b>Other off-balance sheet exposures</b>		
19	Off-balance sheet exposures at gross notional amount	1 685.0
20	(Adjustments for conversion to credit equivalent amounts)	1 287.1
21	(General provisions associated with off-balance sheet exposures deducted in determining Tier 1 capital)	-
<b>22</b>	<b>Off-balance sheet exposures (sum of lines 19 to 21)</b>	<b>398.0</b>
<b>Excluded exposures</b>		
EU-22a	(Exposures excluded from the leverage ratio total exposure measure in accordance with Article 429a(1)(c) of CRR)	-
EU-22b	(Exposures exempted in accordance with Article 429a (1) (j) of CRR (on and off balance sheet))	-
EU-22c	(Excluded exposures of public development banks - Public sector investments)	-
EU-22d	(Excluded promotional loans of public development banks: - Promotional loans granted by a public development credit institution - Promotional loans granted by an entity directly set up by the central government, regional governments or local authorities of a Member State - Promotional loans granted by an entity set up by the central government, regional governments or local authorities of a Member State through an intermediate credit institution)	-
EU-22e	(Excluded passing-through promotional loan exposures by non-public development banks (or units): - Promotional loans granted by a public development credit institution - Promotional loans granted by an entity directly set up by the central government, regional governments or local authorities of a Member State - Promotional loans granted by an entity set up by the central government, regional governments or local authorities of a Member State through an intermediate credit institution)	-
EU-22f	(Excluded guaranteed parts of exposures arising from export credits)	-
EU-22g	(Excluded excess collateral deposited at triparty agents)	-
EU-22h	(Excluded CSD related services of CSD/institutions in accordance with Article 429a(o) of the CRR)	-
EU-22i	(Excluded CSD related services of designated institutions in accordance with Article 429a(1)(p) of the CRR)	-
EU-22j	(Reduction of the exposure value of pre-financing or intermediate loans)	-
<b>EU-22k</b>	<b>(Total excluded exposures)</b>	<b>-</b>
<b>Capital and total exposure measure</b>		
<b>23</b>	<b>Tier 1 capital</b>	<b>1 112.5</b>
<b>24</b>	<b>Leverage ratio total exposure measure</b>	<b>18 694.8</b>
<b>Leverage ratio</b>		
<b>25</b>	<b>Leverage ratio</b>	<b>5.95%</b>
EU-25	Leverage ratio (without the adjustment due to excluded exposures of public development banks - Public sector investments)	5.95%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves)	5.95%
26	Regulatory minimum leverage ratio requirement	3.00%
EU-26a	Additional leverage ratio requirements (%)	0.00%
27	Applicable leverage buffer	0.00%
<b>Choice on transitional arrangements and relevant exposures</b>		

<b>EU-27</b>	<b>Choice on transitional arrangements for the definition of the capital measure</b>	-
<b>Disclosure of mean values</b>		
28	Mean of daily values of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivable	-
29	Quarter-end value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables	-
30	Total exposures (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	18 694.8
30a	Total exposures (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	18 694.8
31	Leverage ratio (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	5.95%
<b>31a</b>	<b>Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)</b>	<b>5.95%</b>

As of October 2019, the Leverage Ratio hits 5.95%. T1 own funds amounts to 1 112.5 m€ and total Leverage Ratio exposures stand at 18 694.8 m€.

Total on-balance sheet exposures (after deduction of assets included in the calculation of Tier 1 capital) represent 17 449.8 m€ (93% of Total Exposure), total derivatives exposures (including add-ons for Potential Future Exposure) amount to 847 m€ (5% of Total Exposure) and off-balance sheet exposures (converted to Credit Equivalent Amounts) reach 398 m€ (2% of Total Exposure).

## 4 Credit Risk

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### 4.1 Credit Risk governance

#### 4.1.1 Definition of Credit Risk

RBC Group defines credit risk as the risk of loss associated with counterparty's potential inability or unwillingness to fulfil its on- and off-balance sheet payment obligations. Credit risk may arise directly from the risk of default of a primary obligor (e.g., issuer, debtor, borrower or policyholder), or indirectly from a secondary obligor (e.g., guarantor, reinsurance) and/or through off-balance sheet exposures, contingent credit risk and/or transactional risk. Credit risk includes counterparty credit risk from both trading and non-trading activities. Exposure to credit risk occurs any time funds are extended, committed or invested through actual or implied contractual agreement.

#### 4.1.2 Business Model and Risk Profile

Credit risk is inherent to the following operations:

- Overdrafts (generally within internal limits not confirmed to the customers) and the confirmed credit lines; typically RBCIS Bank has a contractual lien on client assets as an ultimate form of remedy for unapproved overdrafts.
- Operations related to Assets and Liabilities Management. RBCIS Bank has an Investment Policy approved by the Board of Directors that outlines authorized investments and terms and conditions for their execution. This includes placements with RBC Group as well as investment in High Quality Liquid Assets / placements with Central Governments and Local Authorities as appropriate;
- Fund Finance - we provide clients with (generally secured) committed or uncommitted credit facilities to facilitate clients' settlement of securities or to provide liquidity (bridge financing) between capital calls. These commitments are secured with a lien over the uncalled capital of the underlying investors.
- Cash deposits in the different banks of our correspondents network; these cash balances represent credit risk exposures to us in case of bankruptcy of the agent banks. The Bank has implemented strong processes around selection and monitoring of said correspondent network, including limits definition and monitoring of cash balances by Risk Management unit.
- Guarantees provided (this represents marginal amounts driven by some ancillary client activities).

Note that the Bank also provides clients foreign exchange services and related transactions. We refer to Market Risk and Counterparty Credit Risk sections for more information.

Overall, RBCIS Bank has limited appetite for Credit Risk, which is mitigated through the nature and monitoring of risk exposures, as well as related risk ratings and concentration. The formal Bank's Risk Appetite is approved by the Board at least annually and the credit risk profile is managed through the RBCIS Bank Risk Committee of the Board, the RBC I&TS Credit Risk Committee and the RBCIS Bank Executive Committee.

### 4.1.3 Organization and Functions involved in Credit Risk Management

Please also refer to section 1.2 'Description of the risk governance structure' in terms of generic roles and responsibilities for Risk Management. RBCIS Bank has established a comprehensive credit risk policy framework that covers requirements in terms of Credit Risk Approval Authorities, Credit Risk Limits, Credit Risk Identification and Assessment (including Credit Risk Ratings / Scorings), Credit Risk Mitigation (including Collateral), Credit Monitoring, Credit Deterioration, Credit Risk Measurement Methodologies, Governance...

RBCIS Bank manages credit risk at both the individual exposure level as well as the portfolio level. Credit risk at the individual exposure level is managed through our credit approval system and involves four approval levels up to and including the Board of Directors. The requisite approvals are based upon the size and relative risk of the aggregate exposure under consideration. The Credit Risk unit is responsible for monitoring the size, terms and maturity of all credit exposures as well as, in collaboration with the 1st line of defense, the ongoing monitoring of the creditworthiness of the counterparty. In addition, they are responsible for assigning and maintaining the internal risk ratings on each exposure.

Other relevant information include:

#### RBC I&TS Credit Risk Committee

The Committee is established to enable effective oversight and management of credit risk within RBC Investor & Treasury Services. This includes monitoring the credit exposure profile of RBC I&TS, assess credit risk concentrations, review credit risk exposures at risk (e.g. watchlist, defaults, ...) and generally, provide positive advice, strategic direction and guidance in order to manage all material credit risks impacting I&TS segment and RBCIS Bank, as applicable.

#### Implementation of the three lines of defense model

Within the 1st line of defense, dedicated teams are in place to support credit risk needs. This includes two teams, ICCM (Institutional Client and Credit Management) for funds and GTCM (Global Trading Credit Management) for non-funds, that prepare and submit credit requests to the 2nd line Risk Management function. These team are also responsible, together with some other 1st line operational departments (e.g. 'Cash Control' unit) to monitor any potential excess to approved limits. Another dedicated 1st line team ('TMS Middle Office' unit) is also in place to monitor loans / Fund Finance exposures and for instance ensure clients comply with all covenants defined in the credit/pledge agreements.

The 2nd line Risk Management function reviews and approves credit requests/limits, and monitors credit risk exposures through different daily monitoring reports (Overdrafts, Single Name, Large Exposure, Shadow Banking, Nostro, ...) that cover the relevant risk exposures. Risk Management also provides independent reporting to the Executive Committee and Risk Committee on the Board, including limits / exposures / defaults and any material excess to the limit.

#### Other information on Counterparty Limits / Risk Assessments

The evaluation of counterparties and the credit risk classification takes place within the "credit assessment" process. The Bank assigns credit risk ratings to its borrowers to reflect its assessment of the specific credit risk of each borrower over a 3-year horizon (or full credit cycle as appropriate) starting from the time of risk assessment or revision or confirmation. The 3-year time horizon is consistent with the term of the majority of the credit risk exposures. The Bank extends the term of the rating horizon in the case of specific portfolios where the nature of the business predominantly exposes the Bank to longer term exposures. On the other hand, the ratings of very weak borrowers are assigned to primarily reflect their riskiness based on current conditions and short-term expectations. The rating is determined through an assessment of factors, specific to the industry and/or product, that differentiate the riskiness of the borrowers and reflects the probability of default of the borrower over the time horizon of the rating. The currency of the rating is maintained through a process of continuous monitoring and periodic review.

Internal ratings are systematically compared with external ratings from Moody's, Standard & Poor's and Fitch and are adjusted where applicable. Approved credit limits for funds should be revisited at least annually as part of the review of each Group of Funds single name overall limits. For non-fund counterparties limits are reviewed on annual, bi-annual or within a three year cycle. Borrowers with material deterioration in credit

quality which may breach their covenant are added to a watch list for monitoring, and action is taken as appropriate.

## 4.2 Credit risk exposure

### 4.2.1 Total and average amount of credit exposure by exposure classes

In the application of Article 442 (c) in the CRR, this table represents the year-end total and annual average exposure. Exposures values are shown after accounting offsets but before credit risk mitigation. Exposures subject to counterparty credit risk (CCR) are excluded from the scope of the table presented below, a specific outlook of these types of exposure being presented under the section 4.6 Counterparty credit risk.

The year-end total exposure includes figures obtained using the standardized approach methods. The average exposure is computed as the average of the net exposure values observed at the end of each calendar quarter of the year 2019 (December 2018, March 2019, June 2019, September 2019) with, in addition to its, the fiscal Year-end (October 2019) .

Template 5 – EU-CRB-B - Total and average net amount of exposures

	Net exposure at the end of the period	Average net exposure over the period
Central governments or central banks		
Institutions		
Corporates		
Of Which: Specialized Lending		
Of Which: SME		
Retail		
Secured by real estate property		
SME		
Non-SME		
Qualifying Revolving		
Other Retail		
SME		
Non-SME		
Equity		
<b>Total IRB approach</b>		
Central governments or central banks	8 727.0	9 357.2
Regional governments or local authorities	-	-
Public sector entities	-	-
Multilateral Development Banks	-	-
International Organizations	-	-
Institutions	7 897.0	7 630.6
Corporates	2 375.0	2 469.7
of which: SME	-	-
Retail	-	-
of which: SME	-	-
Secured by mortgages on immovable property	-	-
of which: SME	-	-
Exposures in default	0.0	0.0
Items associated with particularly high risk	-	-
Covered bonds	-	-
Claims on institutions and corporates with a short-term credit assessment	-	-
Collective investments undertakings (CIU)	-	-
Equity exposures	-	-
Other exposures	292.2	293.0



	Net exposure at the end of the period	Average net exposure over the period
<b>Total SA approach</b>	<b>19 291.2</b>	<b>19 750.1</b>
<b>Total</b>	<b>19 291.2</b>	<b>19 750.1</b>

As of October 31<sup>st</sup>, 2019, the Bank's total exposure (excluding CCR exposures) amounted to 19,291 million €. Average net exposure over the period totalizes 19,750 million €.

As of October 31<sup>st</sup>, 2019, exposures are mostly concentrated on the "central governments or central banks" as well as the "Institutions" asset classes which represent respectively 45% and 41% of the total net exposure. Average over the period follows the same trend with the "central governments or central banks" and "institutions" asset classes representing 47% and 39% respectively.

Regarding the Central Governments and Central Banks exposures, the main counterparties of the Bank are the Central Bank of Luxembourg, the Swiss National Bank, the Banque de France and the Banca d'Italia.

#### 4.2.2 Geographical breakdown of credit exposures

In the application of Article 442 (d) in the CRR, the table below shows the total exposure broken down by exposure classes and geographic areas at year-end 2019. Exposures values are shown after accounting offsets but before credit risk mitigation. Exposures subject to counterparty credit risk (CCR) are excluded from the scope of the table presented below, a specific outlook of these types of exposure being presented under the part 4.6 Counterparty credit risk.

The geographical distribution is based on the incorporation country of the counterparty or issuer. It comprises figures obtained using the standardized methods.

Template 6 - EU-CRB-C - Geographical breakdown of exposures

		a	b	c	d	e	f	g	h	i	j	k	l
		Europe	Of which: Luxembourg	Of which: Switzerland	Of which: united Kingdom	Of which: France	Of which: Italy	North America	South and Central America	Asia	Africa	Other geographical areas	Total
1	Central governments or central banks	-	-	-	-	-	-	-	-	-	-	-	-
2	Institutions	-	-	-	-	-	-	-	-	-	-	-	-
3	Corporates	-	-	-	-	-	-	-	-	-	-	-	-
4	Retail	-	-	-	-	-	-	-	-	-	-	-	-
5	Equity	-	-	-	-	-	-	-	-	-	-	-	-
6	Total IRB approach	-	-	-	-	-	-	-	-	-	-	-	-
7	Central governments or central banks	8 721.9	5 786.1	-	2 372.7	531.6	31.3	0.2	-	2.6	-	2.4	8 727.0
8	Regional governments or local authorities	-	-	-	-	-	-	-	-	-	-	-	-
9	Public sector entities	-	-	-	-	-	-	-	-	-	-	-	-
10	Multilateral Development Banks	-	-	-	-	-	-	-	-	-	-	-	-
11	International Organizations	-	-	-	-	-	-	-	-	-	-	-	-
12	Institutions	3 744.7	90.3	3 082.5	4.1	11.7	0.1	3 789.7	15.4	333.8	12.8	0.6	7 897.0
13	Corporates	2 071.7	562.2	170.2	14.9	523.0	394.0	168.6	134.6	-	0.0	0.0	2 375.0
14	Retail	-	-	-	-	-	-	-	-	-	-	-	-
15	Secured by mortgages on	-	-	-	-	-	-	-	-	-	-	-	-

		a	b	c	d	e	f	g	h	i	j	k	l
		Europe	Of which: Luxembourg	Of which: Switzerland	Of which: united Kingdom	Of which: France	Of which: Italy	North America	South and Central America	Asia	Africa	Other geographical areas	Total
	immovable property												
16	Exposures in default	-	-	-	-	-	-	-	0.0	-	-	-	0.0
17	Items associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	-	-
18	Covered bonds	-	-	-	-	-	-	-	-	-	-	-	-
19	Claims on institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-
20	Collective investments undertakings (CIU)	-	-	-	-	-	-	-	-	-	-	-	-
21	Equity exposures	-	-	-	-	-	-	-	-	-	-	-	-
22	Other exposures	51.5	3.8	14.6	0.0	6.0	23.6	2.0	-	5.5		233.1	292.2
<b>23</b>	<b>Total SA approach</b>	<b>14 589.7</b>	<b>6 442.4</b>	<b>3 267.3</b>	<b>2 391.6</b>	<b>1 072.3</b>	<b>449.0</b>	<b>3 960.6</b>	<b>150.0</b>	<b>341.9</b>	<b>12.8</b>	<b>236.2</b>	<b>19 291.2</b>
24	Total	14 589.7	6 442.4	3 267.3	2 391.6	1 072.3	449.0	3 960.6	150.0	341.9	12.8	236.2	19 291.2

As at October 31<sup>st</sup>, 2019, the Bank's exposure was mainly concentrated in Europe (76%, EUR 14.6bn) and North America (21%, EUR 4.0bn). Exposures in that European area are concentrated on 3 countries: Luxembourg with respectively 33% of the total exposure, Switzerland with 17%, and the United Kingdom with 12% of the total exposure.

### 4.2.3 Exposure breakdown by industry sector

In the application of Article 442 (e) in the CRR, the table below shows the total exposure broken down by exposure class and industry at October 31<sup>st</sup>, 2019. The industry classification is based on NACE codes. NACE (*Nomenclature des Activités Économiques dans la Communauté Européenne*) is a European industry standard for classifying business activities. It comprises figures obtained using the standardized methods.

Template 7 - EU-CRB-D- Concentration of exposures by industry or counterparty types

		k	l	m	n	o	p	q	R	s	t
		Net carrying values									
		Financial and insurance activities	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence, compulsory social security	Education	Human health services and social work activities	Arts, entertainment and recreation	Other services	Total
1	Central governments or central banks										
2	Institutions										
3	Corporates										
4	Retail										
5	Equity										
6	Total IRB approach										
7	Central governments or central banks	-	-	-	-	8 718.2	-	-	-	8.8	8 727.0
8	Regional governments or local authorities	-	-	-	-	-	-	-	-	-	-
9	Public sector entities	-	-	-	-	-	-	-	-	-	-
10	Multilateral Development Banks	-	-	-	-	-	-	-	-	-	-
11	International Organizations	-	-	-	-	-	-	-	-	-	-
12	Institutions	7 872.6	-	-	-	-	-	-	-	24.4	7 897.0
13	Corporates	2 310.4	-	-	-	-	-	-	-	64.5	2 375.0

		k	l	m	n	o	p	q	R	s	t
		Net carrying values									
		Financial and insurance activities	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence, compulsory social security	Education	Human health services and social work activities	Arts, entertainment and recreation	Other services	Total
14	Retail	-	-	-	-	-	-	-	-	-	-
15	Secured by mortgages on immovable property	-	-	-	-	-	-	-	-	-	-
16	Exposures in default	0.0	-	-	-	-	-	-	-	-	0.0
17	Items associated with particularly high risk	-	-	-	-	-	-	-	-	-	-
18	Covered bonds	-	-	-	-	-	-	-	-	-	-
19	Claims on institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-
20	Collective investments undertakings (CIU)	-	-	-	-	-	-	-	-	-	-
21	Equity exposures	-	-	-	-	-	-	-	-	-	-
22	Other exposures	8.8	-	-	-	-	-	-	-	283.3	292.2
<b>23</b>	<b>Total SA approach</b>	<b>10 191.9</b>	-	-	-	<b>8 718.2</b>	-	-	-	<b>381.1</b>	<b>19 291.2</b>

As of October 31<sup>st</sup>, 2019, the sectors “Financial and insurances activities” and “Public administration” represented the highest exposures with respectively 53% and 45% of the total exposures.

Investment Funds counterparties are classified under the “Financial and insurances activities”. RBCIS Bank continues to invest into counterparties with a high level of financial strength and ratings such as Central Governments or strong Financial institutions.

#### 4.2.4 Exposure breakdown by residual maturity

In the application of Article 442 (f) in the CRR, the table below shows the total exposure broken down by exposure classes and residual maturities at October 31<sup>st</sup>, 2019.

Template 8 - EU CRB-E: Maturity of exposures

		a	b	c	d	e	f
		Net exposure value					
		On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
1	Central governments or central banks						
2	Institutions						
3	Corporates						
4	Retail						
5	Equity						
6	Total IRB approach						
7	Central governments or central banks	-	8 722.7	-	-	-	8 722.7
8	Regional governments or local authorities	-	-	-	-	-	-
9	Public sector entities	-	-	-	-	-	-
10	Multilateral Development Banks	-	-	-	-	-	-
11	International Organizations	-	-	-	-	-	-
12	Institutions	-	6 670.8	1 029.3	-	-	7 700.1
13	Corporates	-	886.8	-	-	-	886.8
14	Retail	-	-	-	-	-	-
15	Secured by mortgages on immovable property	-	-	-	-	-	-
16	Exposures in default	-	0.0	-	-	-	0.0
17	Items associated with particularly high risk	-	-	-	-	-	-
18	Covered bonds	-	-	-	-	-	-
19	Claims on institutions and corporates with a short-term credit assessment	-	-	-	-	-	-
20	Collective investments undertakings (CIU)	-	-	-	-	-	-
21	Equity exposures	-	-	-	-	-	-
22	Other exposures	-	292.2	-	-	-	292.2
23	<b>Total SA approach</b>	-	<b>16 573.0</b>	<b>1 029.3</b>	-	-	<b>17 602.0</b>
24	<b>Total</b>	-	<b>16 572.5</b>	<b>1 029.3</b>	-	-	<b>17 601.9</b>

This table shows that 94% of the total risk exposure does not exceed 1 year.

#### 4.2.5 Credit quality of exposures

In the application of Article 442 (g) in the CRR, the tables below provide a breakdown of defaulted and non-defaulted exposures by regulatory exposure classes and industries respectively.

The industry classification is based on NACE codes, which is a European industry standard classification system for classifying business activities.

Template 9 - EU-CR1-A - Credit quality of exposures by exposure classes and instruments

		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c-d)
		Defaulted exposures	Non-Defaulted exposures					
1	Central governments or central banks							
2	Institutions							
3	Corporates							
4	Of Which: Specialized Lending							
5	Of Which: SME							
6	Retail							
7	Secured by real estate property							
8	SME							
9	Non-SME							
10	Qualifying Revolving							
11	Other Retail							
12	SME							
13	Non-SME							
14	Equity							
15	<b>Total IRB approach</b>							
16	Central governments or central banks	-	8 727.0	-	-	-	-	8 727.0
17	Regional governments or local authorities	-	-	-	-	-	-	-
18	Public sector entities	-	-	-	-	-	-	-

		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c-d)
		Defaulted exposures	Non-Defaulted exposures					
19	Multilateral Development Banks	-	-	-	-	-	-	-
20	International Organizations	-	-	-	-	-	-	-
21	Institutions	-	7 897.0	-	-	-	-	7 897.0
22	Corporates	-	2 375.0	-	-	-	-	2 375.0
23	of which: SME	-	-	-	-	-	-	-
24	Retail	-	-	-	-	-	-	-
25	of which: SME	-	-	-	-	-	-	-
26	Secured by mortgages on immovable property	-	-	-	-	-	-	-
27	of which: SME	-	-	-	-	-	-	-
28	Exposures in default	0.0	-	-	-	-	-	0.0
29	Items associated with particularly high risk	-	-	-	-	-	-	-
30	Covered bonds	-	-	-	-	-	-	-
31	Claims on institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-
32	Collective investments undertakings (CIU)	-	-	-	-	-	-	-
33	Equity exposures	-	-	-	-	-	-	-
34	Other exposures	-	292.2	-	-	-	-	292.2
35	<b>Total SA approach</b>	<b>0.0</b>	<b>19 291.2</b>	-	-	-	-	<b>19 291.2</b>
36	<b>Total</b>	<b>0.0</b>	<b>19 291.2</b>	-	-	-	-	<b>19 291.2</b>
37	Total - Of which: Loans	0.0	16 156.7	-	-	-	-	1 615.7
38	Total - Of which: Debt Securities	-	1 445.2	-	-	-	-	1 445.2
39	Total - Of which: Off-BS	-	1 689.3	-	-	-	-	1 689.3



Template 10 – EU CR1-B - Credit quality of exposures by industry or counterparty types

		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c-d)
		Defaulted exposures	Non-Defaulted exposures					
1	Agriculture, forestry and fishing	-	-	-	-	-	-	-
2	Mining and quarrying	-	-	-	-	-	-	-
3	Manufacturing	-	-	-	-	-	-	-
4	Electricity, gas, steam and air conditioning supply	-	-	-	-	-	-	-
5	Water supply	-	-	-	-	-	-	-
6	Construction	-	-	-	-	-	-	-
7	Wholesale and retail trade	-	-	-	-	-	-	-
8	Transport and storage	-	-	-	-	-	-	-
9	Accommodation and food service activities	-	-	-	-	-	-	-
10	Information and communication	-	-	-	-	-	-	-
11	Financial and insurance activities	0.0	10 191.9	-	-	-	-	10 191.9
12	Real estate activities	-	-	-	-	-	-	-
13	Professional, scientific and technical activities	-	-	-	-	-	-	-
14	Administrative and support service activities	-	-	-	-	-	-	-
15	Public administration and defense, compulsory social security	-	8 718.2	-	-	-	-	871.8
16	Education	-	-	-	-	-	-	-
17	Human health services and social work activities	-	-	-	-	-	-	-
18	Arts, entertainment and recreation	-	-	-	-	-	-	-
19	Other services	-	381.1	-	-	-	-	381.1
<b>20</b>	<b>Total</b>	<b>0.0</b>	<b>19 291.2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>19 291.2</b>

One defaulted exposure (amounting to 0.04 mm, 0.0002% of the total) has been reported as of October 31<sup>st</sup>, 2019. The Bank does not book any credit risk adjustment which qualify as general credit risk adjustment.

#### 4.2.6 Credit quality of exposures by geographical area

In the application of Article 442 (h) in the CRR, the table below provides a breakdown of defaulted and non-defaulted exposures by geographical areas. The geographical distribution is based on the legal residence of the counterparty or issuer.

Template 11 - EU CR1-C – Credit quality of exposures by geography

		a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c-d)
	Defaulted exposures	Non-Defaulted exposures						
1	Europe	-	14 589.7	-	-	-	-	14 589.7
2	Of which: Luxembourg	-	6 442.4	-	-	-	-	6 442.4
3	Of which: Switzerland	-	3 267.3	-	-	-	-	3 267.3
4	Of which: united Kingdom	-	2 391.6	-	-	-	-	2 391.6
5	Of which: France	-	1 072.3	-	-	-	-	1 072.3
6	Of which: Italy	-	449.0	-	-	-	-	449.0
7	United States and Canada	0.0	3 960.6	-	-	-	-	3 960.6
8	South and Central America	-	150.0	-	-	-	-	150.0
9	Asia	-	341.9	-	-	-	-	341.9
10	Africa	-	12.8	-	-	-	-	12.8
11	Other geographical areas	-	236.2	-	-	-	-	236.2
<b>12</b>	<b>Total</b>	<b>0.0</b>	<b>19 291.2</b>	-	-	-	-	<b>19 291.2</b>

One defaulted exposure (amounting to 0.04 mm, 0.0002% of the total) has been reported as of October 31<sup>st</sup>, 2019. The related default is technical in nature, i.e. rating is driven by country rating but there is no credit concern on this particular counterpart / exposure. The Bank does not book any credit risk adjustment which qualify as general credit risk adjustment.

## 4.3 Non Performing Exposures

### 4.3.1 Definitions

RBC has adopted IFRS 9 Financial Instruments, resulting in Accounting Policies foreseeing an allowance for credit losses (ACL) being established for all financial instruments, except for financial assets classified or designated as FVTPL<sup>2</sup> and equity securities designated as FVOCI<sup>3</sup>, which are not subject to impairment assessment. Assets subject to impairment assessment include certain loans, debt securities, interest-bearing deposits with banks, accounts and accrued interest receivable. IFRS 9 models and methodologies have been developed and implemented that allow for both the 'accounting driven' Allowance for Credit Loss view (i.e., combination of 12 month and lifetime losses after consideration of IFRS 9 staging, weighted across a range of forward looking macroeconomic scenarios), as well as 'risk driven' expected credit loss view (i.e. forward looking losses for a given period, that are scenario specific and not weighed / staged).

RBC IS Bank Consolidated Financial Statements include in the Accounting Policy section of the Notes and more specifically in the "Financial Instruments / Classification of Financial instruments" sub-section, relevant information related to definitions, classification and valuation of the various components which may be subject to Non Performing Exposures. This includes information related to:

- Allowance for Credit Losses
- Measurement of expected Credit Losses,
- Expected Life,
- Assessment of significant increase in credit risk,
- Use of forward looking information,
- Definition of default,
- Credit Impaired financial assets (stage 3),
- Individually and Collectively assessed loans,
- Write offs.

The past due exposures are assessed for impairment purposes. An exposure is considered impaired when management determines that it will not be able to collect all amounts due according to the original contractual terms or the equivalent value. When a financial asset is considered to be credit-impaired, a loss allowance is recognized equal to credit losses expected over the remaining lifetime of the asset.

Forbearance agreement is defined as a binding legal agreement between RBC and the Borrower when RBC agrees to not exercise its legal right in a Delinquent or Default situation. RBC's agreement to forbear may require the Borrower to perform additional covenants (e.g. provide additional security, selling assets, etc) and may include a compromise in the form of Re-ageing, Extension or Deferral. The Forbearance Agreement must be signed by RBC, the Borrower(s) and guarantor(s) if any.

### 4.3.2 Non Performing Exposures Policies / Strategy

RBC IS Bank leverages RBC relevant policies in terms of management of delinquent and default accounts but had adopted a specific additional addendum to factor relevant additional specific requirements (e.g. regulatory). These cover Non Performing Exposures, Forbearance, Impairment, Past Dues and Provisions.

Assumptions underlying the definition of non-performing exposures are considered to be similar to those used for identifying impaired financial assets and defaulted exposures, including:

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<sup>2</sup> Fair value through profit or loss

<sup>3</sup> Fair value through other comprehensive income

- materiality thresholds for the identification of non-performing exposures on the basis of the 90 days past due criterion (which is set to EUR 10,000 for the time being);
- methods used for days past due counting. The Bank considers a Credit Exposure being past due when the contractual payment of either principal or interest is not received by the Bank within agreed payment schedule. For each day after the contractual due date on which a payment is not received by RBC, the counting of days past due will increase by one.
- indicators of unlikelihood to pay used. Indicators of unlikelihood to pay, which act as a trigger for classification consideration of exposures as Non Performing, leverage on RBC definitions (e.g. the Borrower has sought or been placed in bankruptcy administration or similar protection) but also factor Capital Requirements Regulation (CRR 575/2013 Article 178), such as significant perceived decline in credit quality subsequent to the institution taking on the exposure or credit obligation being put on non-accrued status. This also factors EBA/GL/2016/07 section 5 (e.g. borrower has breached the covenants of a credit contract);
- effective average duration of the cure period and probation period (e.g. the exposure meets the exit criteria applied by the reporting institution for the discontinuation of the impairment and default classification and this has been the case for a period of not less than 3 months)
- the impairment policy for non-performing exposures.

RBC IS Bank has limited to no appetite to any material Non Performing Exposure and has not experienced any impairment / write off on any potential Non Performing Loans in Fiscal 2018 and 2019. However RBC IS Bank has considered in its addendum potential options<sup>4</sup> in terms of strategy should such Non Performing Exposures surge and become material.

#### 4.3.3 Ageing of accounting past due and not impaired exposures

The following table provides an ageing analysis of accounting on-balance-sheet past-due exposures regardless of their impairment status.

Template 12 - EU CR1-D – Ageing of past-due exposures

		a	b	c	e	f	g
		Gross carrying values of					
		≤ 30 days	> 30 days ≤ 60 days	> 60 days ≤ 90 days	> 90 days ≤ 180 days	> 180 days ≤ 1year	> 1year
1	Loans	-	-	-	-	-	-
2	Securities	-	-	-	-	-	-
3	<b>exposures</b>	-	-	-	-	-	-

No past due are reported as of October 31<sup>st</sup>, 2019.

#### 4.3.4 Forborne exposure and non-performing loans

The following table provides an overview of non-performing and forborne exposures as per the Commission Implementing Regulation (EU) No 680/2014, with a split between the loans, debt securities and off-balance sheet exposures categories. 'Other assets' category is not reported into the below table.

<sup>4</sup> e.g. Hold/forbearance strategy; Active portfolio reductions; Change of exposure type; Legal options...

Template 13 - EU CR1-E – Non-performing and forborne exposures

		a	b	c	d	e	f	g
		Gross carrying amount of performing and non-performing exposures						
			Of which performing but past due >30 days and <=90 days	of which performing forborne	Of which non-performing			
					Of which: defaulted	of which: impaired	of which: forborne	
1	Loans	16 156.7	-	-	-	-	-	-
2	Debt Securities	1 445.2	-	-	-	-	-	-
3	Off-balance sheet exposures	1 689.3	-	-	-	-	-	-

We refer to comment on section 4.2.6. The default counterpart is only technical in nature and not considered to be non performing.

		h	i	j	k	l	m
		Accumulated impairment and provisions and negative fair value adjustments due to credit risk				Collaterals and financial guarantees received	
		On performing exposures		On non-performing exposures		On non-performing exposures	of which: forborne exposures
		of which: forborne		of which: forborne			
1	Loans	0.2	-	-	-	-	-
2	Debt Securities	0.1	-	-	-	-	-
3	Off-balance sheet exposures	0.1	-	-	-	-	-

No non-performing exposure are reporting as of October 31st, 2019.

#### 4.3.5 Changes in the stock of specific credit risk adjustments

No specific credit risk adjustments are reported as of October 31st, 2019.

There was no specific credit risk adjustment (i.e. no amount of specific loan loss provision for credit risks) nor any related recovery recorded directly to the income statement during the year end October 31<sup>st</sup>, 2019.

#### 4.3.6 Changes in the stock of defaulted and impaired loans and debt securities

We refer to comment on section 4.2.6. The default counterpart is only technical in nature and not considered to be non performing and has not been subject to any credit risk adjustment neither. Consequently there is no change in defaulted and impaired amounts

### 4.4 Credit risk mitigation

#### 4.4.1 Description of the main types of credit risk mitigants (CRM)

RBCIS Bank uses the following Credit Risk Mitigants to manage its credit risk – but only part of those are actually used for risk exposure quantification as at end of 2019.

##### Collateral / guarantees

RBC has documented its Enterprise Policy on Collateral Management which documents eligible collateral and loan to value, including valuation approach, frequency of valuation, legal documentation and enforceability requirements etc

From a capital standpoint, and as noted in Section 4.4.3, RBC IS Bank only recognizes limited amounts of collateral compared to its overall exposures.

From a risk management standpoint, RBC IS Bank has various contractual documents in place which aim to provide various credit mitigants including but not limited to the below:

- Lien on client assets, set off, retention and power of sale. Our agreements include provisions in terms of transaction processing, subscriptions / redemptions settlement (switch from contractual to actual) and security interests.
- ISDAs / Credit Support Annex ('CSA') or Credit Support Deed (CSD) are generally in place with clients to cover Forex activity.
- Fund Finance loans: security over the uncalled capital of the institutional investors for the capital call loans.

The above are factored on a regular basis as part of credit / counterparty credit risk monitoring processes. RBC IS Bank does not apply Loan to Value but regularly factors the entire Net Asset Value of the funds (where we have a pledge) for information purposes.

Some of the HQLA assets (related to Assets and Liabilities Management) are also subject to underlying guarantee (e.g. State guarantee).

RBCIS Bank does not hold pledges of real estate (residential mortgages, commercial mortgages) nor pledges of commercial assets (e.g. transfer of receivables). The Bank does not have other forms of guarantees neither (e.g. personal guarantees, first demand guarantees and support commitments.)

### Netting agreements

The Bank generally has legally enforceable netting agreements for on balance sheet exposures (authorized and non-authorized overdrafts where assets are under custody with RBCIS Bank) and off-balance sheet exposures (derivatives).

#### 4.4.2 Basel III treatment

RBCIS Bank has adopted the Financial Collateral Comprehensive Approach to take advantage of any sort of collateralization. Collateral is eligible only if it meets the CRR575/2013 conditions. RBCIS Bank considers the following 4 mitigation techniques: Financial collateralized transactions, on-balance sheet netting, guarantees and OTC netting.

#### 4.4.3 Overview of credit risk mitigation techniques

In the application of Article 453 (f) and (g), this table provides an overview of the exposure value covered by Basel III-eligible CRM (after regulatory haircuts) and includes all collateral and financial guarantees used as credit risk mitigation for all secured exposures.

This table also includes the carrying amounts of the total population which are in default. Exposures unsecured (column a) represent the carrying amount of credit risk exposures (net of credit risk adjustments) that do not benefit from a credit risk mitigation technique, regardless of whether this technique is recognized in the CRR. Exposures secured (column b) represent the carrying amount of exposures that have at least one CRM mechanism (collateral, financial guarantees) associated with them.

Template 14 - EU CR3 – Credit risk mitigation techniques – overview

		a	b	c	d	e
		Exposures unsecured - carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Loans	16 088.3	68.4	66.3	-	-
2	Debt Securities	1 445.2	-	-	19.3	-
3	<b>Total exposures</b>	<b>17 533.5</b>	<b>68.4</b>	<b>66.3</b>	<b>19.3</b>	-
4	Of which defaulted	0.04	-	-	-	-

## 4.5 Standardized approach

RBCIS Bank uses the standardized approach to calculate its regulatory capital requirements.

#### 4.5.1 External credit assessment institutions

The standardized approach provides weighted risk figures based on external ratings given by External Credit Assessment Institutions (ECAI's) as indicated in the CRR. In order to apply the standardized approach for risk weighted exposure, RBCIS Bank uses external ratings assigned by the following rating agencies: Standard & Poor's, Fitch and Moody's.

The "second best approach" is used for the selection of the external ratings for the regulatory capital calculation. If no external rating is available, the CRR regulation provides specific risk weights to be applied.

Table 4-1 - Mapping of ECAIs' credit assessments to credit quality steps

Credit Quality Step	Fitch's assessments	Moody's assessments	S&P's assessments
1	AAA to AA-	Aaa to Aa3	AAA to AA-
2	A+ to A-	A1 to A3	A+ to A-
3	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-
4	BB+ to BB-	Ba1 to Ba3	BB+ to BB-
5	B+ to B-	B1 to B3	B+ to B-
6	CCC+ and below	Caa1 and below	CCC+ and below

#### 4.5.2 Standardized approach – Credit risk exposure and Credit Risk Mitigation effects

The following table shows credit risk exposure before credit conversion factor (CCF) and credit risk mitigation (CRM) and the exposure-at-default (EAD) after CCF and CRM broken down by exposure classes and a split in on- and off-balance sheet exposures, under the standardized approach.

Exposures subject to the counterparty credit risk (CCR) and securitization risk framework are excluded from this template.

Template 15 - EU CR4: Standardized approach – credit risk exposure and Credit Risk Mitigation effects

Asset classes		a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
1	Central governments or central banks	8 727.0	-	8 727.0	-	13.1	0.15%
2	Regional government or local authorities	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	-	-
4	Multilateral development banks	-	-	-	-	-	-
5	International organizations	-	-	-	-	-	-
6	Institutions	7 700.1	196.9	7 675.9	-	1 593.5	20.75%
7	Corporates	886.8	1 488.2	844.7	296.2	1 140.8	100.00%
8	Retail	-	-	-	-	-	-
9	Secured by mortgages on immovable property	-	-	-	-	-	-
10	Exposures in default	0.0	-	0.0	-	0.1	150.00%
11	Exposures associated with particularly high risk	-	-	-	-	-	-
12	Covered bonds	-	-	-	-	-	-
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-
14	Collective investment undertakings	-	-	-	-	-	-
15	Equity	-	-	-	-	-	-
16	Other items	292.2	-	292.2	-	187.2	64.06%
17	<b>Total</b>	<b>17 606.1</b>	<b>1 685.1</b>	<b>17 539.8</b>	<b>296.2</b>	<b>2 934.7</b>	<b>16.45%</b>

The Bank does not consider to have any significant market or credit risk concentrations within the credit mitigation taken.



As of October 31, 2019, RBCIS Bank invests or is dealing with well rated counterparties, occurring a an average risk weight close to 0% for the “Central governments or central banks” category, and close to 20% (21.3% as of October 31<sup>st</sup>, 2018) for the “Institutions” category. Investment funds are classified under the “Corporate” asset class. A “Non-Rated” 100% risk weight is applied for investment funds counterparties, no external credit assessment being provided by ECAI for Funds counterparties.

The Bank does not disclose information on the exposure values and the exposure values after credit risk mitigation associated with each credit quality step as prescribed in Part Three, Title II, Chapter 2 of the CRR as well as those deducted from own funds, as required by Article 444(e) of the CRR, as those information are considered proprietary.

#### **4.5.3 Standardized approach – exposures by asset classes and risk weights**

In the application of Article 444 (e), the following table shows the exposure-at-default post conversion factor and risk mitigation broken down by exposure classes and risk weights, under the standardized approach.

Exposures subject to the counterparty credit risk and securitization risk framework are excluded from this template.

Template 16 - EU CR5 – Standardized approach – exposures by asset classes and risk weights

		Risk Weights								
		0%	2%	4%	10%	20%	35%	50%	70%	75%
1	Central governments or central banks	8 720.3	-	-	-	-	-	-	-	-
2	Regional government or local authorities	-	-	-	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	-	-	-	-	-
4	Multilateral development banks	-	-	-	-	-	-	-	-	-
5	International organizations	-	-	-	-	-	-	-	-	-
6	Institutions	-	-	-	-	7 517.7	-	139.5	-	-
7	Corporates	-	-	-	-	-	-	-	-	-
8	Retail	-	-	-	-	-	-	-	-	-
9	Secured by mortgages on immovable property	-	-	-	-	-	-	-	-	-
10	Exposures in default	-	-	-	-	-	-	-	-	-
11	Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-
12	Covered bonds	-	-	-	-	-	-	-	-	-
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-
14	Collective investment undertakings	-	-	-	-	-	-	-	-	-
15	Equity	-	-	-	-	-	-	-	-	-
16	Other items	-	-	-	-	137.5	-	-	-	-
17	<b>Total</b>	<b>8 720.3</b>	-	-	-	<b>7 655.2</b>	-	<b>139.5</b>	-	-

		Risk Weights						Total	Of which unrated	
		100%	150%	250%	370%	1250%	Others			Deducted
1	Central governments or central banks	2.4		4.3				-	8 727.0	2.4
2	Regional government or local authorities	-	-	-	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	-	-	-	-	-
4	Multilateral development banks	-	-	-	-	-	-	-	-	-
5	International organizations	-	-	-	-	-	-	-	-	-
6	Institutions	18.6	0.0	-	-	0.1	-	-	7 675.9	0.1
7	Corporates	1 131.0	9.9	-	-	-	-	-	1 140.9	1 131.0
8	Retail	-	-	-	-	-	-	-	-	-
9	Secured by mortgages on immovable property	-	-	-	-	-	-	-	-	-
10	Exposures in default	-	0.0	-	-	-	-	-	0.0	-
11	Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-
12	Covered bonds	-	-	-	-	-	-	-	-	-
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-
14	Collective investment undertakings	-	-	-	-	-	-	-	-	-
15	Equity	-	-	-	-	-	-	-	-	-
16	Other items	154.7	-	-	-	-	-	-	292.2	282.9
<b>17</b>	<b>Total</b>	<b>1 306.7</b>	<b>9.9</b>	<b>4.3</b>	<b>-</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>17 836.0</b>	<b>1 416.3</b>

## 4.6 Counterparty credit risk

### 4.6.1 Management of counterparty risk

The following exposures are part of this sub-section:

- Foreign exchange operations (FX spots, FX Outright Forwards and FX Swaps of maximum 1 Year and on a list of selected currencies). Accumulated client positions are offset in the market to minimize market risk. The overnight market risk limits are hence set at very low levels as there is no Risk appetite to keep open positions overnight. Please refer to Market Risk section for further details.

The Bank does not use any other derivatives (no repos / reverse repos, no IRS, ...) and hence there are no other sources of Counterparty Credit Risk in terms of derivatives.

### Counterparty Credit Risk Mitigation

Master netting agreements or similar arrangements (collectively, netting agreements) with counterparties are used to mitigate counterparty credit risk as a result of markets exposure and permit the Bank to offset receivables and payables with such counterparties. A netting agreement is a contract with a counterparty that permits net settlement of multiple transactions with that counterparty, including upon the exercise of termination rights by a non-defaulting party. Upon exercise of such termination rights, all transactions governed by the netting agreement are terminated and a net settlement amount is calculated.

All counterparties that trade term exposures are expected to sign a master agreement containing netting provisions and clauses that seek to minimize credit exposures. The Bank's policy requires all netting arrangements to be legally documented. ISDA (International Swaps and Derivative Association) master agreements and CSA ('Credit Support Annex') are RBCIS Bank's preferred manner for documenting OTC derivatives.

### Wrong way Risk

RBCIS Bank has limited exposure to wrong-way risk, i.e. the risk that exposure to a counterparty or obligor is adversely correlated with the credit quality of that counterparty.

Regarding the specific Wrong-Way Risk<sup>5</sup>, the Bank never enters into contracts with underlying instruments linked to the counterparty (i.e. derivative contracts based on the counterparty's own securities, reverse rep transactions with counterparty's securities used as collateral...).

Regarding the General (or Systemic) Wrong-Way Risk<sup>6</sup>, it is limited given the nature of the Bank's exposures where for instance client driven FX exposures are covered in the market, with RBCIS Bank not taking any active positions.

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<sup>5</sup> when an exposure to a particular counterparty is positively and highly correlated with the probability of default of the counterparty due to the nature of our transactions with them

<sup>6</sup> when there is a positive correlation between the probability of default of counterparties and general macroeconomic or market factors. This typically occurs with derivatives (e.g. the size of the exposure increases) or with collateralized transactions (the value of the collateral declines).

#### 4.6.2 Analysis of CCR exposures by model approach

In the application of Article 439 (f) in the CRR, the following table shows the methods used for calculating the regulatory requirements for CCR exposure. Exposures cleared through a central counterparty (CCP) are excluded.

As displayed, the Bank uses the mark-to-market methods to measure the exposure value of instruments subject to capital requirements for CCR.

Template 17 - EU CCR1: Analysis of CCR exposure by approach

	a	b	c	d	e	f	g
	Notional	Replacement cost/ Current market value	Potential future credit exposure	EEPE	Multiplier	EAD post-CRM	RWA
1	Mark to market	474.9	886.8			847.1	427.4
2	Original exposure	-				-	-
3	Standardized approach	-			-	-	-
4	Internal Model Method (for derivatives and SFTs)			-	-	-	-
5	Of which securities financing transactions			-	-	-	-
6	Of which derivatives and long settlement transactions			-	-	-	-
7	Of which from contractual cross-product netting			-	-	-	-
8	Financial collateral simple method (for SFTs)				-	-	-
9	Financial collateral comprehensive method (for SFTs)					-	-
10	VaR for SFTs					-	-
11	<b>Total</b>						<b>427.4</b>

As at 31 October 2019, the final exposure arising from derivative transactions amounted to EUR 1,361.6 million, exposure post netting totalizing € 847,1 million.

#### 4.6.3 CVA capital charge

In the application of Article 439 (f) in the CRR, the following table provides the exposure value and risk exposure amount of transactions subject to capital requirements for credit valuation adjustment. RBCIS's OTC derivatives exposures are subject to credit valuation adjustment. RBCIS Bank uses the standardized approach to calculate CVA capital charge.

Template 18 - EU CCR2 – Credit valuation adjustment (CVA) capital charge

		a	b
		Exposure value	RWA
1	Total portfolios subject to the Advanced CVA capital charge	-	-
2	(i) VaR component (including the 3×multiplier)		-
3	(ii) Stressed VaR component (including the 3×multiplier)		-
4	All portfolios subject to the Standardized CVA capital charge	699.4	96.2
EU4	Based on Original Exposure Method	-	-
5	<b>Total subject to the CVA capital charge</b>	<b>699.4</b>	<b>96.2</b>

#### 4.6.4 Exposures to CCP

RBCIS Bank is not exposed to central counterparties.

#### 4.6.5 Standardized approach - CCR exposures by exposure class and risk weight

In the application of Article 444 (e) in the CRR, the following table provides the counterparty credit risk exposures under the standardized approach broken down by risk weights and regulatory exposure classes. "Unrated" includes all exposures for which a credit assessment by a nominated ECAI is not available and they therefore receive the standard risk weight according to their exposure classes as described in the CRR.

Template 19 - EU CCR3: Standardized approach – CCR exposures by regulatory portfolio and risk.

Exposure Classes		Risk Weights					
		0%	2%	4%	10%	20%	50%
1	Central governments or central banks	-	-	-	-	-	-
2	Regional governments or local authorities	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	-	-
4	Multilateral Development Banks	-	-	-	-	-	-
5	International Organizations	-	-	-	-	-	-
6	Institutions	-	-	-	-	518.5	9.8
7	Corporates	-	-	-	-	-	-
8	Retail	-	-	-	-	-	-
9	Institutions and corporates with a short term credit assessment	-	-	-	-	-	-
10	Other items	-	-	-	-	-	-
11	<b>Total</b>	-	-	-	-	<b>518.5</b>	<b>9.8</b>

Exposure Classes		Risk Weights					Total	Of Which unrated
		70%	75%	100%	150%	Others		
1	Central governments or central banks	-	-	-	-	-	-	-
2	Regional governments or local authorities	-	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	-	-	-
4	Multilateral Development Banks	-	-	-	-	-	-	-
5	International Organizations	-	-	-	-	-	-	-
6	Institutions	-	-	0.1	0.0	-	528.4	-
7	Corporates	-	-	318.7	0.0	-	318.7	318.7
8	Retail	-	-	-	-	-	-	-
9	Institutions and corporates with a short term credit assessment	-	-	-	-	-	-	-
10	Other items	-	-	-	-	-	-	-
11	<b>Total</b>	-	-	<b>318.7</b>	<b>0.0</b>	<b>0.0</b>	<b>847.1</b>	<b>318.7</b>

Investments funds are falling into the corporate category. Most of nominated ECAs do not rate investments funds counterparties.

#### 4.6.6 Impact of netting and collateral held on exposure value for derivatives and SFTs

In the application of Article 439 (e) in the CRR, the following tables present information on counterparty credit risk exposure and the impact of netting and collateral held as well as the composition of collateral used in both derivatives transactions and securities financing transactions (SFT).

RBCIS Bank is solely exposed to derivatives transactions and consequently does not hold securities financings transactions.

The table below provides the gross positive fair values before any credit risk mitigation, the impact of legally enforceable master netting agreements as well as further reduction of the CCR exposure due to eligible collateral received.

Template 20 - EU CCR5-A – Impact of netting and collateral held on exposure values

		a	b	c	d	e
		Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
1	Derivatives	474.9	514.6	847.1	-	847.1
2	Securities Financing Transactions	-	-	-	-	-
3	Cross-product netting	-	-	-	-	-
4	<b>Total</b>	<b>474.9</b>	<b>514.6</b>	<b>847.1</b>	-	<b>847.1</b>

#### 4.6.7 Impact on collateral to be provided in case of credit rating downgrade

The Bank considers that, at this stage, there would be no additional amount of collateral to be provided by RBC IS Bank in case of downgrade in its credit rating.



## 5 Market Risk

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### 5.1 Definition of Risk

Market Risk is the impact of market prices upon the financial condition of the firm. This includes potential gains or losses due to changes in market determined variables such as interest rates, credit spreads, equity prices, commodity prices, foreign exchange rates and implied volatilities.

Market risk can be exacerbated by thinly-traded or illiquid markets. For an overview of Market Risk sub-risks, please refer to the RBC Enterprise Market Risk Framework.

### 5.2 Risk Overview

#### 5.2.1 Risk Profile

The different business areas within RBCIS Bank with a contribution to Market risk are:

- Cash and Liquidity Management - This business holds an inventory of institutional, supranational, government and financial (covered) bonds and is sensitive to credit spread risk and – to a lesser extent – to interest rate risk. The portfolio has a relatively short duration, high credit quality and is used to manage RBCIS Bank’s liquidity. Treasury investments are made in the banking book in accordance with the Investment Policy approved by the Board. The policy permits investment of assets in a prudent manner that avoids undue risk of loss while earning a reasonable rate of return.
- Forex exchange services - which are incidental to supporting clients’ needs. Limited intraday FX positions and very small overnight positions are authorized to allow for residual small client trades to be aggregated intraday and placed through professional market counterparties. Limits are established based on the volumes and currency volatility by trading location. These positions are monitored tightly on a daily basis by the Market Risk Unit in Risk Management. No speculative trading positions are allowed. RBCIS Bank’s policy is to avoid market risk, and proprietary trading activities are not part of the strategy given the current risk appetite. Therefore there is no material exposure to market risk in the RBCIS Bank’s Trading book
- In addition, from time to time, operational events for securities transactions may cause RBCIS to hold relatively small short-term positions; these are then typically liquidated in an orderly fashion. The risk inherent in these positions is kept to a minimum as they are liquidated or hedged at the earliest possible time. These positions are captured by the operational risk processes.

#### 5.2.2 Risk Quantification

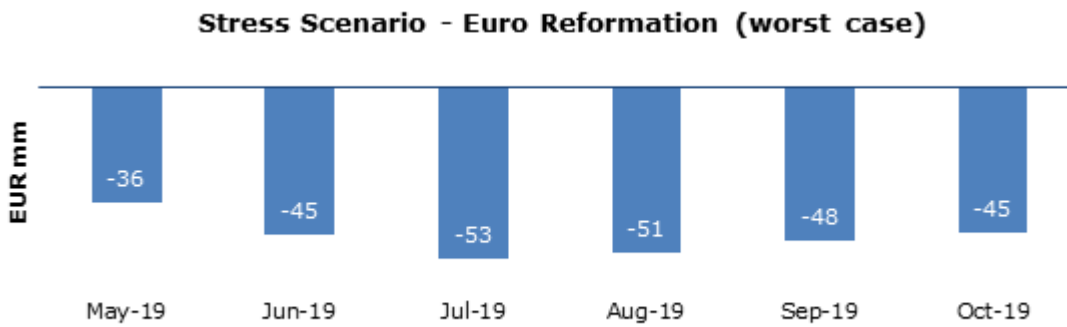
RBCIS Bank uses a range of risk measurement metrics and limits to understand and manage the risks that the business is exposed to such as:

- Value-at-Risk (VaR) and stress VaR;
- Stress testing (historical & hypothetical stress scenarios and sensitivity stress tests);
- Sensitivity measures, including Credit Spread and Interest Sensitivities and
- Other nominal measures (i.e. the FX overnight positions).

Graph 5-1 - RBCIS 1D 99% VaR & SVaR Exposures

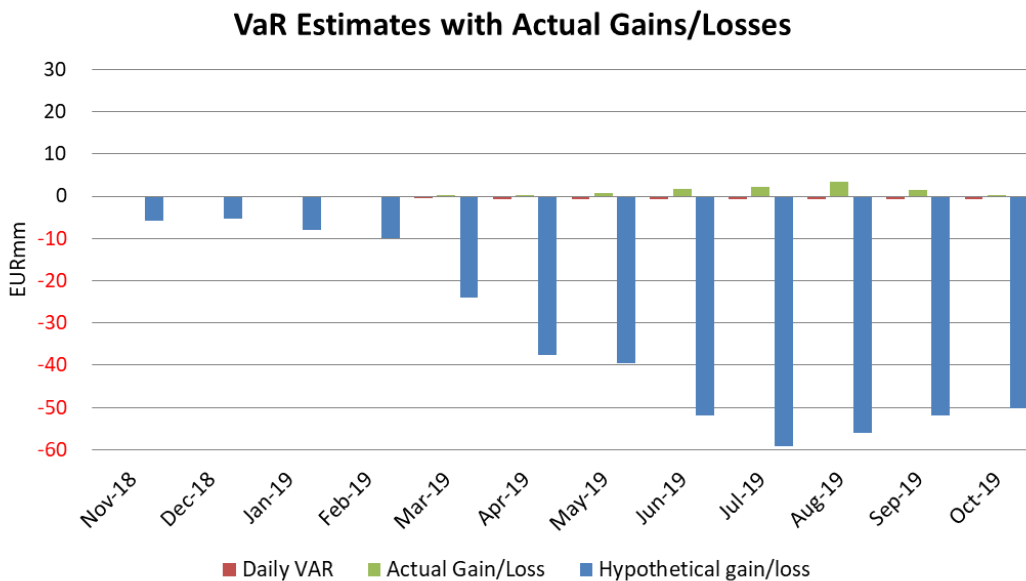


Graph 5-2 - RBCIS Stress Testing Worst Case - EUR Reformation



In the application of article 455(g) of the CRR, institutions should disclose VaR estimates vs. actual gains and losses specified in the format of template EU MR4. This evaluates the effectiveness of VaR estimates by comparing it to daily actual P&L.

Graph 5-3 - Template: EU MR4 Comparison of VaR Estimates with Actual Gains/Losses (EUR mm)



## 5.3 Risk Control and Governance Structure

### 5.3.1 Risk Control and Reporting

RBCIS Bank's Market risk appetite is set and reviewed by the RBCIS Bank Board. RBCIS Bank has a range of limits in place covering the risk measurement metrics noted above. All limits set by RBCIS Bank are consistent with the stated risk appetite. In addition to the RBCIS Bank Board approved limits, operational limits can also be set at the RBCIS Bank CRO level. Exposures are also limited by the RBC Group limit structure.

GRM – Market and Counterparty Credit Risk (MCCR) function produces daily reports for the business and senior management detailing RBCIS Bank's Market risk profile against limits, as well as monthly summary reports to the RBCIS Bank Board of Directors (or its risk Committee) and the RBCIS Bank Executive Committee (ExCo).

Breaches of Board limits are reported to the Risk Committee of the RBCIS Bank Board and the RBCIS Bank Executive Committee (ExCo) at its next meeting. Excesses to Operational limits are reported to the RBCIS Bank ExCo and to the Conduct Risk Committee chaired by Senior Vice President-MCCR and assigned a Red, Amber or Green rating. The decision will then be shared with the senior business management team and HR for any remedial action.

### 5.3.2 Key Risk Mitigation Policies

The Investment policy limits the permissible investments as described in the table below:

Table 5-1 - Metrics and Investment Policy Constraint

Metric	Investment Policy Constraint
Maximum maturity	< 7.0 Yrs
Maximum weighed average portfolio maturity	< 4.5 Yrs
Asset Quality	Level 1, Level 2a and Level 2b
Concentration in Level 2A (on Total HQLA)	< 40%
Concentration in Level 2B (on Total HQLA)	< 15%
Swiss Covered Bonds restricted to Credit Suisse and UBS issuers that are not eligible as EBA HQLA.	< EUR 400 mm
Max. Allocation by individual issuer	< 20%

The above quantitative metrics are supplemented by qualitative metrics on the type of authorized assets (Fixed or floating rate fixed income products) and authorized countries.

In addition, advanced quantitative metrics (VaR, Stress VaR and Stress scenario) are calculated and monitored on a daily basis against RBCIS Bank operational limits.

Any breaches of the Investment Policy or of any of the operational limits will be escalated directly to the IS Bank's CRO and Treasurer and reported to the next ExCo and also to the Conduct Risk Committee.

RBC IS Bank has a defined trading Product Mandate as approved by the New Business Committee (NBC). Both Local Market Risk and Enterprise Market Risk teams are part of the NBC approval process. The Product Mandate defines the set of products that a desk is permitted to trade to ensure all trades have the appropriate level of functional support and risk capture. Any breach of the Product Mandate follows the same escalation process applicable for limits breaches.

### **5.3.3 Currency Risk Management**

#### **5.3.3.1 Currency Risk Control and Reporting**

Currency Risk or exchange rate risk refers to the exposure faced by investors or companies that operate across different countries, in regard to unpredictable gains or losses due to changes in the value of one currency in relation to another currency. RBCIS does not hold significant spot open positions.

The Bank conducts foreign exchange intermediation activity i.e. offers execution and sales services to its clients. In addition, the Bank may be exposed to foreign exchange risk on its foreign currency commission revenues and on its long term capital investments in subsidiaries.

The Bank's trading currency position is managed on a real time basis by the Front Office dealers. Most of transactions are booked separately, without delay and daily in the Front Office system "Kondor+". "Kondor+" is interfaced in real time with the "Back Office" system and the Accounting system.

The Back Office can follow up in real time any operations being pending in the interface between both systems.

GRM-MCCR produces a daily report listing the FX overnight positions and limits to the attention of the Chief Risk Officer, the Head of Market desk, and the Head of Risk. In addition, Finance reconciles the Foreign Exchange positions and Profit and Loss results between Front Office records and accounting books.

FX Overnight limits are set up by currency. Intra-day limits are set up for the desk to adhere to during the day trading activity. Any breach of currency risk limits without prior approval will follow the escalation process as defined for other operational limits.

#### **5.3.3.2 Currency Risk Profile**

RBCIS is primarily active in currencies with deep liquid foreign exchange markets such as EUR, USD and GBP. RBCIS Bank's assets and liabilities are primarily composed of EUR and USD. The remainder of the balance sheet is denominated in GBP and other. RBCIS Bank also undertakes FX Swap activities for cash optimization purposes. This activity is short dated by nature (average weighted maturity of 5.04 days during October 2019) and is mainly done in EUR/CHF, EUR/GBP and EUR/USD.

Treasury Market Services (TMS) is using the FX forward market to swap Tier 1 and Tier 2 currencies into EUR and CHF and in turn places the proceed at SNB and ECB. This allows TMS to achieve better economics due to the price fluctuation dynamic which tends to intensify over calendar month, quarter and year ends.

The currency risk is mitigated by having in place low PV01 limits across all currencies.

Table 5-2- Fx PV01 exposure vs. Limits

PV01	Bucket 0:	Bucket 1:	Bucket 2:	Bucket 3:	Bucket 4:	Bucket 5:	Total	Limit	Available
	mty<=3D	3D<mty<=1M	1M<mty<=2M	2M<mty<=3M	3M<mty<=6M	6M<mty<=1Y			
AED		-25					-25	2,000	1,975
AUD	0	-88	-481	-446			-1,015	5,000	3,985
CAD	3	-88					-85	5,000	4,915
CHF	87	2,865	-12,009	23,097	3,119		17,160	100,000	82,840
CNY	-4						-4	2,000	1,996
DKK	3		-544				-541	15,000	14,459
EUR	-51	-2,101	20,704	-11,406	-630	2,329	8,846	100,000	91,154
GBP	-3		-1,654				-1,657	40,000	38,343
HKD	-13	-75	-893	-2,747	-1,214	-2,292	-7,236	40,000	32,764
HUF		-9					-9	2,000	1,991
ILS	0						0	2,000	2,000
JPY	1	-445	-2,416	-4,024			-6,884	20,000	13,116
MXN	-3						-3	2,000	1,997
NOK	1		-257		-1,187		-1,443	15,000	13,557
NZD	-1	1					0	2,000	2,000
PLN	0	-10					-10	2,000	1,990
RUB	-1						-1	2,000	1,999
SEK	8	-26	-1,298	-904			-2,220	15,000	12,780
THB	0						0	2,000	2,000
TND		-1					-1	2,000	1,999
TRY	0						0	2,000	2,000
USD	-24	25	-961	-3,541			-4,500	40,000	35,500
ZAR	-2						-2	2,000	1,998
Grand Total	2	23	190	30	87	37	369		

### 5.3.3.3 Key Vulnerabilities

By nature the level of risk in the Trading book is low and there are no identified vulnerabilities.

The market risk in the banking book is mainly driven by the credit spread risk in the FVOCI portfolio. As the FVOCI portfolio at the end of October 2019 has only slightly increased to EUR 1.4bn considered the inherent risks associated to the FVOCI portfolio as Low.

## 5.4 Trading Book Procedures and Systems

### 5.4.1 Trading Book

The only permissible instruments are FX spots, FX Outright Forwards and FX Swaps of maximum tenor of 1 Year and on a list of selected currencies.

Operational limits are set to limit the residual FX overnight positions. The limits are set at very low levels as there is no risk appetite to keep open positions overnight.

At the end of October 2019, the VaR exposure had very low usage compared to the limit.

Table 5-3– FX VaR and Stress VaR exposures vs. Limits

VaR and stress VaR Operational Limits - RBCIS Bank Consolidated			
Date	Operational Limit in k EUR	Metric in EUR	Usage
VaR	EUR 35 k	1 667	5%
Stress VaR	EUR 70 k	4 392	6%

## 5.5 Assessment of the regulatory capital requirement

RBCIS applies the standardized approach to calculate its regulatory capital requirement for general interest rate risk within trading activities and foreign exchange risk.

The template below presents the Bank’s regulatory capital required broken down by risk type for year-end 2018.

Template 21 - EU MR1: Market risk under standardized approach

	a	b
	RWA	Capital requirements
<b>Outright products</b>	<b>114.7</b>	<b>9.2</b>
Interest rate risk (general and specific)	77.1	6.2
Equity risk (general and specific)	-	-
Foreign exchange risk	37.6	3.0
Commodity risk	-	-
<b>Options</b>	-	-
Simplified approach	-	-
Delta-plus method	-	-
Scenario approach	-	-
<b>Securitization (specific risk)</b>	-	-
<b>Total</b>	<b>114.7</b>	<b>9.2</b>

## 6 Liquidity Risk

### 6.1 Risk management objectives and policies for liquidity risk

#### 6.1.1 Governance and Risk Control

##### 6.1.1.1 Governance Summary

RBCIS Bank employs a three lines of defense model with respect to liquidity risk. This provides segregation between those who take on risk, those who control risk and those who provide assurance.

The table below shows the authorities for governance of key risk control elements. The table 6-1 below provides the roles and responsibilities across 1<sup>st</sup> line, 2<sup>nd</sup> line and approval committees.

GRM, and the CRO, form key components of the overall risk framework of RBCIS Bank.

Table 6-1 – Liquidity Risk Governance summary

Key risk control element	1 <sup>st</sup> Line of defense	2 <sup>nd</sup> Line of defense		Committees		
	Corporate Treasury	GRM Liquidity Risk and Chief Risk Officer	Enterprise Model Risk Management	ALCO	EXCO	Board of Directors
1. Measurement, Methodologies and Models	Propose	Approve	Model vetting	Approve	Approve	Approve
2. Parameters and Assumptions	Propose	Approve	Not applicable	Approve	Approve	Approve
3. Metrics	Propose	Approve	Not applicable	Approve	Approve	Approve
4. Limits	Propose	Approve	Not applicable	Approve	Approve	Approve

##### 6.1.1.2 Overall Governance – Three lines of defense model

RBCIS Bank's three lines of defense model is described in detail below:

- **1<sup>st</sup> Line of Defense**

The first line of defense for risks arising from the management of liquidity is provided by the business and support functions embedded in the business and comprises Investor and Treasury Market Services (TMS) and Corporate Treasury (CT).

##### I&TS Treasury & Market Services (TMS)

- Treasury and Market Services ("TMS") ensures the management of unsecured intra-group funding to tenor limits;
- Tests, at least annually, the access to central bank facilities under direction from Corporate Treasury (the results of these tests are reported to RBCIS Bank ALCO); and
- Under the directive of CT based on the guidelines laid out in the RBCIS Bank Investment Policy, maintains a suitable diversified High Quality Liquid Asset (HQLA) buffer.

## Corporate Treasury (CT)

- Provides risk identification, assessment, mitigation, control and reporting in accordance with established RBCIS Bank risk policies;
- Ensures alignment of business and operational strategies with corporate risk culture and risk appetite;
- Plays a monitoring, advisory, policy and coordinating role with respect to balance sheet, liquidity, interest rate risk in the banking book and capital matters to ensure prudent balance sheet management and compliance with the internally defined Risk Appetite Framework and regulatory requirements;  
and
- Works in conjunction with RBC Corporate Treasury to obtain advice and counsel on the balance sheet management and its related risk and performs ongoing coordination with other functions and business segments of I&TS and RBC.

- **2<sup>nd</sup> Line of Defense**

The Second Line of Defense is provided by Group Risk Management (GRM) – Liquidity Oversight and Global Compliance.

As mentioned in the section 1.2.1.6, the Second Line:

- Establishes the enterprise level risk management frameworks, and provides risk guidance;
- Provides oversight for the effectiveness of First Line risk management practices;  
and
- Monitors independently reporting on the level of risk against the established risk appetite limits.

Ultimate responsibility for all aspects related to the oversight of liquidity risk lies with the Board of Directors, who has delegated day-to-day control to the Chief Financial Officer (CFO) and the Chief Risk Officer (CRO). The CFO and CRO are supported by the ALCO, the Risk Committee and Heads of Risk.

- **3<sup>rd</sup> Line of Defense**

See section 1.2.1.6.

### 6.1.1.3 Roles and Responsibilities

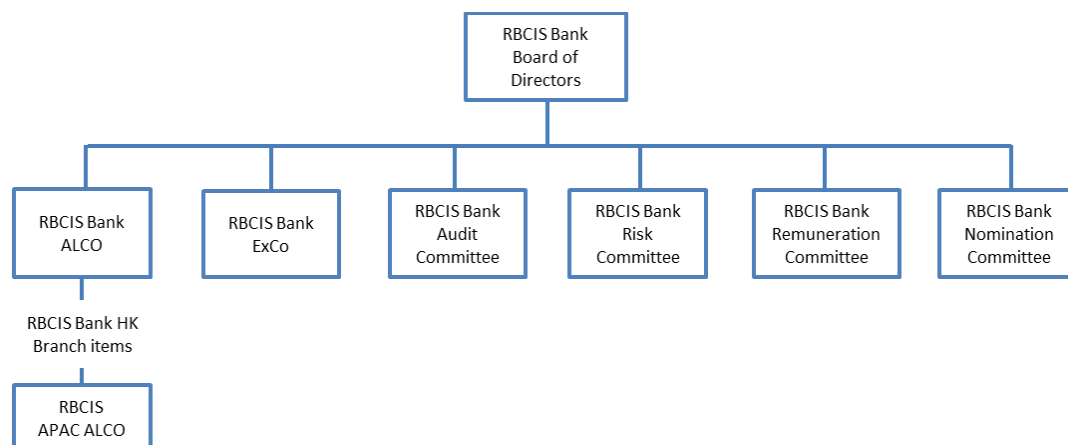
#### 6.1.1.3.1 Role of the Board

The role of the Board of Directors is described in the section 1.2.1.1 of the document.

The Board of Directors' responsibilities with respect to liquidity risk include:

- Approving RBCIS Bank's liquidity risk appetite and establishing mechanisms to ensure that the level of risk within the firm remains within the specified risk appetite; and
- Approving the policy framework; and
- Annually approving the ILAAP.





**6.1.1.3.2 Delegation of Duties**

For liquidity risk matters, the Board of Directors delegates its daily management in compliance with the principles laid down in the frameworks and policies approved by the Board or the Risk Committee, to the RBCIS Bank ALCO.

**6.1.1.3.3 RBCIS Bank Risk Committee**

The role of the Risk Committee is described in the section 1.2.1.2 of this document.

Regarding the liquidity risk, the Risk Committee also reviews and recommends approval to the Board of Directors the annual ILAAP document.

**6.1.1.3.4 RBCIS Bank Executive Committee**

The role of the RBCIS Bank Executive Committee (Exco) is described the section 1.2.1.3 of this document. Regarding the liquidity risk, regular monthly reports establishing the liquidity risk status and profile of the Bank are presented to the ExCo. It also reviews and approves the annual ILAAP document before submission to the RC and the BoD.

**6.1.1.3.5 RBCIS Bank Asset and Liability Committee (ALCO)**

The role of the ALCO is described in the section 1.2.1.5 of this document. In addition to this, ALCO reviews and recommends for approval by the Board of Directors or their committees the following policies and documents:

Table 6-2 – Policies and owners

Owner	Policy Name	Report Name
Corporate Treasury	IRRBB Policy	ILAAP
	Capital Management Policy	Funding Plan
	Dividend Policy	Capital Plan
	Investment Policy	Pillar 3 Disclosure
	Intragroup Lending Policy	
	Liquidity Risk Funds Transfer Pricing Policy	
	Liquidity Contingency Plan & Capital calculation policy	

Owner	Policy Name	Report Name
	Large exposures policy Pillar 3 Policy	
GRM	Liquidity Risk Management Framework Liquidity Risk Policy Pledging Policy	

ALCO also reviews and approves the ILAAP document before submission to the ExCo and the BoD.

#### **6.1.1.3.6 Corporate Treasury - Management**

Corporate Treasury (CT) has overall responsibility for liquidity management in RBCIS Bank. Corporate Treasury has the following roles and responsibilities:

- Maintain funding and liquidity plans;
- Propose fund transfer pricing methodology;
- Propose changes to Stress Testing methodology and Liquidity Risk Model (NAV Ratio model);
- Review Liquidity risk policies (Liquidity Management Framework, Liquidity Risk Framework and Pledging Policy);
- Propose limits and exceptions within its authorities;
- Own and update the Liquidity Contingency Plan, the ILAAP, the Funding Plan, the Investment Policy and
- Contribute to the annual review process of the Recovery Plan and ICAAP.

Corporate Treasury delegates responsibility for day-to-day liquidity management, including the management of liquid asset buffers and short-term funding to I&TS Treasury Market Services (TMS).

#### **6.1.1.3.7 Corporate Treasury - Liquidity Measurement**

Corporate Treasury - Liquidity Measurement has day-to-day ownership of liquidity measurement. The team has the following responsibilities:

- Manage the liquidity risk measurement and reporting processes for IS Bank and its subsidiaries; and
- Produce Management Information for the ALCO;
- Establish, monitor and report adherence to RBC liquidity risk limits and standing orders, escalating limit excesses appropriately to management;
- Communicate impacts from changes in regulatory landscape;
- Implement reporting and risk measurement processes to ensure RBCIS Bank meets complex and dynamic regulatory requirements;

and

- Lead relationship with GRM with respect to their liquidity risk oversight function.

#### **6.1.1.3.8 I&TS Treasury & Market Services (TMS)**

In addition to ensuring compliance with all relevant local limits and regulation, TMS has the following roles and responsibilities:

- Liquidity management execution agents tasked with the responsibility for execution of short-term, operational liquidity management within limit and policy constraint;
- Identifying preferred liquidity management strategies;
- Monitoring and reporting market developments, including central bank actions, to assess the potential for changes in liquidity or funding conditions;
- Retaining primary responsibility for intraday cash and collateral management;

- Managing liquid assets and other liquid asset buffers in line with directions from Corporate Treasury; and
- Providing immediate engagement with key business partners and executing open market transactions.

#### **6.1.1.3.9 GRM**

GRM Market and Counterparty Credit Risk is responsible for independent global oversight of liquidity risk, with RBC IS Bank team acting as the second line of defense challenge and oversight function for RBC IS Bank on consolidated basis. The responsibilities of GRM also include but are not limited to ensure adequate Liquidity Risk framework and policies are defined, leveraging on RBC requirements and factoring RBC IS Bank specifics in terms of business, products, activities, regulations adequate. This includes GRM ownership on some of the policies and GRM review, challenge and approval for those owned by CT;

- Establish and monitor compliance with risk limits and policies, including reporting and escalation of breaches of risk limits;
- Review and validation of relevant liquidity risk significant models and assumption;
- Oversight and review of stress testings and relevant key regulatory reporting.

#### **6.1.1.4 ILAAP and Risk Management processes**

The RBCIS Bank ILAAP is an annual process led by RBCIS Bank Corporate Treasury falling under the responsibility of RBCIS Bank ALCO and Executive Committee. The RBCIS Bank Board is responsible for review, challenge and approval of the ILAAP results and document.

RBCIS Bank's ILAAP is fully embedded in the overall risk management processes. RBCIS Bank's ILAAP presents a clear and concise picture of the liquidity risks that the firm faces. The document provides the Management Body and the Joint Supervisory Team with a comprehensive overview of key constituents of liquidity risk management and measurement within the firm. The diagram below demonstrates the building blocks which form the basis of the ILAAP document.

The ILAAP document details the governance and controls related to the management and measurement of liquidity risk including the roles of the key stakeholders and the direction provided by the Board level risk appetite statement and framework.

#### **6.1.1.5 Interlinkage with Risk framework - Risk appetite**

##### **6.1.1.5.1 Governance Risk Appetite Liquidity Risk**

The risk appetite of RBCIS Bank and its affiliates is defined within the RBCIS Bank Risk Appetite Framework, reviewed and approved at least annually by the RBCIS Bank Board of Directors.

RBCIS's liquidity risk appetite is proposed by Corporate Treasury and recommended by GRM. It is reviewed by ALCO and ExCo and recommended to the Risk Committee for consideration and recommendation to the Board of Directors for final approval.

##### **6.1.1.5.2 Risk Tolerance Statement**

RBCIS Bank is mandated to manage liquidity risk inherent in the markets in which it operates, and in the business activities it undertakes, in a way that ensures that all financial needs, including existing commitments and new business aligned to core activities, can be met on a commercially viable basis, while meeting regulatory and internal minimums and maintaining sufficient stock of highly liquid assets to mitigate the effects of extreme, but plausible, adverse events on RBCIS Bank's solvency, as determined by regular analysis.

### **6.1.1.5.3 Risk Appetite Metrics**

RBCIS Bank and its affiliates will comply with any applicable limits or other requirements as defined in any RBC framework, policy or standing order.

The liquidity thresholds are integrated with RBCIS Bank strategies, policies and risk appetite. They are calculated and tracked daily by Corporate Treasury.

GRM has the authority to pre-approve extensions to internal limits as long as they are (a) temporary in duration and (b) well-defined and limited. Regulatory limits must be adhered to at all times. All internal limit extensions, including underlying business reasons and risk rationale for agreeing to the extension are reported at the next appropriate RBCIS ALCO meeting.

## **6.1.2 Risk Identification, Measurement, Monitoring and Reporting**

### **6.1.2.1 Reporting Framework**

RBCIS Bank follows the enterprise framework for liquidity reporting and centralizes liquidity risk measurement within Corporate Treasury. The Liquidity Measurement team in Luxembourg is responsible for all liquidity measurement and reporting for RBCIS Bank. The data for liquidity reporting is sourced from appropriate systems that are controlled locally.

#### **6.1.2.1.1 IT Infrastructure**

The IT infrastructure that supports RBCIS Bank's daily and monthly reporting is based on several applications internally developed.

#### **6.1.2.1.2 Data Controls**

Data for liquidity reporting are sourced automatically from strategic booking and accounting systems. The daily reports are prepared automatically and are analyzed in detail by Liquidity Measurement Team.

During the reporting process, several validations are performed:

- Validation of material items in the submitted LCR returns to the balance sheet including AFS portfolio, Central bank deposits, intragroup funding and client deposits; and
- Analytical review to previous reports to explain the main variances and consistency checks; and
- Monitoring of limits and ratios.

For regulatory submissions additional processes are carried out as detailed in the section 561.2.2.

### **6.1.2.2 Regulatory Reporting Requirements**

The table 6-4 describes the list of reporting submitted to the regulator along with the frequency.

Table 6-3 - Regulatory Reporting Frequency

Entity	Report	Regulator	Frequency
RBCIS Bank Luxembourg	Daily Liquidity Report	CSSF/BCL	Daily
	LCR Solo and Conso basis (C72, C73, C74, C75 and C76)	CSSF/BCL	Monthly
	Additional Liquidity Monitoring Metrics (ALMM), Solo and Conso basis (C66,C67,C68, C69, C70 and C71)	CSSF/BCL	Monthly
	NSFR (C60 and C61), Solo and Conso basis	CSSF/BCL	Quarterly
	NSFR under the Short Term Exercise (BCBS* templates), Conso basis	CSSF/BCL	Quarterly
	SSM Liquidity Exercise	JST	Yearly
	ILAAP Quantitative Information template under the Short Term Exercise	CSSF/BCL	Yearly
	Other ad-hoc request	JST	In 2019, the ECB launched the LIST exercise (Liquidity Stress Tests) for the first time
RBCIS Bank Zurich Branch	NSFR	FINMA	Quarterly
	LMT (Liquidity Monitoring Tool) with Facilitation	FINMA	Quarterly
RBCIS Bank France	LCR	ACPR	Monthly
	Additional Liquidity Monitoring Metrics (ALMM)	ACPR	Monthly
	NSFR(EBA templates)	ACPR	Quarterly
RBCIS Bank Hong Kong Branch	Return of Liquidity Position and Liquidity Monitoring Tool Part 1-3 (LMR and additional liquidity metrics)	HKMA	Monthly
	Return of Liquidity Monitoring Tool Part 4 (Maturity profile and supplementary information)	HKMA	Quarterly

## 6.2 Declaration on the adequacy of liquidity risk management and liquidity risk statement approved by the Board of Directors

The adequacy of liquidity and funding positions assessment is based on following considerations:

- The risk appetite and internal limit structure of regulatory and internal metrics;
- The key liquidity metrics and the balance sheet structure as at the reference date and the projections undertaken in the Funding Plan (3 years);
- The results of the stress tests (and reverse stress tests) as at the assessment date, and going forwards as part of the funding plan, as well as the description of the managements actions listed in the RBCIS Bank Liquidity Contingency Plan;
- The role of the ILAAP in the overall Risk Management process.

The ILAAP contains descriptions of the key changes during the year, the primary weaknesses, as well as an overall conclusion on RBCIS Bank's liquidity adequacy.

The management body of RBCIS Bank has determined that the Bank is managing its liquidity risk in a manner commensurate with internal and regulatory expectations, based on the review of the annual ILAAP during the Board of Directors meeting held on February 4<sup>th</sup> 2020.

The management body of the Bank attests that a robust liquidity risk management framework is in place enabling to maintain a solid Liquidity Risk Profile and that the Bank complies with regulatory limits alongside internal limits and control framework. The Bank holds substantial high quality securities that are prudently valued and maintains sufficient levels of funding, with all illiquid assets funded for greater than 1yr. Funding derives primarily from stable sources in a sector that has significant barriers to facilitate withdrawals of deposits in the short term. Moreover the Bank has not received any central bank support (either directly or indirectly) and is not reliant on incremental group liquidity in the event of a liquidity crisis.

The Board of Directors of RBCIS Bank acknowledges that the liquidity risk management of the Bank is adequate. The development of relevant indicators, such as liquidity position combined with a survival period, client deposits trend, value of unencumbered assets, daily LCR and NSFR prediction under stress test are monitored consistently by the Bank. The amount and composition of liquidity buffers during 2019 fiscal year are adequate and enable the institution to be able to continue to meet its payment obligations both under normal and stress conditions. RBCIS Bank complies structurally with internal and external requirements, including standards for maintaining healthy balance sheet.

## 6.3 Liquidity Coverage Ratio (LCR) disclosure

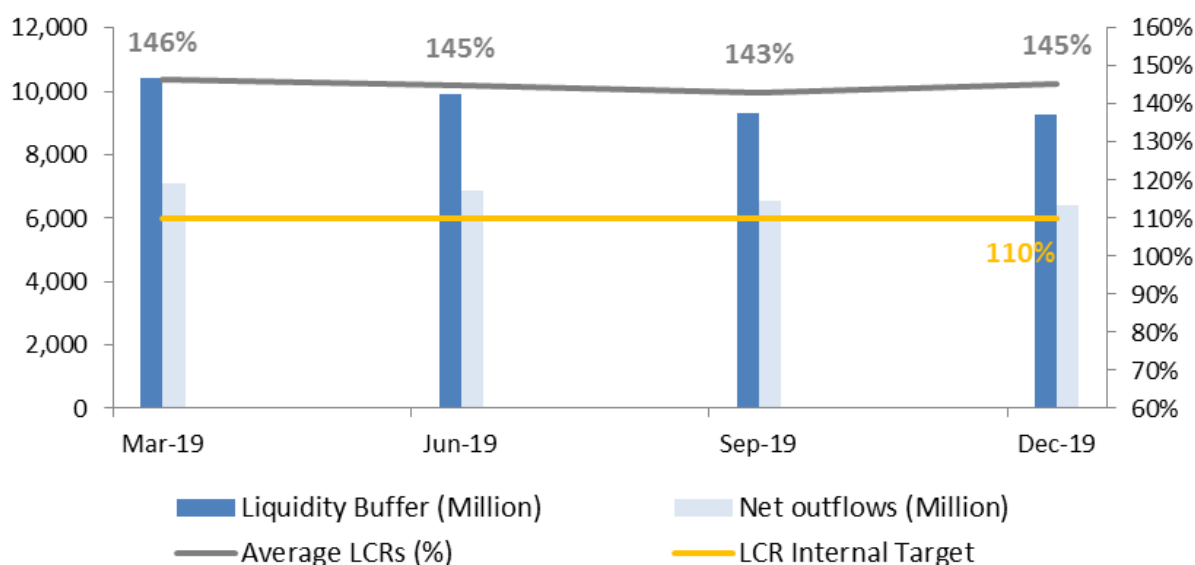
### 6.3.1 LCR disclosure data

LCRs disclosed in this template, as well as all other metrics, are simple average of 12 LCRs (and other metrics) monthly reporting observations in accordance with the EBA Guidelines (EBA/GL/2017/01 - Guidelines on LCR disclosures). It means that the LCR as of March 2019 is an average of monthly LCRs from April 2018 to March 2019, the LCR as of June 2019 is an average of monthly LCRs from July 2018 to June 2019, the LCR as of September 2019 is the average of monthly LCRs from October 2018 to September 2019, the LCRs as of December 2019 is the average of monthly LCRs of the year 2019. As mentioned in the guidelines, the use of averages avoids the use of isolated information relating to a specific date.

Over the observation period, we can notice that the average LCRs and other liquidity metrics are broadly stable. The liquidity profile of RBCIS Bank remained strong relative to the regulatory requirement (Minimum LCR 100%) and internal targets (110%).

### 6.3.2 LCR disclosure template – Scope CONSO

Graph 6-2 - Quarterly LCR metrics



The average consolidated LCRs ranged between 143% and 146%. The average liquidity buffer was between EUR 9.3bn and EUR 10.4 bn while the average Net cash outflows ranged between EUR 6.4 bn and EUR 7.1 bn over the period.

Scope of consolidation : CONSO		Total unweighted value			
		Currency and units (EUR million)			
Quarter ending on (DD Month YYYY)		29 March 2019	28 June 2019	30 September 2019	31 December 2019
Number of data points used in the calculation of averages		12	12	12	12
<b>HIGH-QUALITY LIQUID ASSETS</b>					
1	Total high-quality liquid assets (HQLA)				
<b>CASH-OUTFLOWS</b>					
2	Retail deposits and deposits from small business customers, of which:	0	0	0	0
3	Stable deposits	0	0	127	0
4	Less stable deposits	0	0	25	0
5	Unsecured wholesale funding	16,786	16,360	14,564	15,884
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	11,950	11,794	10,483	11,636
7	Non-operational deposits (all counterparties)	4,836	4,566	4,232	4,248
8	Unsecured debt	0	0	0	0
9	Secured wholesale funding				
10	Additional requirements	1,378	1,386	1,365	1,237
11	Outflows related to derivative exposures and other collateral requirements	515	520	467	509
12	Outflows related to loss of funding on debt products	0	0	0	0
13	Credit and liquidity facilities	864	867	747	728
14	Other contractual funding obligations	157	164	138	88
15	Other contingent funding obligations	1,168	1,206	1,036	1,037
16	<b>TOTAL CASH OUTFLOWS</b>				
<b>CASH-INFLOWS</b>					
17	Secured lending (eg reverse repos)	0	0	0	0
18	Inflows from fully performing exposures	1,576	1,623	1,507	1,642
19	Other cash inflows	453	348	262	226
EU-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)				
EU-19b	(Excess inflows from a related specialised credit institution)				
20	<b>TOTAL CASH INFLOWS</b>	<b>2,030</b>	<b>1,971</b>	<b>1,769</b>	<b>1,867</b>
EU-20a	Fully exempt inflows	0	0	0	0
EU-20b	Inflows Subject to 90% Cap	0	0	0	0
EU-20c	Inflows Subject to 75% Cap	2,030	1,971	1,769	1,867
21	<b>LIQUIDITY BUFFER</b>				
22	<b>TOTAL NET CASH OUTFLOWS</b>				
23	<b>LIQUIDITY COVERAGE RATIO (%)</b>				



Scope of consolidation : CONSO		Total weighted value			
		29 March 2019	28 June 2019	30 September 2019	31 December 2019
Currency and units (EUR million)					
Quarter ending on (DD Month YYY)					
Number of data points used in the calculation of averages		12	12	12	12
<b>HIGH-QUALITY LIQUID ASSETS</b>					
1	<b>Total high-quality liquid assets (HQLA)</b>	<b>10,405</b>	<b>9,928</b>	<b>9,322</b>	<b>9,281</b>
<b>CASH-OUTFLOWS</b>					
2	Retail deposits and deposits from small business customers, of which:	0	0	0	0
3	<i>Stable deposits</i>	0	0	0	0
4	<i>Less stable deposits</i>	0	0	0	0
5	Unsecured wholesale funding	7,823	7,515	7,248	7,157
6	<i>Operational deposits (all counterparties) and deposits in networks of cooperative banks</i>	2,988	2,948	2,869	2,909
7	<i>Non-operational deposits (all counterparties)</i>	4,836	4,566	4,378	4,248
8	<i>Unsecured debt</i>	0	0	0	0
9	Secured wholesale funding	0	0	0	0
10	Additional requirements	890	926	886	860
11	<i>Outflows related to derivative exposures and other collateral requirements</i>	515	520	509	509
12	<i>Outflows related to loss of funding on debt products</i>	0	0	0	0
13	<i>Credit and liquidity facilities</i>	375	407	377	351
14	Other contractual funding obligations	157	164	138	88
15	Other contingent funding obligations	0	0	0	7
16	<b>TOTAL CASH OUTFLOWS</b>	<b>8,871</b>	<b>8,605</b>	<b>8,272</b>	<b>8,113</b>
<b>CASH-INFLOWS</b>					
17	Secured lending (eg reverse repos)	0	0	0	0
18	Inflows from fully performing exposures	1,576	1,623	1,634	1,642
19	Other cash inflows	180	122	94	71
EU-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)	0	0	0	0
EU-19b	(Excess inflows from a related specialised credit institution)	0	0	0	0
20	<b>TOTAL CASH INFLOWS</b>	<b>1,757</b>	<b>1,744</b>	<b>1,728</b>	<b>1,713</b>
EU-20a	<b>Fully exempt inflows</b>	0	0	0	0
EU-20b	<b>Inflows Subject to 90% Cap</b>	0	0	0	0
EU-20c	<b>Inflows Subject to 75% Cap</b>	1,757	1,744	1,728	1,713
		<b>TOTAL ADJUSTED VALUE</b>			
21	<b>LIQUIDITY BUFFER</b>	<b>10,405</b>	<b>9,928</b>	<b>9,322</b>	<b>9,281</b>
22	<b>TOTAL NET CASH OUTFLOWS</b>	<b>7,114</b>	<b>6,861</b>	<b>6,544</b>	<b>6,400</b>
23	<b>LIQUIDITY COVERAGE RATIO (%)</b>	<b>146%</b>	<b>145%</b>	<b>143%</b>	<b>145%</b>

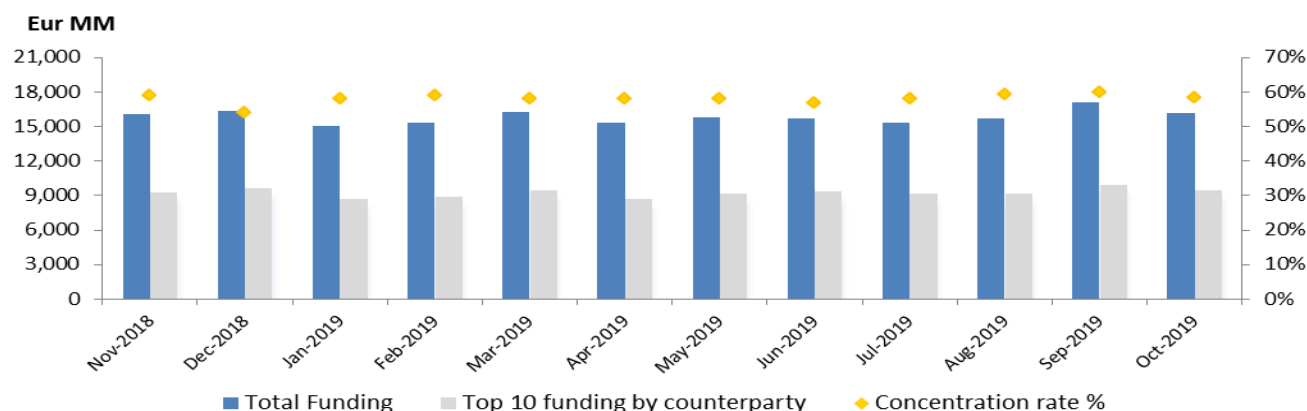
### 6.3.3 Additional qualitative information complementing the LCR disclosure data

#### 6.3.3.1 Concentration of funding

Given the nature of its business profile, the funding of RBCIS Bank is exclusively composed by wholesale funding. The clients deposits represent the main component of its funding. Interbank funding may be part of its liabilities to a lesser extent.

A monitoring of the clients deposits concentration is performed on a daily basis. An analysis of the concentration by clients and by currencies as well as the deposits trend is performed daily and the information is reported in the Management dashboard on a monthly basis and in the Board of Directors pack on a quarterly basis. The institution also reports to the regulator on a monthly basis the ALMM templates, where the information on concentration of funding by counterparty (Template C67.00) and on the concentration of funding by product (template C68.00) is required.

Graph 6-3 - Funding History and concentration (from Nov 2018 to Oct 2019)

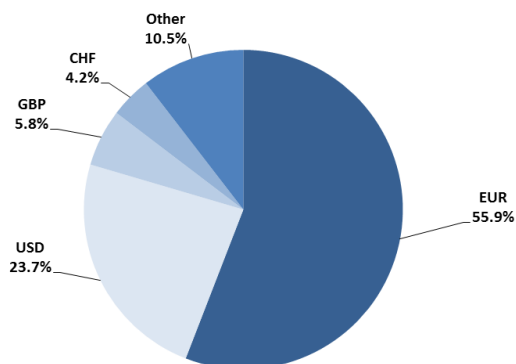


#### 6.3.3.2 Currency mismatch in the LCR

RBCIS Bank's assets and liabilities are primarily composed by EUR and USD currencies and to a lesser extent in GBP and CHF. RBCIS is active in those currencies with deep liquid foreign exchange markets such as EUR, USD and GBP.

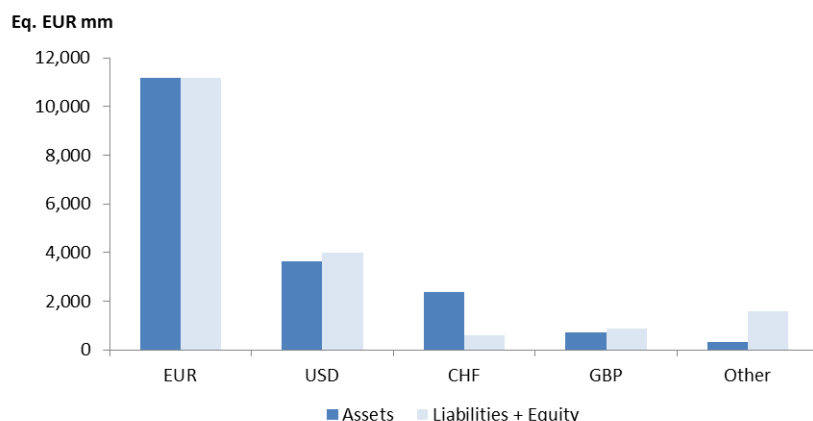
As mentioned in the previous section, a daily monitoring and analysis of clients funding is performed by currency. The graph 6 - 7 depicts the average of clients deposits balances based on daily observation over the 2019 fiscal year.

Graph 6-4 – Clients funding breakdown by currency



The graph 6-8 depicts the currency mismatch between assets and liabilities as of end of October 2019.

Graph 6-5 – Currency mismatch



To mitigate the currency risk, RBCIS Bank deals FX swaps and the vast majority are dealt with RBC group which benefits from a large network of counterparties in the swap market. FX swaps maturities are staggered over three months of which a portion is calibrated to be kept overnight in order to maintain an appropriate buffer for all currencies.

RBC considers fungible currencies to be those currencies that fulfil the following criteria:

- There is an active FX market
- RBC, the parent, is actively dealing these currencies

This includes EUR, USD, GBP, CHF. These currencies are assumed to be liquid, even under a liquidity stress.

The use of FX swaps for balance sheet management is reported by RBCIS Bank Treasury and Market Services (TMS) and monitored by RBCIS Bank Group Risk Management (GRM) and Corporate Treasury (CT). Particular attention is given to the notional size of the FX swap book and term mismatches between the FX swap contracts and the use of converted funds.

In terms of reporting, the Bank has reported over the fiscal year 2019 monthly LCRs in USD, GBP and exceptionally in CHF in accordance with Article 415(2) of Regulation (EU) No 575/2013, where liabilities in those currencies exceeding 5% of the total liabilities.

Note: Although the LCR requirement imposed by the LCR delegated Act 2015/61 does not apply individually to each of the significant currencies, a prudent risk management policy is applied by RBCIS Bank to mitigate the risk linked to the currency mismatch between the funding and the assets.

Internal limits have been set on LCR by significant currency and on Net Position by Currency (Daily Liquidity Stress Test) to reflect the bank appetite for currency mismatch. Those limits are applicable to the bank material currencies (USD, GBP and CHF).

### 6.3.3.3 Derivatives exposures and potential collateral calls

The derivatives treatment follows rules outlined in the LCR delegated Act 2015/61 and the CRR regulation (575/2013). They are 2 components for the LCR EBA :

a - Net derivatives outflows and net derivatives inflows

and

b – Additional outflows from derivatives

a. Calculation of net derivatives outflows and inflows :

The calculation of net inflows from derivatives and net outflows from derivatives follows the instructions outlined in Art 21 of the LCR delegated act.

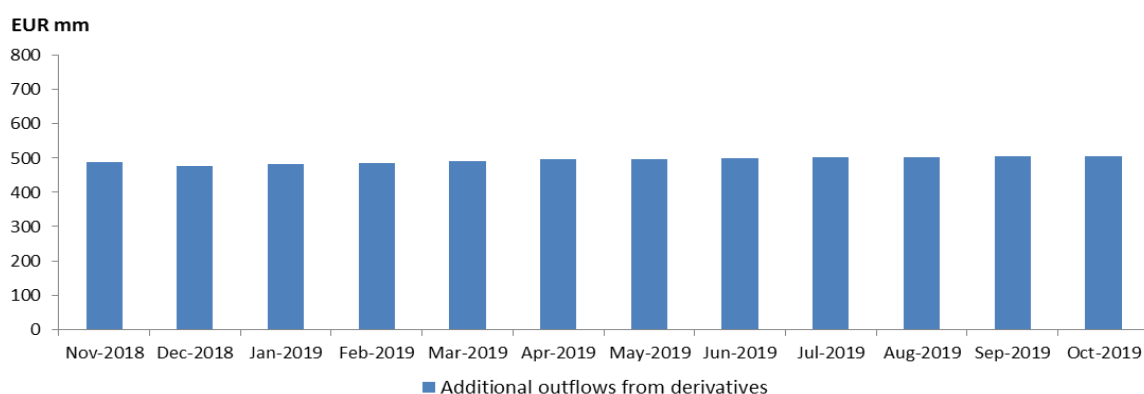
b. Additional outflows from derivatives (Rows 320 C73 Outflows)

The methodology used for the calculation of the additional outflows follows the HLBA (Historical look back approach) developed by the BCBS (Basel Committee) as required by the EBA (EBA RTS/2014/05).

RBCIS Bank takes as additional outflows from derivatives the largest aggregated cumulative net collateral outflow and inflow realized at end of 30 day periods during the 24 months preceding the reporting date.

The graph 6-9 depicts the average additional outflows from derivatives during the 2019 fiscal year. The monthly average is based on the 12 last month’s observation period.

Graph 6-6 – Additional outflows from derivatives (Nov-2018 to Oct-2019)



The amount of average Additional outflows remained broadly stable during the fiscal year, around EUR 500mm. The impact of the derivatives additional outflows on the averages LCRs was around 12% over the fiscal year.

#### ***6.3.3.4 Centralization of liquidity management and interaction between RBC group's units***

The Treasury function of RBCIS Bank is centralized in Luxembourg, including the consolidated management of the balance sheet. Many subsidiaries of RBCIS Bank do not have a banking or investment license and are often supported by a local branch of RBCIS Bank apart from RBCIS Bank France S.A. which engages in treasury activities locally although these tend to operate by pooling liquidity to Luxembourg.

Any loss or liquidity shortfall will be consolidated and accounted in the RBCIS Bank Consolidated balance sheet. Any liquidity or capital management action will be operated by RBCIS Bank Luxembourg and the benefits will be adequately managed to ensure appropriate level of capital and liquidity at a consolidated level and at individual level for all affiliates.

Regarding RBCIS Bank France SA, this entity places all its cash with RBC IS Bank Luxembourg excepting the cash placement done with the Bank de France (BDF) in order to maintain a buffer of liquidity for its Liquidity Coverage Ratio.

### 7.1 IRRBB measurement and management

RBCIS Bank is exposed to market risk arising from transactions originated by its various units. Interest rate risk, a type of market risk, is the risk of loss resulting from changes in interest rates and/or in the volatility. Interest rate risk arises largely from mismatched maturity and re-pricing dates between RBCIS Bank's assets, liabilities and off-balance sheet transactions.

While these mismatches are inherent to a bank's role as a financial intermediary, RBCIS Bank seeks to limit the impact of these mismatches on its Net Interest Income (NII) and Economic Value of Equity (EVE).

RBCIS Bank has developed an IRRBB policy that specifies RBCIS Bank's requirements for prudent asset liability management of interest rate risk to limit the exposure of RBC Investor Services Bank S.A. NII and EVE to changes in interest rates. It is developed in consideration of RBC's Market Risk Framework, the RBC's Enterprise Structural Interest Rate Risk Policy, internal requirements, accepted practices and the requirements of regulators.

As such, the purpose of the RBCIS Bank IRRBB policy is to:

- Establish objectives for managing the interest rate risk (IRR) arising from RBCIS Bank's structural (non-trading) portfolios.
- Set structural interest rate limits for RBCIS Bank's structural portfolios in accordance with RBC Board-approved enterprise structural interest rate risk limits.
- Outline the roles, responsibilities and authorities of the various risk committees, functional units and personnel with respect to this policy.

Changes and updates to the measurement and assessment of IRRBB due to, but not limited to: (i) model changes, (ii) business driven assumptions and (iii) new product or business activity are outlined in the RBCIS Bank Non-Trading Market Risk Standing Order.

The controls over allowable market activity as well as permissible hedging strategies and instruments are documented in RBCIS Bank Investment Policy, RBCIS Bank Market Risk Limits document and in the RBCIS Bank IRRBB policy.

RBCIS Bank follows the regulatory requirements as set out by the European Central Bank (ECB) and the European Banking Authority (EBA)/GL/2018/02 guidelines on the management of interest rate risk arising from non-trading activities.

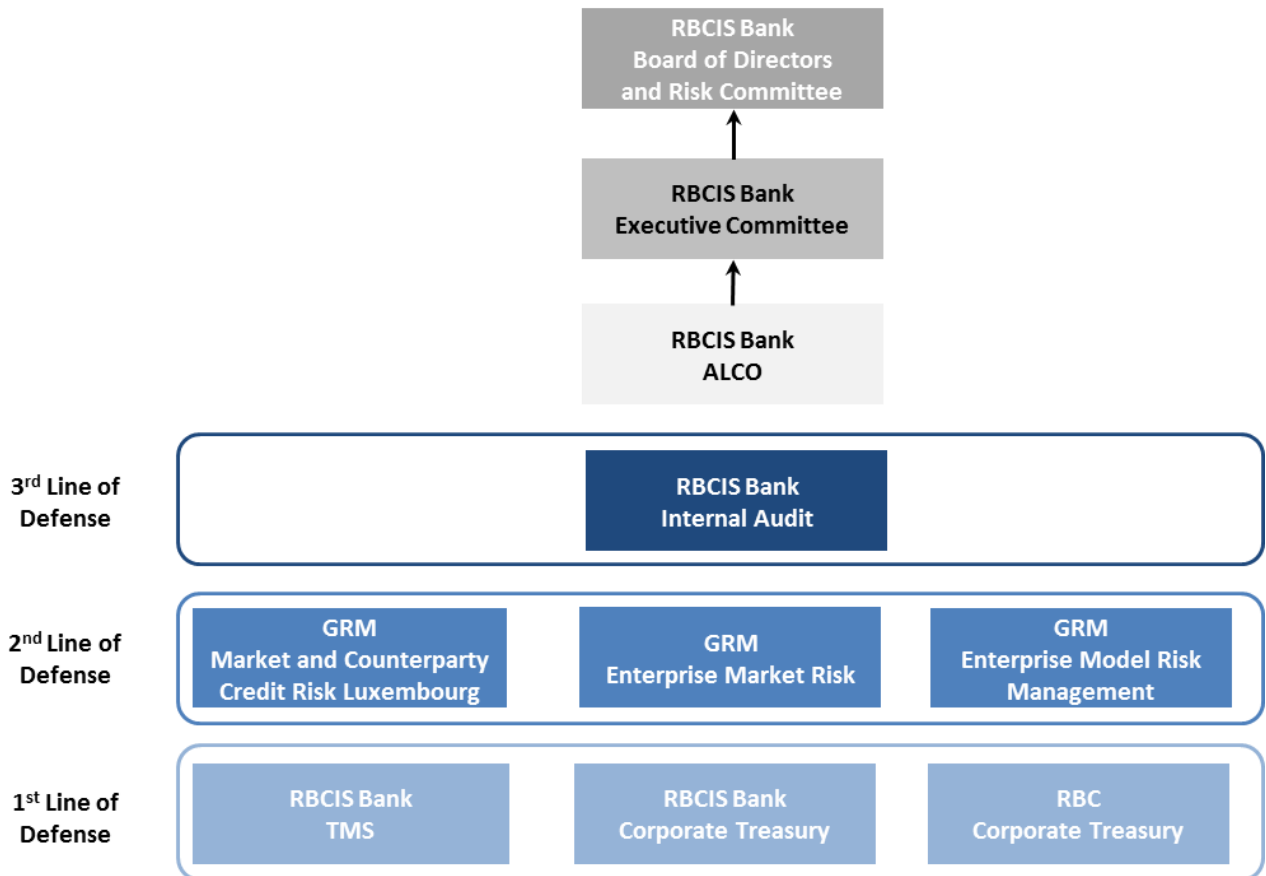
Finally, the RBCIS Bank IRRBB Policy defines the following Interest Rate Risk objectives :

- To preserve RBCIS's safety and soundness by limiting the vulnerability of EVE and NII to adverse interest rate movements. Since some degree of IRR is inherent to the banking business, total concurrently elimination of either NII risk or Value risk is not practical.
- To protect RBCIS's ability to pursue its core business strategies by addressing creditor concerns and regulatory requirements. This objective implies a requirement to manage IRR in a prudent and professional manner.
- To improve current and future earnings by managing IRR in a cost-effective manner within the constraints of the first two objectives.
- To favour the management of Value Risk over NII Risk, subject to the constraints of the risk limits specified in the policy and the first two objectives. EVE Risk management is favored because it is a more comprehensive, longer-term economic measure of interest rate risk, while NII Risk is an accounting-income based measure and provides no insight into IRR inherent in a balance sheet beyond a certain measurement horizon.

- To operate within the risk limits allocated to RBCIS and specified in the RBCIS Bank IRRBB policy in order to manage the day to day operations, taking into account the constraints of its processes and risk measurement capabilities, while adhering to other applicable frameworks, policies, and standing orders which cover, on a standalone basis, specific risk aspects of RBCIS' balance sheet.

Roles and responsibilities of key stakeholders in the IRRBB measurement are summarized in the picture below.

Graph 7-1 – Roles and responsibilities in the IRRBB measurement



Process owners are responsible for ensuring adherence to the RBCIS Bank IRRBB policy and for maintaining appropriate evidence of their monitoring activities.

Table 7-1 – IRRBB Roles and Responsibilities

Committee/Group	Responsibilities
<b>RBCIS Bank’s Board of Directors And Risk Committee of the Board of Directors (BoD)</b>	RBCIS Bank of Directors and Risk Committee’s responsibilities include, but are not limited to: <ul style="list-style-type: none"> <li>• Reviews, on a regular basis, reporting on RBCIS Bank’s structural IRR position and status.</li> <li>• Risk Committee of the Board reviews and recommends to the Board for approval the Structural IRR Policy and Limits at least once a year.</li> <li>• Defining the risk strategy and guiding principles related to IRRBB and entrusting the Executive Committee with the implementation of these governance principles.</li> <li>• Monitoring the implementation by the Executive Committee of its internal governance strategies related to IRRBB</li> </ul>
<b>RBCIS Bank’s Executive Committee (ExCo)</b>	ExCo responsibilities includes, but are not limited to: <ul style="list-style-type: none"> <li>• Implementing the Governance principles related to IRRBB as defined by the Board of Directors and its Risk Committee.</li> <li>• Regularly reviewing compliance against approved limits and key developments affecting the management of IRRBB</li> </ul>
<b>Asset Liability Management Committee (RBCIS Bank’s ALCO) (Chaired by the RBCIS Bank’s Treasurer)</b>	<ul style="list-style-type: none"> <li>• RBCIS Bank’s ALCO has primary oversight responsibility and authority for ensuring that RBCIS Bank’s ALM is managed prudently and professionally:                             <ul style="list-style-type: none"> <li>- At least annually, reviews and recommends RBCIS Bank’s Structural IRR Policy along with the Limits.</li> <li>- Provides strategic direction to the TMS Group for the management of structural IRR.</li> <li>- Reviews ALM strategies for RBCIS Bank including tactical risk positioning.</li> <li>- Regularly reviews compliance against approved limits and key developments affecting the management of structural IRR.</li> <li>- Responsible for ensuring that the RBCIS Bank’s Board has sufficient reports and metrics for IRR oversight.</li> <li>- Delegate and approve risk limits to RBCIS Bank.</li> <li>- Delegate and approve risk limits to the subsidiaries of RBCIS Bank.</li> </ul> </li> <li>• Requests, as needed, supplementary information from the TMS Group in Luxembourg and RBC Corporate Treasury to fulfil its oversight responsibility.</li> </ul>
<b>RBC Corporate Treasury</b>	<ul style="list-style-type: none"> <li>• Proposes policy amendments for consideration by RBCIS Bank, and provides advice and counsel regarding the consistency of RBCIS Bank’s Structural Interest Rate Risk policy with Enterprise IRRBB practices.</li> <li>• On a monthly and/or quarterly basis as required (and more frequently if required), calculates and reports Value Risk and NII Risk for RBCIS Bank.</li> <li>• Maintains qualified, capable staff to operate the interest rate risk models, provide the services and explain the results.</li> <li>• Responsible for developing, maintaining and documenting the IRRBB methodology and changes to the methodology.</li> <li>• Provides advice and counsel on pricing and measuring interest rate risk of existing and new products.</li> <li>• Be knowledgeable of the RBCIS Bank’s Structural Interest Rate Risk policy.</li> <li>• Submits to GRM-Enterprise Model Risk Management and GRM-Enterprise Market Risk for validation new or revised models, and model parameters and assumptions, on a timely basis.</li> <li>• Attends RBCIS Bank ALCO when deemed appropriate.</li> </ul>



Committee/Group	Responsibilities
<b>RBCIS Bank Corporate Treasury</b>	<ul style="list-style-type: none"> <li>• In collaboration with RBC Corporate Treasury, ensure the integrity of the interest rate risk management process, including data collection and transformation, assumptions, modeling, and reporting.</li> <li>• Develop and propose policy amendments in response to new business initiatives and identify appropriate amendments that reflect changes in regulatory requirements.</li> <li>• Interface for ECB/CSSF on IRRBB matters.</li> <li>• On a regular basis, provide status updates to RBCIS Bank's ALCO, on the measurement, monitoring and management of their interest rate risk and related initiatives and action plans.</li> <li>• In conjunction with RBC Corporate Treasury Toronto, documents the business assumptions used in the IRRBB models.</li> </ul>
<b>RBC Investor &amp; Treasury Services Treasury &amp; Market Services (TMS) Group in Luxembourg</b>	<ul style="list-style-type: none"> <li>• Day-to-day responsibility under the direction of the RBCIS Bank Corporate Treasury for structural IRR management, including: <ul style="list-style-type: none"> <li>- Reports developments in structural IRR to RBCIS Bank's ALCO.</li> <li>- Ensures that the IRR is managed within allocated risk limits using permitted instruments identified in various policies and Standing Orders; and following Core Portfolio Principles</li> </ul> </li> <li>• Manages and develops risk mitigation strategies for the structural balance sheet in order to stay within approved limits.</li> <li>• Works with business lines to ensure understanding of linkages of interest rate risk arising from banking products.</li> </ul>
<b>RBCIS Bank Market and Counterparty Credit Risk (MCCR)</b>	<p>RBCIS Bank MCCR's responsibilities include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Reviews the market risk operational limits at least annually.</li> <li>• Provides independent and effective oversight on the nature and extent of material market risks including IRRBB</li> <li>• Ensures the implementation of and compliance with risk management policies and procedures.</li> <li>• Establishes control processes by developing key market risk sensitivity metrics and RBCIS Bank risk reporting to inform and support management.</li> <li>• Identifies supplementary risk controls that may be required to manage the risks and exposures as necessary.</li> <li>• Reviews changes to risk measurement models.</li> <li>• Partners with GRM-Enterprise Model Risk Management and GRM-Enterprise Market Risk to review and approve model parameters and assumptions.</li> <li>• Produces monthly reporting for RBCIS Bank limit monitoring.</li> <li>• Reviews proposals for new products and for changes to existing products with market risk impacts.</li> <li>• Approves Operational limits and exceptions to those limits.</li> <li>• Represents GRM to regulators on matters related to RBCIS Bank IRRBB and other non-trading risks.</li> <li>• Reviews regulatory submissions.</li> <li>• Delivers ICAAP documentation related to IRRBB</li> </ul>

Committee/Group	Responsibilities
<b>GRM – Enterprise Market Risk</b>	GRM–Enterprise Market Risk’s responsibilities include but are not limited to: <ul style="list-style-type: none"> <li>• Reviewing existing market risk stress testing scenarios and providing CT and RBCIS Bank with updates as necessary.</li> <li>• Ensuring the implementation of and compliance with relevant risk management policies and procedures.</li> <li>• Providing independent and effective oversight on the nature and extent of material market risks including IRRBB.</li> <li>• Establishing control processes by developing key market risk sensitivity metrics and enterprise risk reporting to inform and support management.</li> <li>• Identifying supplementary risk controls that may be required to manage the risks and exposures as necessary.</li> <li>• Reviewing changes to risk measurement models.</li> <li>• Producing weekly reporting, aggregating risk for RBCIS Bank within the Comprehensive Enterprise Market Risk Report.</li> <li>• Partnering with GRM-Enterprise Model Risk Management and RBCIS Bank to review and approve model parameters and assumptions.</li> </ul>
<b>GRM – Enterprise Model Risk Management</b>	<ul style="list-style-type: none"> <li>• Validates ALM models in accordance with RBC’s model risk policies and procedures.</li> <li>• Validates model assumptions and model inputs, providing review approval to new and updated models, model inputs and model assumptions where required.</li> </ul>
<b>RBCIS Bank’s Subsidiaries</b>	<ul style="list-style-type: none"> <li>• Balance sheet’s interest rate risk of RBCIS Bank’s subsidiaries are transferred to the central Treasury. RBCIS Bank’s subsidiaries are therefore not required to immunize their respective balance sheets from IRR. Only RBCIS Bank is allowed to hold open interest rate positions.</li> </ul>
<b>Internal Audit Services</b>	<ul style="list-style-type: none"> <li>▪ Provides independent assessment of asset liability management practices, processes and controls.</li> </ul>
<b>Technology and Operations</b>	<ul style="list-style-type: none"> <li>▪ Provides technology and operations support.</li> </ul>

## 7.2 Description of IRRBB Measurement

The measurement of RBCIS Bank’s IRRBB is centralized at RBC Corporate Treasury, Head office in Toronto. By leveraging the centralized and utilized resources and IT tools, Corporate Treasury Toronto in close collaboration with Corporate Treasury Luxembourg performs the production of periodical IRRBB measurements and ad hoc qualitative and quantitative assessments to support completion of reporting and/or analyses. A service level agreement (SLA) exists outlining the level of service and the responsibilities between IS Bank and RBC Corporate Treasury.

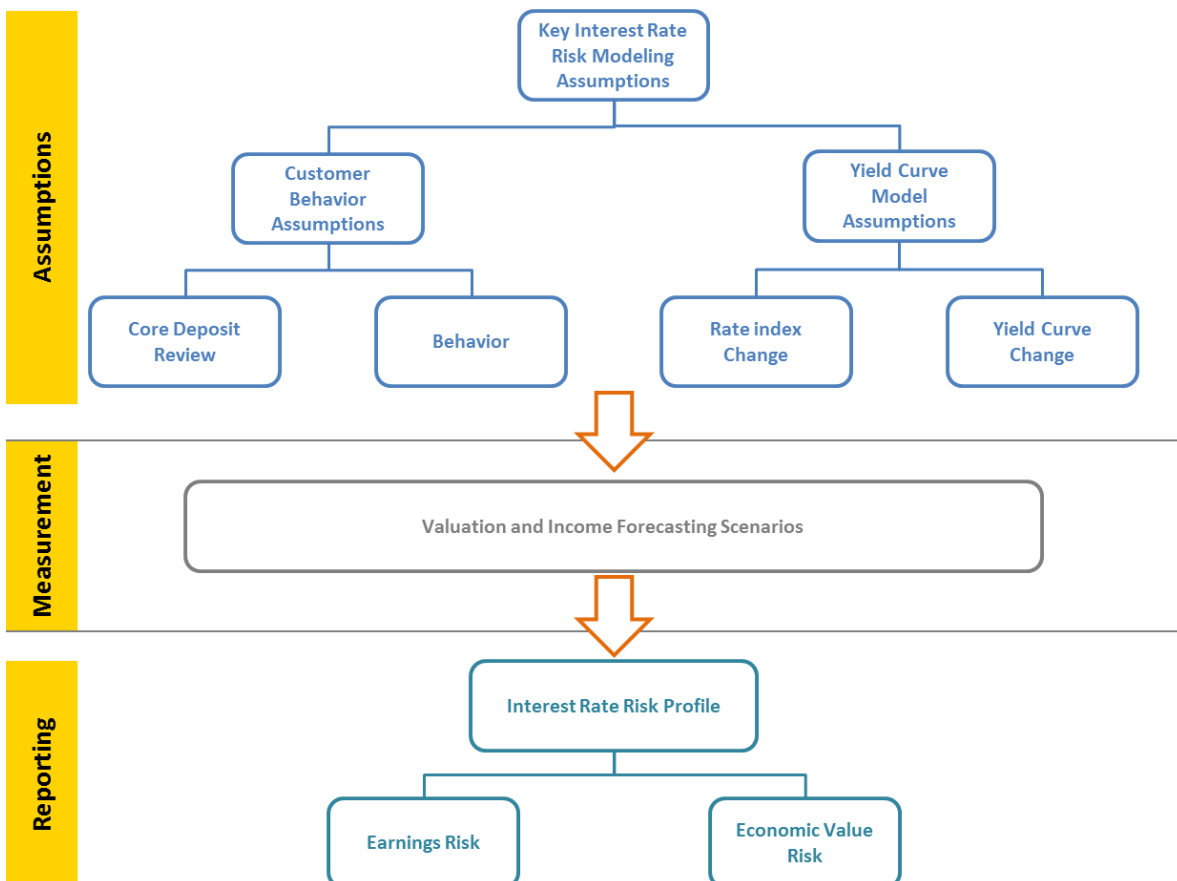
### 7.2.1 Process overview

The process starts with research aimed at identifying the customer behavior/yield curve assumptions then building/setting up a set of models, which incorporates those assumptions into the RBCIS Bank IRR profile. This task is performed by the Applied Research and Analytics department, Interest Rate Risk Measurement and Risk Infrastructure teams of RBC. The next step is generating the actual risk profile using the most current set of position data. The reporting function is performed by the Corporate Treasury Toronto IRR Measurement department.

Model design and maintenance must comply with applicable requirements as set out in Group Risk Management’s (GRM) policies and standing orders, including those outlined in the RBC Enterprise Model Risk Policy. Appropriate approvals must be obtained from GRM prior to use of any new or changed model.

The following picture illustrates main steps involved in measuring and reporting the Interest Rate Risk exposure of RBCIS.

Graph 7-2 – IRRBB measurement: process overview



## 7.2.2 Assumptions

### *Yield Curve Model Assumptions*

RBCIS Bank's IRRBB Model is capable of modelling a wide range of rate scenarios. For NII risk metrics, RBCIS relies on deterministic rate scenarios that are based on prevailing market yield curves in EUR, USD, CAD, CHF, JPY and GBP. For EVE risk measurement, RBCIS uses closed form valuation models

### *Customer Behavior and Rate Assumptions*

Customer Behavior and Rate Assumptions are intended to simulate customer reaction to changes in the interest rate environment and product pricing response to underlying wholesale market rate changes. For RBCIS, the main focus of review and assumptions relate to administration of deposit rates. Rates are generally administered (consistent with custodial bank competitive practices) to ensure a high degree of balance stability.

### *Modeling of Product Price Sensitivity*

Contractual features of RBCIS Bank's products relevant to the measurement of interest rate risk are mapped into the IRRBB Model to accurately model their cash flows for the purpose of measuring interest rate earnings and value risk.

For products with no contractual maturity and administrated rates (e.g. deposits), historical balances and product rate information is analyzed by currency, along with a product review to establish interest rate risk characteristics. Historic balances are reviewed quantitatively to assess stability and possible relationship to rate levels and changes. Capital and reserves included in the IRRBB sensitivity analysis are modeled separately from liabilities.

## 7.2.3 Key Model Specifications

EVE risk represents the sensitivity of balance sheet's value, as measured by the net present value of assets minus liabilities plus the net value of off-balance sheet items, to fluctuations in interest rates.

Valuation of securities and term deposits are based on discounting contractual/projected cash flows. Discount factors are generated from market swap curves.

Shocked valuations are generated by full re-valuation of the relevant instruments with scenario shocks applied directly to input curves.

Table 7-2 – Average and longest repricing maturity

#### Repricing maturity assigned to NMDs

---

Average repricing maturity assigned to NMDs.

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Longest repricing maturity assigned to NMDs.

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NII risk is the change in 1-year projected balance sheet accrued interest income from change in client interest and market interest rates from a base projection based on projected forward rates.

## 7.2.4 Periodicity of reporting

Table 7-3 – IRRBB reporting

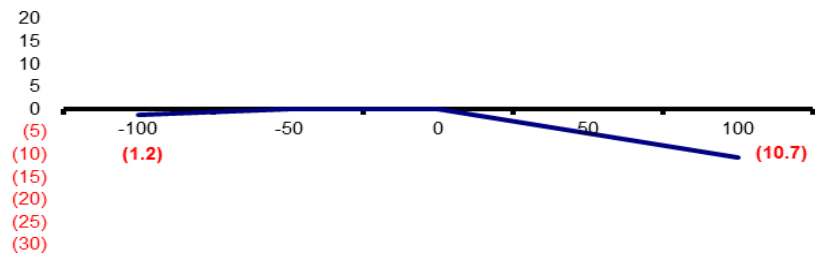
Frequency	Type of Measurement	Monitoring/Control
Reporting to <ul style="list-style-type: none"> <li>ALCO (Monthly)</li> <li>EXCO (Quarterly)</li> <li>Risk Committee (Quarterly)</li> <li>Board of Directors (Quarterly)</li> </ul>	On a monthly basis and more frequently if required, measurement and report of Value Risk and NII Risk for RBCIS Bank including: <ul style="list-style-type: none"> <li>Value Risk and NII Risk exposures under an instantaneous up or down 100 basis point rate change as outlined in the EBA/GL/2018/02 guideline ;</li> <li>The change in economic value that results from calculating the outcome of the standard shock, as referred to in Article 98(5) of Directive 2013/36/EU and in the EBA EBA/GL/2018/02 .</li> <li>Measurement of the EVE and NII/earnings sensitivity under different stress test scenarios for potential changes in the level and shape of the interest rate yield curve as outlined in the EBA EBA/GL/2018/02 .</li> <li>Measurement of the risk subcomponents of IRRBB, including: gap risk, option risk and basis risk as outlined in EBA GL/2018/02.</li> </ul>	<i>First line of defense</i> <ul style="list-style-type: none"> <li>Corporate Treasury Luxembourg</li> <li>TMS Luxembourg</li> </ul> <i>Second line of defense</i> <ul style="list-style-type: none"> <li>GRM Market and Counterparty Credit Risk Luxembourg</li> </ul>
Quarterly Reporting to <ul style="list-style-type: none"> <li>ECB</li> </ul>	<ul style="list-style-type: none"> <li>On a quarterly basis update of the quantitative and qualitative sections of the IRRBB template as part of the supervisory STE.</li> </ul>	<i>First line of defense</i> <ul style="list-style-type: none"> <li>Corporate Treasury Luxembourg</li> </ul> <i>Second line of defense</i> <ul style="list-style-type: none"> <li>GRM Market and Counterparty Credit Risk Luxembourg</li> </ul> Review by CFO/CRO
Semi Annual Reporting <ul style="list-style-type: none"> <li>CSSF</li> </ul>	<ul style="list-style-type: none"> <li>On a semi-annual basis, update of the quantitative and qualitative sections of the IRRBB CSSF regulatory reporting.</li> </ul>	<i>First line of defense</i> <ul style="list-style-type: none"> <li>Corporate Treasury Luxembourg</li> </ul> <i>Second line of defense</i> <ul style="list-style-type: none"> <li>GRM Market Risk Luxembourg</li> </ul>

## 7.2.5 IRRBB Measures

### 7.2.5.1 $\Delta$ EVE under 100 upward / downward shock

Table 7-4 – value risk by major currency Graph 7-3 – value risk profile

	100_DN	100_UP
EUR	0.5	(8.9)
USD	(0.9)	(1.9)
GBP	(1.4)	0.2
CHF	(0.2)	1.7
Other	0.7	(1.7)
<b>Total</b>	<b>(1.2)</b>	<b>(10.7)</b>



### 7.2.5.2 $\Delta$ EVE under 200 upward / downward shock (outlier test)

Graph 7-4 – EVE under 200 upward / downward shock

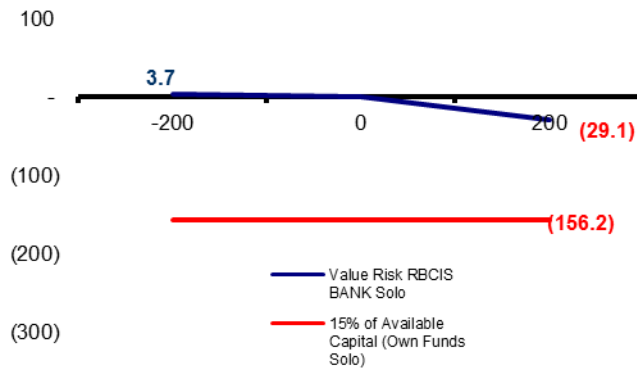


Table 7-5 – outlier test

	200_DN	200_UP
15% of Available Capital	(156.2)	(156.2)
Value Risk RBCIS Bank	3.7	(29.1)
<b>Value risk utilization</b>	<b>0.00%</b>	<b>18.60%</b>

### 7.2.5.3 $\Delta$ NII under 100 upward / downward shock

Table 7-6 – Earning risk by major currencies

EUR mm	100_DN	100_UP
EUR	6.3	7.8
USD	1.4	(1.7)
GBP	(2.5)	0.1
Other	(2.3)	2.2
<b>Total</b>	<b>2.9</b>	<b>8.3</b>

## 7.3 Interest rate shocks and stress scenarios

The key model outputs, EVE and NII risks, are calculated over a wide range of interest rate scenarios in order to comply with regulatory requirements and to capture the various hypothetical movements of the interest rate term structure.

There are 10 historical, 5 hypothetical and 11 Single Risk Factor stress scenarios considered for the calculation of RBCIS Bank portfolio's IRRBB to stressed market conditions.

RBCIS also applies the 6 prescribed Standardized interest rate shock scenarios according to the EBA/GL/2018/02.

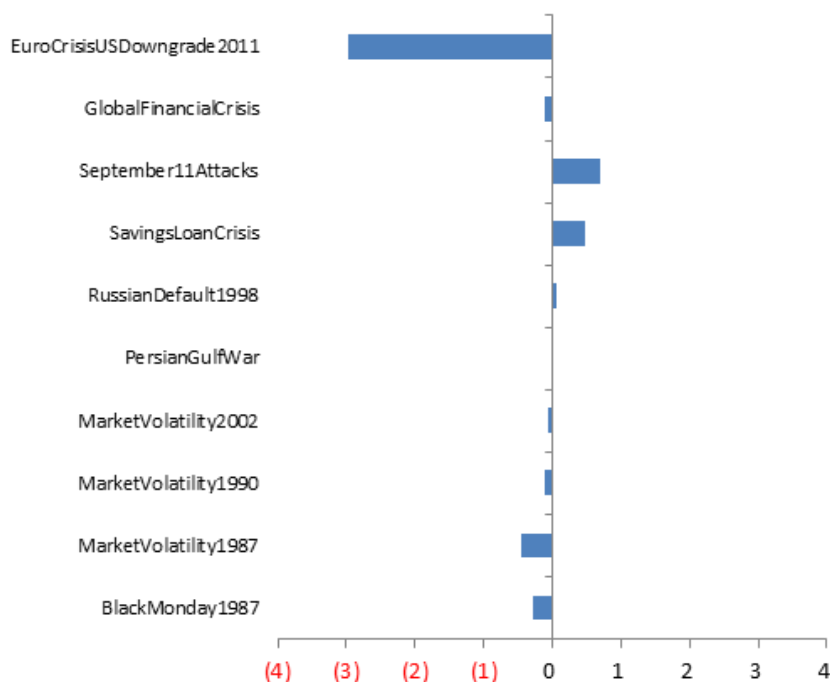
### 7.3.1 Historical stress tests

Historical stress tests are designed to recreate market shocks that occurred during a period of significant market turbulence such as the Global Financial Crisis of 2008 or Black Monday in 1987. By recreating these shocks the Bank can assess what would happen to the banking book if this type of events were to reoccur.

Table 7-7 – Historical Stress Test summary

Shock Type	Start Date	End date
Savings and Loan Crisis	5-Mar-1986	27-May-1986
Market Volatility 1987	13-Apr-1987	3-Jul-1987
Black Monday	29-Sep-1987	26-Oct-1987
Market Volatility 1990	20-Apr-1990	28-Jun-1990
Persian Gulf War	23-Aug-1990	14-Nov-1990
Russian Default	10-Sep-1998	21-Oct-1998
September 11	30-Aug-2001	07-Nov-2001
Market Volatility 2002	4-Sep-2002	15-Oct-2002
Global Financial Crisis	1-Sep-2008	21-Nov-2008
Euro Crisis / US Downgrade	4-Aug-2011	12-Oct-2011

Graph 7-5 –Historical stress tests – Summary results ( $\Delta$  EVE)



### 7.3.2 Hypothetical Stress tests

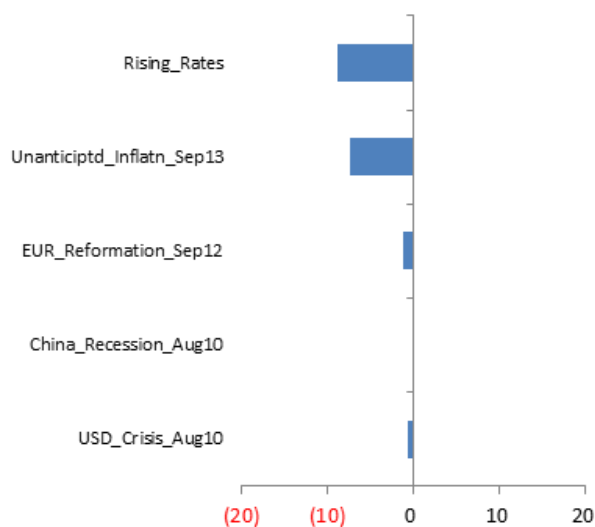
Historical scenarios capture exposures to stress situations similar to past experiences but are not able to capture the potential market changes that could occur under a different type of economic situation. Hypothetical scenarios fill in this gap by developing a series of market shocks that would likely occur if a particular economic event were to unfold.

Scenarios include:

- a) A possible recession in China
- b) A reformation of the Eurozone
- c) A period of unanticipated inflation
- d) Expectation of significant rising bond yields
- e) A USD crisis due to growing public debt, unfunded liabilities and risk of default in major municipalities



Graph 7-6 – Hypothetical stress tests – Summary results ( $\Delta$  EVE)



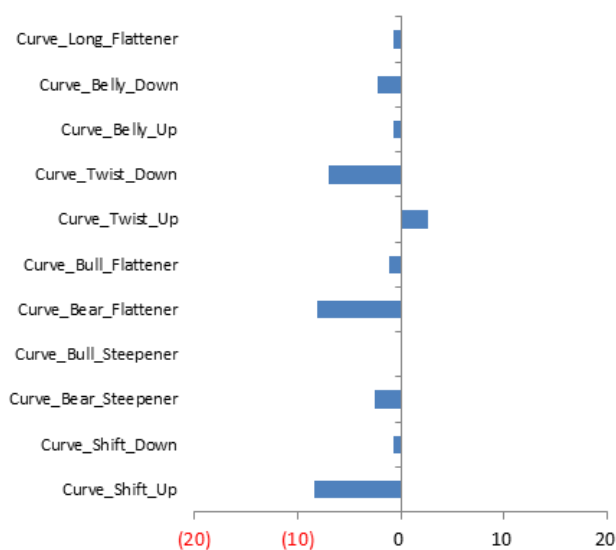
### 7.3.3 Single Risk Factor Stress

Single Risk Factor (SRF) stress scenarios are simplified stress scenarios that apply shocks to a limited number of risk factors within broad asset classes.

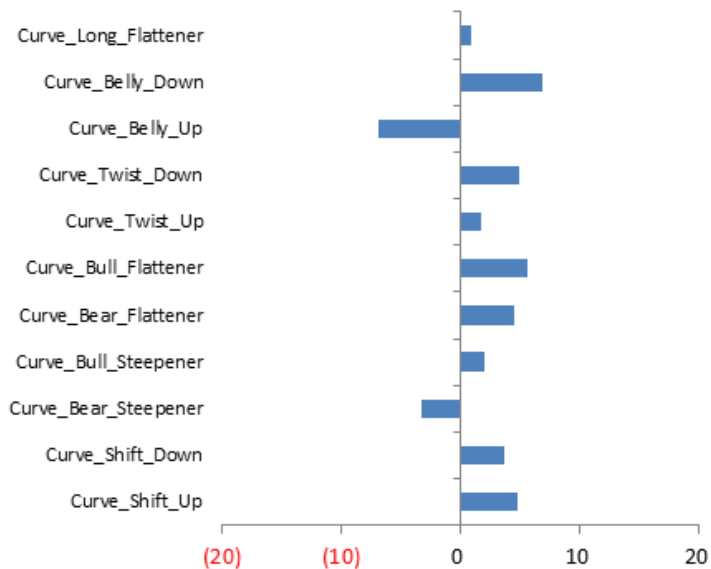
SRF stresses can allow management to better identify what element within a broader stress test is driving exposures, and can help limit concentrations within the portfolio.

The shape and magnitude of shocks are tied to actual movements in history over a 20-day horizon. A statistical analysis was used to identify the types of curve shocks that can be used to explain most of the historical data.

Graph 7-7 – Single risk factors – Summary results ( $\Delta$  EVE)



Graph 7-8 – Single risk factors – Summary results ( $\Delta$  NII)



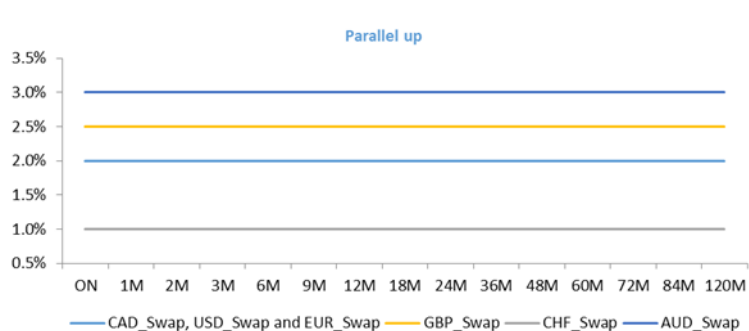
### 7.3.4 EBA Standardized interest rate shock scenarios

Banks are required to the six prescribed interest rate shock scenarios to capture parallel and non-parallel gap risks for EVE and two prescribed interest rate shock scenarios for NII. These scenarios are applied to IRRBB exposures in each currency for which the bank has material positions.

Under this approach, IRRBB is measured for the following six scenarios:

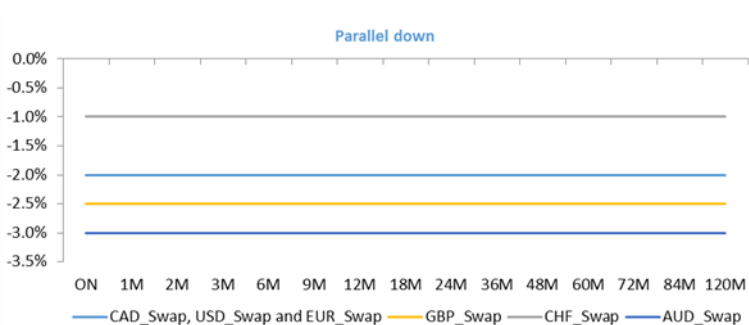
#### 1. Parallel shock up

Graph 7-9 – EBA scenario : parallel up curve



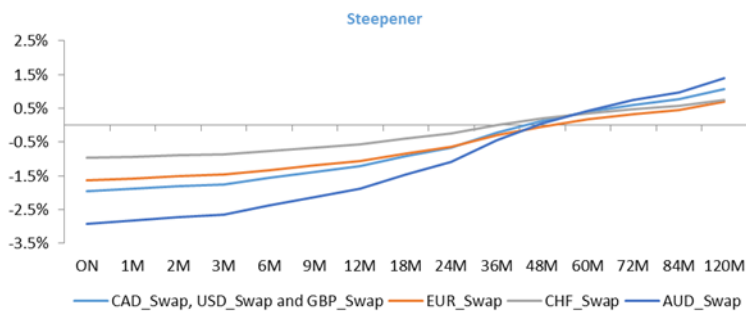
#### 2. Parallel shock down

Graph 7-10 – EBA scenario : parallel down curve



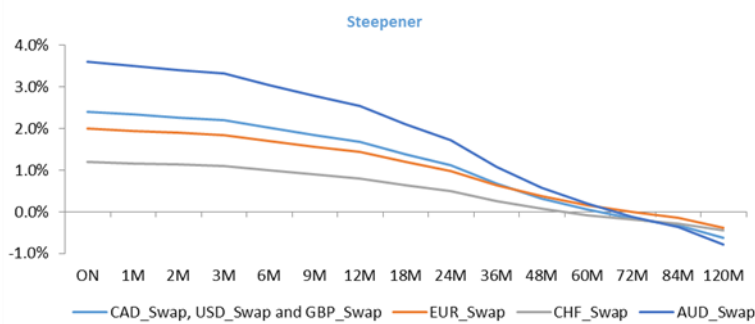
### 3. Steepener shock (short rates down and long rates up)

Graph 7-11 – EBA scenario : Steepener shock



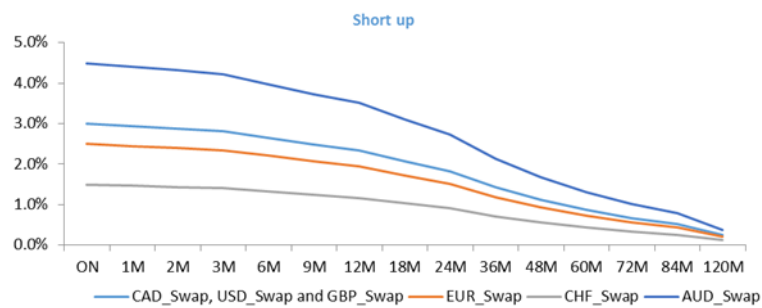
### 4. Flattener shock (short rates up and long rates down)

Graph 7-12 – EBA scenario: Flattener shock



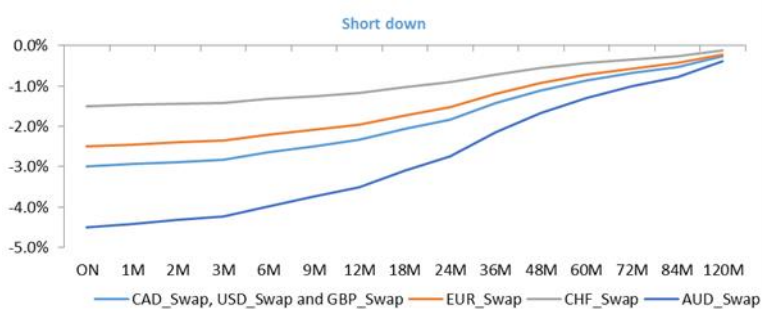
### 5. Short rates shock up

Graph 7-13 – EBA Scenario: Short rates shock up



### 6. Short rates shock down

Graph 7-14 – EBA Scenario: Short rates shock down



The template BCBS IRRBB1 provides with an overview of the 6 BCBS stress tests impact on  $\Delta$ EVE and  $\Delta$ NII (Parallel up and down only) along with the Tier 1 Capital.

Template 23 – BCBS IRRBB1 – Quantitative information on IRRBB

EUR mm	$\Delta$ EVE		$\Delta$ NII	
Period	2019	2018	2019	2018
Parallel up	(30.9)	N/A	0.8	N/A
Parallel down	(0.7)	N/A	5.4	N/A
Steeper	5.7	N/A		
Flattener	(28.0)	N/A		
Short Rate up	(35.3)	N/A		
Short Rate down	0.3	N/A		
<b>Maximum</b>	<b>(35.3)</b>	N/A	0.8	N/A
Period	2019		2018	
<b>Tier 1 Capital</b>	1 041.4		1 042.8	

## 8 Operational risk

Operational risk is defined as the risk of loss or harm resulting from people, inadequate or failed internal processes and systems, or from external events. At RBC, the scope of operational risk is further defined by Operational Risk Categories. Proactive management of operational risks and controls is a key element of the RBC Enterprise Operational Risk Management Framework (ORM Framework), which establishes the principles of how RBC manages its operational risk exposures.

### 8.1 Operational risk governance

#### 8.1.1 Organization

RBC uses the Three Lines of Defense Governance Model to ensure that risks to achieving strategic objectives are appropriately managed. Escalation processes are in place such that relevant ORM information (e.g., material risk exposures, items requiring decisions or actions) is escalated to appropriate levels within the organization (e.g., Business management, Segment operating committees, Board of Directors) in a timely manner and commensurate with the urgency and materiality of the matter. Defined governance and escalation structures ensure that senior management has clear visibility of the risk profile to support risk-informed decisions and to ensure holistic risk management.

The following table illustrates the Three Lines of Defense Governance Model with respect to operational risk management.

Table 8-1 – Three Lines of Defense Model

Business and Corporate Support Segments	Centres of Governance	GRM Operational Risk	Internal Audit
<b>1<sup>st</sup> Line of Defence</b>	<b>2<sup>nd</sup> Line of Defence</b>		<b>3<sup>rd</sup> Line of Defence</b>
Risk owners Manage operational risk in its activities	Design and implement operational risk management requirements  Objective oversight, challenge and assessment		Independent assurance
<p>Provided by Segments who are responsible for providing products and services, and for the execution of activities. Employees at all levels of the organization are responsible for managing the day-to-day risks that arise in the context of their roles.</p> <p>Accountabilities include identifying, managing and supervising risks within approved enterprise policies and appetite; and establishing the capabilities for operational risk management, including the execution of ORM Programs.</p>	<p>Provided by the Centres of Governance (CoG) and Group Risk Management Operational Risk (GRM OR)</p> <p>Accountabilities include defining RBC's approach to managing operational risk and the Operational Risk Categories, as well as providing objective and risk-based oversight, challenge and reasonable assurance of their respective areas of risk.</p>		<p>Provided by the internal audit function</p> <p>Accountabilities include conducting independent review and testing of 1<sup>st</sup> and 2<sup>nd</sup> Lines; and proving independent assurance to senior management and the Board of Directors on the effectiveness of RBC's risk management practices.</p>

#### 8.1.2 Policies and Committees

RBCIS Bank's operational risk management framework relies on strong governance, with clearly defined roles and responsibilities.

##### 8.1.2.1 Policies

Key Operational Risk Management Policy Documents (ORM Policy Documents ) are illustrated in the following diagram. While this Policy articulates high-level requirements relating to ORM Tools, detailed execution requirements are provided in the RBC Enterprise Standard for Operational Risk Management (ORM Standard).

The Operational Risk Management Policy Architecture is depicted in the diagram below.

Table 8-2 – Operational risk management policy architecture



The key ORM Policy Documents are supplemented by guidelines and supporting documents (e.g., methodologies) which provide additional guidance, commentary, and illustrative examples to enhance understanding. Additionally, other Risk Policy Documents address the management of various Operational Risk Categories.

### 8.1.2.2 Committees

RBCIS Bank has established a clear and robust risk governance framework in order to manage, control and provide assurance with respect to risk. That framework includes the following roles and responsibilities.

#### Board of Directors

The Board of Directors is responsible for managing RBC Investor Services Bank S.A. including its subsidiaries and branches. Its members are jointly accountable for the management of the Bank. The duties, responsibilities and procedures of the Board are to oversee and advise the Authorized Management (as defined in CSSF Circular 12/552 and other regulation) in its management of the bank.

Major decisions affecting the Bank require Board approval. The Board, appointed by the shareholder of the Bank, appoints the members of the Authorized Management and creates succession plans for the Authorized Management. It may also specify more extensive information and reporting duties for the Authorized Management beyond what is required by law. The Board reviews the efficiency of its work on a regular basis.

For the purpose of increasing its effectiveness, the Board has established the following four specialized sub-committees (“committee”) notably in the fields of audit & compliance, risk, remuneration and nomination committees. Their mission is to provide the Board with critical assessments in respect of the organization and operation of the Bank in the aforementioned areas in order to enable the members of the Board to fulfil their supervisory mission and their responsibilities pursuant to regulatory requirements. The Board ensures that the various committees effectively interact and report to the Board on a regular basis. The Board cannot delegate its decision-making powers and responsibilities to these committees pursuant to CSSF Circular 12/552, as amended.

#### Executive Committee

The Board of Directors has delegated under its general supervision the daily management as well as any other powers of the Company and the representation of the Company within such daily management to the Executive Committee, being “Authorized Management” of RBCIS Bank.

The Executive Committee will manage the daily affairs of the Company in a collegial manner, within the provisions of the applicable Law, regulations, circulars of the Commission de Surveillance du Secteur Financier, the Articles of Association and the global governance documents and organizes, both on the national and international front, the coordination of the activities of the Company,

In accordance with article 103 from CSSF Circular 12/552, the members of the Executive Committee shall personally oversee the activities and functions, which fall under their direct responsibility on a regular basis.

The appointment, removal and powers of the members of the Executive Committee shall be determined by a resolution of the Board of Directors.

RBCIS Bank has appointed one member of the Executive Committee as Chief Risk Officer responsible for the Risk Function (the "CRO"), one member of the Executive Committee as Chief Compliance Officer responsible for the Compliance Function (the "CCO"), and one member of the Executive Committee as Chief Internal Auditor responsible for the Internal Audit Function (the "CIA").

Local Executive Committees of subsidiaries and branches report into the Executive Committee of RBCIS Bank.

### **Audit & Compliance Committee**

The Audit & Compliance Committee's purpose is to review the adequacy and effectiveness of following activities and to assist the Board in its oversight of:

- (i) the integrity of the bank's financial statements;
- (ii) the external auditors' qualifications, independence and performance;
- (iii) the effectiveness and independence of the bank's Internal Audit Services, Finance and Compliance functions;
- (iv) the adequacy and effectiveness of internal controls; and (v) the bank's compliance with legal and regulatory requirements.

The Audit & Compliance Committee has not received any delegated decision powers from the Board of Directors, which remain entirely with the Board of Directors

The Audit & Compliance Committee will report to the Board following each meeting with respect to its activities and recommendations.

The Audit & Compliance Committee will collaborate and exchange information with other committees of the Board, including the Nomination Committee, Risk Committee and Remuneration Committee with regards to matters in the scope of its mandate.

### **Risk Committee**

The Risk Committee specializes in the field of risk and its mission is to provide the Board with critical assessments in respect of the organization and operation of risk management, in order to increase the effectiveness of the Board and enable its members to fulfil their supervisory mission.

The Risk Committees' primary purpose is to advise the Board regarding the bank's overall current and future risk appetite and strategy and to assist the Board in overseeing the implementation of that strategy by authorized management.

The Risk Committee may request any document and information that it deem necessary to fulfil its mission. The RC may involve the Authorized Management as well as persons in charge of internal controls in its work. These persons may attend the Committee's meetings but are not members of it.

The Risk Committee has not received any delegated decision powers from the Board of Directors, which remain entirely with the Board of Directors.

The Risk Committee will report to the Board following each meeting with respect to its activities and recommendations.

The Risk Committee will collaborate and exchange information with other committees of the Board, including the Audit & Compliance Committee, Nomination Committee and Remuneration Committee with regards to matters in the scope of its mandate.

## **I&TS Operational Risk Committee**

The missions of the RBC Investor & Treasury Services Operational Risk Committee is to provide oversight of Operational Risk in the Investor and Treasury Services businesses globally, and across RBCIS Bank legal entities in particular. This Committee has a delegation of authority to decide on Operational risk matters on behalf of the I&TS Operating Committee (e.g. policies, mitigation actions).

## **Deal Review Committee**

The Deal Review Committees (DRCs) are established under the authority of the I&TS Operating Committee. The regional DRCs shall review and approve all Proposals in accordance with the Client Acceptance Policy.

## **New Business Committee (NBC)**

The RBC I&TS New Business Committee (“NBC”) is responsible for the risk review, and in some instances approval, of all new I&TS products / services, and requests for adjustments to I&TS products / services, in all locations.

## **Privacy Incidents Risk Committee (PIRC)**

A Privacy Incident Review Committee (“PIRC”) will meet to:

- Review privacy/confidentiality incidents that occurred in Luxembourg,
- Identify trends,
- determine appropriate actions to be taken to prevent future occurrences
- determine if disciplinary measures are to be recommended
- discuss any other privacy/confidentiality related subject

The PIRC will take place on a quarterly basis. However, ad hoc meetings may be organized when deemed necessary (depending on the number of privacy breaches that may occur during a period). Once a year, as part of the Bank duties to supervise its branches and subsidiaries (“Bank Group”), the PIRC will also review the privacy incidents that occurred in the branches and subsidiaries.

The regular Risk Management processes in place, in application of the RBC and RBCIS Bank Risk Management Frameworks and Policies, ensure that the risks to which RBCIS Bank is exposed are identified, assessed, controlled, monitored and reported. The Risk Management governance of RBCIS Bank ensures that these processes are documented through recurrent and ad hoc Risk Reports and discussed with executive management on a regular basis (I&TS Risk Committee, Board of Directors and/or Audit Committee, RBCIS Bank Executive Committee ...).

### **8.1.2.3 Enterprise Conduct Framework**

The Enterprise Conduct Framework is a key element within RBC’s overall enterprise-wide risk management program for the identification, assessment, monitoring and reporting of the significant risks faced by the organization as described in the Enterprise Risk Management Framework. This Framework describes RBC’s approach to a set of related topics that include Risk Culture, Conduct Risk, and Sales Conduct and Practices (which are each presented as a Framework within this document), as well as Misconduct. These topics cross all risk categories.

RBC’s Values and risk-aware culture of “Doing What’s Right” effectively support the long term success of the organization. RBC’s Values set the tone of our organizational culture, and translate into desired behaviors as articulated in our Code of Conduct and Leadership Model. Our Risk Management Principles provide a risk lens for these desired behaviors, enabling us to focus on a sub-set of behaviors and Outcomes referred to as our Conduct.



RBC defines Conduct as the manifestation of culture through the behaviors, judgment, decisions and actions of the organization and its individuals. In the context of this Framework, the focus of Conduct is two-fold:

1. RBC’s expectation that employees’ and the third party service providers that RBC engages and the organization’s behaviors, judgments, decisions, and actions lead to positive Outcomes for clients, employees, financial markets, and RBC’s reputation; and
2. RBC’s monitoring and reporting on the Conduct-related Outcomes for clients, employees, financial markets, and RBC’s reputation.

The following key Conduct-related concepts are depicted below:

- RBC’s organizational direction influences our strategy, organizational practices, and Risk Culture, and sets expectations for positive Outcomes for our clients, our employees, the financial markets, and our reputation.
- Our strategies, organizational practices (including Sales Conduct and Practices), and Risk-aware Culture influence behaviors, judgments, decisions, and actions (i.e., Conduct) at an organizational and individual level.
- Our Conduct drives actual Outcomes for our clients, our employees, financial markets, and our reputation.
- Lessons learned support appropriate organizational responses to poor Conduct Outcomes (stemming from Conduct Risks and/or Misconduct) so practices that influence organizational and individual Conduct can be corrected and enhanced.

Table 8-3 – Conducts related concepts



## 8.2 Operational Risk Management Tools and Processes

The overall Operational Risk is assessed through a combination of qualitative and quantitative methods. A variety of risk and control criteria are used to generate the risk profiles for each legal entity part of the group and for the material products part of client service offering. These risk profiles are analyzed at an aggregate level to provide a view of the risk profile of the business and the local platform as a whole. These profiles are reported to various committees for discussion and action. Specific risks and issues as well as overall themes are discussed.

RBCIS has embedded Operational risk management in all of its activities by leveraging the main elements of the Operational Risk Management Framework outlined below:

- **Risk and Control Self-Assessment (RCSA):** Performed both at an Enterprise level and at a regional business unit or process level, these assessments provide an integrated source of Operational risk and control information.
- **External Operational Risk Event Review:** Provides ‘lessons learned’ and emerging industry trends. GRM Operational Risk team performs internal analysis to investigate whether or not controls are in place to mitigate against such events and recommends additional actions, where required.
- **Internal Operational Risk Event Management:** Operational risk events, including those resulting in actual losses and non-monetary events are monitored by Operational Control team (with oversight from GRM Operational Risk). The focus is on a complete understanding of root cause and mitigation plans for these events with a view to mitigating repeat occurrences.
- **Operational Risk Scenarios:** A number of Scenario analyses is undertaken on an annual basis to proactively identify plausible events with a potentially high impact but low probability of occurrence. The primary scenario topics are provided by Enterprise Operational Risk Management (EORM) and are further supplemented at a Business level via Business platform specific key identified risks.
- **Operational Risk Issue and Actions Tracking and Monitoring** – Operational risk issues and actions identified as a result of RCAs / risk events are entered into RBC’s global Enterprise Operational Risk Management database, Open Pages, and tracked by Operational Control team until resolution.
- **New product/ Initiatives Risk Assessment:** Every new initiative, including changed/ new product go through an assessment of potential contribution to future end state operational risk. Mitigants are identified and monitored throughout the initiative lifecycle in order to stay within risk appetite once delivered.
- **Top Risk Program:** The Top Risk Program is an I&TS-Level Risk Control Self Assessment focusing on key operational risks at a Strategic Unit level (I&TS level), including those arising from changes in the business environment, that may inhibit a Strategic Unit’s ability to achieve its strategic objectives.
- **Key Risk Indicator (KRI):** KRIs are set and monitored for each business on a continuous basis with thresholds set annually. Quarterly Risk Appetite indicators – as defined by the RBCIS Bank ‘s Board of Directors – complement the monthly KRI’s.

Where a risk is assessed as “not adequately mitigated”, an issue must be identified and documented, unless the risk owner chooses to accept the risk. Management risk acceptance decisions need to be documented and approved by an appropriate approval authority. All issues need to have formally documented action plans with completion dates to mitigate the associated risk. Action plans must be reasonably expected to function as designed once implemented. Issue closure criteria, including any required supporting material or evidence to be provided, are documented.

Action plans must clearly articulate:

- (i) the steps to be taken to mitigate the risk associated with the issue; and
- (ii) completion dates.

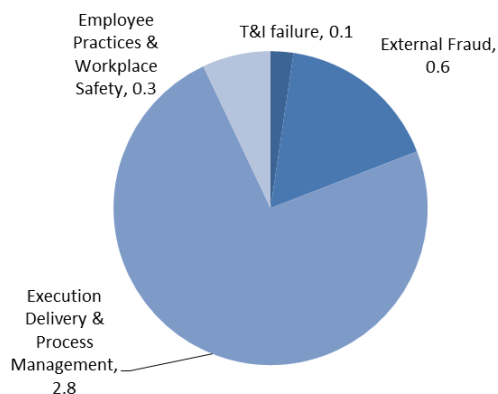
To ensure effective and efficient resolution of issues, agreement is obtained on proposed action plans and closure criteria from relevant stakeholders (e.g., 2nd Line responsible for performing independent issue closure verification) prior to finalization. Where required, an issue may be documented with an interim action to scope appropriate mitigation plans in lieu of a formal action plan. Interim actions to scope long-term mitigation solution must not exceed six months, after which it must be replaced by a formal action plan articulating the actual solution to mitigate the identified risk.

### 8.3 Operational risk event data collection

Specific incident where operational risk leads to, or could have led to, an unintended, identifiable risk impact. An internal operational risk event is an operational risk event that affected at least one of RBC’s subsidiaries or business units.

A structured, effective, and consistent approach to the collection and analysis of internal operational risk events is necessary to provide meaningful information on the level of operational risk exposure, as well as the appropriateness and effectiveness of the control environment, risk management practices, and the overall Operational Risk Profile. Timely, complete, and accurate capture and recording of internal operational risk events support adherence to Basel Committee on Banking Supervision’s Principles for Effective Risk Data Aggregation and Risk Reporting (RDARR). OpenPages is the tool used to record and track all operational risk events and action plans, with the exception of issues already tracked by Internal Audit or Regulatory Compliance.

**Graph 8-1 – Operational risk losses (before recoveries) – EUR mm**



Risk Management presents an operational risk report – including earnings impacting events - to the Risk Committee of the RBCIS Bank Board of Directors on a quarterly basis.

## 8.4 Calculation of the regulatory capital requirement

Operational risk capital is a mathematical representation of RBCIS Bank’s operational risk exposure and supports effective operational risk management by providing credible estimates of operational risk exposures that could potentially impact the achievement of strategic objectives. In addition, operational risk measurement enables RBC to satisfy regulatory requirements to measure minimum required operational risk capital.

RBCIS Bank applies the standardized Basel approach to calculate the regulatory capital requirements for operational risk. This approach consists in applying a percentage (the Beta factor) to an appropriate activity indicator, based on the business lines defined by the Basel Committee.

The relevant indicator is defined by the regulator and is based on the operational results of the underlying business lines, using an average over the past three years. The calculation is updated at the end of each year. The global capital requirement for operational risk used during 2019 (which is based on the 2016-2017 and 2018 results) is EUR 65.1 million and is based on the following operational results:

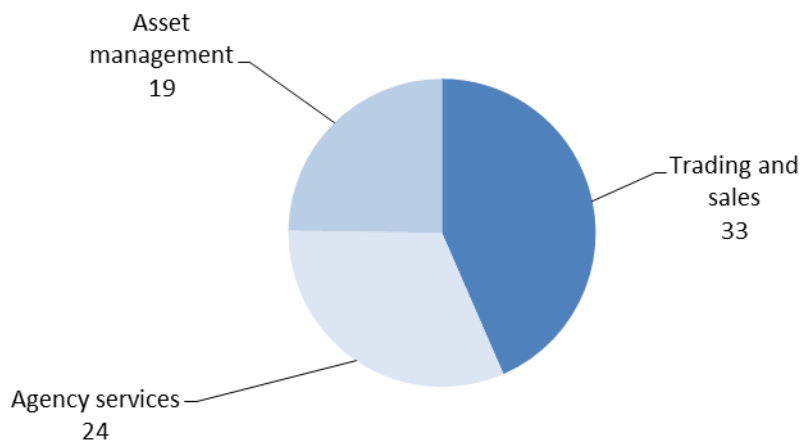
**Table 8-4 – Regulatory Capital requirement**

Business line	Indicator			Beta factor	Weighted indicator		
	2016	2017	2018		2016	2017	2018
Corporate finance	-	-	-	0.2	-	-	-
Trading and sales	124.6	139.6	180.9	0.2	22.4	25.1	32.6
Retail brokerage	-	-	-	0.1	-	-	-
Retail banking	-	-	-	0.1	-	-	-
Commercial banking	-	-	-	0.2	-	-	-
Payment and settlement	-	-	-	0.2	-	-	-
Agency services	126.0	127.1	158.7	0.2	18.9	19.1	23.8
Asset management	145.8	145.2	154.7	0.1	17.5	17.4	18.6
	<b>396.3</b>	<b>411.8</b>	<b>494.3</b>				

Global capital requirement for operational risk 65.1

The graph below presents the breakdown by business lines (according to Basel definitions) of the capital requirement for operational risk used in 2019.

Graph 8-2 – Operational risk capital requirement by business line (EUR mm)



## 9 Asset Encumbrance

RBC IS Bank report on a quarterly basis to the CSSF, asset encumbrance on a consolidated basis. This report includes the whole balance sheet split into encumbered and non-encumbered assets, collateral received and sources of encumbrance.

The figures below are the median value of the figures reported in the last four quarterly report (Q4 2018, Q1 2019, Q2 2019, Q3 2019).

In accordance with regulation (EU) N 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credits institutions and investment firms and amending Regulation (EU) N 648/2012, and the commission delegated regulation (EU) 2017/2295, the following information have been selected to provide key information :

- Encumbered and unencumbered assets
- Collateral received and own debt securities issued
- Sources of encumbrance

### Template 24 – EUAE1 – Encumbered and unencumbered assets

	Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
		of which notionally eligible EHQLA and HQLA		of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA
<b>Assets of the reporting institution</b>	<b>667 500</b>							
Equity instruments								
Debt securities	<b>312 181</b>		<b>312 181</b>		<b>684 462</b>		<b>684 462</b>	
of which: covered bonds	312 181		312 181		684 462		684 462	
of which: asset-backed securities								
of which: issued by general governments								
of which: issued by financial corporations	312 181		312 181		684 462		684 462	
of which: issued by non-financial corporations								
Other assets	<b>355 319</b>				<b>17 380 822</b>			

Encumbered assets are mainly explained by :

- Balance with Central banks (Mandatory reserve deposit)
- Securities given as guarantee
- Cash collateral/Paid to credit institutions (Derivatives)
- Cash collateral/Paid to customers (Derivatives)

Template 25 – EU AE2 - Collateral received and own debt securities issued

	Fair value of encumbered collateral		Unencumbered	
		of which notionally eligible EHQLA and HQLA	Fair value of collateral	of which EHQLA and HQLA
	010	030	040	060
<b>Collateral received by the reporting institution</b>				
Loans on demand				
Equity instruments				
Debt securities				
Loans and advances other than loans on demand				
Other collateral received				
<b>Own debt securities issued other than own covered bonds or asset-backed securities</b>				
<b>Own covered bonds and asset-backed securities issued and not yet pledged</b>				
<b>TOTAL ASSETS, COLLATERAL RECEIVED AND OWN DEBT SECURITIES ISSUED</b>	650 645			

Template 26 – EU AE3 - Sources of encumbrance

	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
<b>Carrying amount of selected financial liabilities</b>	186 830	186 830

## 10 Remuneration Policy

### 10.1 Remuneration

Remuneration disclosures are made in line with RBC Investor Services Bank S.A.'s (RBC IS Bank's) application of the requirements of the qualitative and quantitative remuneration disclosures under the Pillar 3 framework and Article 450 of the Capital Requirements Regulation (EU) No 575/2013 (CRR). For enhanced disclosure on RBC's enterprise-wide remuneration practices, please refer to RBC's proxy circular (last published on April 4, 2019 ).

#### 10.1.1 Remuneration Committee

##### Scope of activities

RBC IS Bank has a Remuneration Committee (the RemCo) which is responsible for the oversight, design and the application of the remuneration principles, practices and processes within RBC IS Bank to ensure that they support the business objectives determined by the RBC IS Bank Board of Directors (the IS Board) and/or senior management, take into account sound risk management practices, including long-term and short-term risk and do not encourage risk-taking in excess of the risk appetite of RBC and RBC IS Bank – subject to the approval of the IS Board.

The RemCo is responsible for the preparation of recommendations to the IS Board regarding the remuneration of senior executives, material risk takers, and other employees and directors identified as Regulated Employees across IS Bank.

On an annual basis, the RemCo reviews the Remuneration Policy – RBC IS Bank S.A. (IS Remuneration Policy) and recommends it for approval to the IS Board. In doing so, the RemCo takes into account the pay and benefits across RBC IS Bank. This includes the terms of bonus plans and other incentive plans. Changes to the IS Remuneration Policy were made in order to ensure compliance with the MIFID II guidelines, the European Banking Authority (EBA) Regulations on Remuneration, the Joint Supervisory Team (JST) recommendations and the Shareholder Ownership Requirements (based on RBC's enterprise-wide policy). Each policy contains an introductory chapter that summarizes and tracks the most recent changes. The RemCo has a specific responsibility to ensure RBC IS Bank-wide policies are compliant with the residing regulations. Three meetings were held during the fiscal year 2019 which is in line with the RemCo mandate.

##### Constitution

Table 10-1 – Constitution of the remuneration committee

Members of the Remuneration Committee (fiscal year-end)	Meeting Attendance (3 meetings in total)
- Gennaro Casale	- 2 of 3 meetings
- Francis Jackson (Chair)	- 3 of 3 meetings
- Stephen Walker	- 3 of 3 meetings

All of the members of the RemCo are independent of day to day management under the standards set out by the Board. Gennaro Casale is the Employee Representative on the RemCo. Francis Jackson is based in London and is the Chair of the Remuneration Committee, is a Non-Executive Director and is not an employee of RBCIS Bank. Stephen Walker is based in Toronto, is an independent Non-Executive Director and is not an employee of IS Bank. No individual is involved in decisions relating to his or her own remuneration. Effective October 31, 2019, Stephen Walker resigned from the RemCo.

## Support

During the year, the Remuneration Committee received advice from RBC Compensation Centre of Expertise (COE) and IS Bank Chief Risk Officer (CRO), who provided advice to the Remuneration Committee on the implications of the Remuneration policy on risk and risk management, and on the adjustments that should be made to levels of variable remuneration payable to staff, taking into account all relevant current and future risks.

## External Consultants

The HR management team of RBCIS Bank received independent advice from Linklaters on changes to the RBCIS Bank Remuneration Policy, prior to presentation to the Remuneration Committee.

The HR management team of RBCIS Bank received independent information from KPMG by means of a report and a digital platform regarding benchmarking of compensation, benefits policies, and HR practices in financial services in Luxembourg.

## Role of the Relevant Stakeholders

The RemCo takes full account of the Company's strategic goals in setting RBC IS Bank Remuneration Policy and is mindful of its duties to shareholders and other stakeholders. The RemCo seeks to preserve shareholder value by ensuring alignment of variable compensation payouts with risk and economic performance, as well as the successful retention, recruitment and motivation of employees.

### 10.1.2 Criteria for the Identification of Regulated Employees

The following groups of employees have been identified as meeting the criteria for Regulated Employees:

1. **Employees captured by qualitative criteria** include but are not limited to:

- Board of Directors;
- Managers which are members of the management body with either a management or a supervision function;
- Senior management including individuals heading a material business unit such as the Director, Treasury Market Services or Head, Client Operations Europe;
- Senior control function management including Risk, Finance, Compliance and Internal Audit and Heads of Human Resources, Information Technology, Economic Analysis, Legal and Tax;
- Those who have authority either individually or as members of a Committee to recommend, approve or veto new products or decisions that result in market or credit risk exposures that exceed specific thresholds;
- those who have managerial authority over staff members under point (v) above who have individual authorities to commit RBC to transactions .

2. **Employees captured by quantitative criteria**

- Employees awarded total compensation of EUR 500,000 or more in the preceding financial year;
- Employees within the 0.3% of the number of staff who have been awarded the highest total compensation in the preceding year;
- Employees awarded compensation in the preceding financial year which was equal to or greater than the lowest total compensation awarded to those meeting specified qualitative criteria.



### 10.1.3 Design and Structure of Remuneration for Regulated Employees

Remuneration programs are designed to:

- Attract and retain the talent we need to compete and succeed; and
- Align the interests of our employees with the achievement of performance objectives and strategic goals within our risk appetite to drive superior financial performance and generate sustainable shareholder returns.

Guided by RBC's vision of being among the world's most trusted and successful financial institutions and RBC's purpose of helping clients thrive and communities prosper, RBC's approach to remuneration is based on the five guiding principles set out below. The RemCo continually evaluates the policies and procedures applicable to RBC IS Bank with a view to upholding these principles:

#### 1. Remuneration aligns with long-term shareholder interests

Awards vary based on absolute and relative performance of RBC and RBC IS Bank.

Mid and long-term incentives vest and pay out over time, encouraging a longer-term view of increasing shareholder value.

#### 2. Remuneration aligns with sound risk management principles

Our risk management culture is reflected in our approach to remuneration. Our remuneration practices appropriately balance risk and reward, and align with shareholder interests.

Performance of individuals, lines of business and RBC overall is assessed on a number of measures, including adherence to risk management policies and guidelines.

#### 3. Remuneration rewards performance

Our pay-for-performance approach rewards contributions of employees to individual, business segment and enterprise results relative to objectives that support our business strategies for sustainable growth over short, medium and long-term horizons, which are aligned with the risk appetite of RBC IS Bank and RBC.

#### 4. Remuneration enables the Company to attract, engage and retain talent

Talented and motivated employees are essential to building a sustainable future for RBC. We offer remuneration that is competitive within the markets where we operate and compete for talent.

Remuneration programs reward employees for high performance and their potential for future contribution.

#### 5. Remuneration rewards behaviors that align with our values and drive exceptional client experiences

RBC values, embedded in our Code of Conduct, form the foundation of our culture and underpin our ongoing commitment to put the needs of our clients first and deliver value to all of our stakeholders.

Risk conduct and compliance with policies and procedures are considered in determining performance-based remuneration.

IS Remuneration Policy aligns with global enterprise-wide policies and procedures and applies to RBC IS Bank entities (subsidiaries and branches) under the scope of the Commission de Surveillance du Secteur Financier (CSSF), the EBA and other local regulators of the subsidiaries and branches. Subsidiaries and branches of RBC IS Bank will implement these policies at a minimum (any local regulatory requirements that are above and beyond these policies will be implemented as required). All the RBC IS Bank's remuneration-related policies and plans align with the five guiding principles described above and these policies are approved by the RemCo and the IS Board.

## Elements of Remuneration

Remuneration includes, but is not limited to, base salary, performance-based incentive awards, pension and benefits. For 2019, there were no non-cash benefits (such as discretionary fringe benefits) offered. All benefits are non-discretionary and are considered to be part of fixed remuneration. All fringe benefits offered by RBC IS Bank are considered components of the fixed remuneration of employees as they are transparent, predetermined and do not depend on performance, form part of the terms of employment and are compliant with article 38-5 g) i) of the LFS and §117 of the EBA Guidelines on Sound Remuneration Policies.

RBC uses a standard grid to assess employees performance in all entities and jurisdictions. A common definition of the different ratings applies. Employees are assessed against goals related to their job mandate, and against RBC Leadership model behaviours.

For employees having a dual reporting line (functional and local), the rating related to the performance of the assessed employee is the combination of the input of the 2 reporting managers.

For Regulated employees, a mandatory risk objective is included in their form. The CRO RBC IS Bank reviews the completion of this objective for any Regulated employee and makes a recommendation to the Remuneration Committee.

For Regulated employees being identified as Authorized Management of RBC IS Bank, the input of the CEO RBC IS bank in their performance is also requested by their direct Manager.

### 1. Fixed Remuneration

All Regulated Employees receive fixed remuneration that reflects their market value, responsibility and contribution to the Company.

Base salary is considered fixed remuneration as it provides a predictable base level of income reflecting each employee's level of responsibility, capabilities, skills and experience.

All advantages received in kind by an employee are non-discretionary and do not foster under any circumstances excessive risk-taking. None of the benefits are linked to performance. Fringe Benefits depend on each entity's Remuneration Structure.

### 2. Variable Remuneration

All Regulated Employees, other than the Independent Non-Executive Directors and overseas Board of Directors are eligible to participate in discretionary performance based incentive schemes. The purpose of variable remuneration awards is to retain and motivate employees, rewarding individual performance and their contribution to longer-term growth at RBC. Variable remuneration may be offered in the form of cash and/or equity-linked instruments depending on the amount of variable compensation and employee level.

RBC IS Bank business unit employees participate in the RBC Investor & Treasury Services (I&TS) Incentive Plan, which consists of an annual cash component and, depending on the amount of incentive (which includes a review of an individual's performance), a medium-term equity-based program. Employees in Functions and Technology & Operations (Functions) participate in variable remuneration incentive programs which consist of a short-term cash-based program, as well as a medium-term equity-based program that applies to senior employees. Variable remuneration represents a higher proportion of total remuneration for senior employees to ensure alignment with longer-term shareholder value creation.

The fraction of variable remuneration mix for Regulated Employees is based on the minimum remuneration deferral requirements in line with Regulatory requirements.

## Compensation risk and performance adjustment

### RBC IS Bank Level:

The Chief Risk Officer of RBC IS Bank (IS Bank CRO) considers key financial and qualitative measures when evaluating whether any adjustments will be recommended to the overall variable compensation pools beyond what is captured in the formulas. The IS Bank CRO also considers key risk factors and the opinion of the RBC IS Chief Compliance Officer (IS Bank CCO) when evaluating whether any adjustments will be recommended to variable compensation awards for Regulated Employees.

### Business Unit Levels:

“RBC IS Bank Level” includes RBC IS Bank entities (branches and subsidiaries).

### Individual Level:

The IS Bank CRO will review and assess the underlying risks associated with the Regulated Employees’ roles and review the recommended variable compensation for the current fiscal year.

As required, the IS Bank CRO will dialogue with the business leaders, the IS Bank CCO and Human Resources on compensation payouts or adjustments. Upon request, the IS Bank CCO will provide effective input into the setting of compensation by taking into account staff compliance-related behavior, riskiness of business undertaken and results of Internal Audit Reports. The Head of Human Resources, Luxembourg will also review variable compensation awards for Regulated Employees.

Details of the review will be presented to the IS RemCo for review and in turn, the IS RemCo will then prepare a recommendation on the variable compensation of the Regulated Employees, for approval by the IS Bank Board.

The IS Bank CCO conducts a review of compensation for the IS Bank CRO to ensure variable compensation payouts adequately reflect risk and performance, and avoid any conflict of interest.

### RBC Level:

In addition to the Compensation Risk and Performance Adjustment Process – RBC IS Bank S.A., there is an RBC enterprise-level process (Compensation Risk and Performance Adjustment Process) to assist the Human Resources Committee (HRC) (a Committee of the RBC Board of Directors) in determining whether remuneration awards require a risk or performance adjustment, the Compensation Risk Management Oversight Committee (CRMOC) reviews major remuneration program pool calculations to ensure significant items impacting the results for the period are identified and appropriately captured. The process includes a review of key financial measures, including net income (on both an after-tax and before bonus and tax basis), return on equity, and economic profit that takes into account the cost and quantity of capital.

The RBC CRO conducts a review of key risk factors to identify significant quantitative and qualitative risks that should be taken into account in determining variable remuneration awards. The CRMOC also reviews these factors. If required, adjustments for risk will be recommended by the RBC CRO to the HRC. Key risk factors include, but are not limited to, risk concentrations including credit and market risk exposure and exposure to stress events.

Deferred remuneration awards granted to employees whose professional activities may have a material impact on RBC’s risk profile, including Regulated Employees, can be adjusted downward at vesting and payout if (i) there has been a material downturn in financial performance or a material failure of managing risk, and (ii) actual risk and performance outcomes are materially different from the assessments made at the time of grant.

## Ratio between fixed and variable remuneration

RBC IS Bank has obtained the necessary approvals to operate a maximum level of the ratio between the fixed and variable components of remuneration that does not exceed 200% of the fixed component of the total remuneration for each individual as required under Article 91(1)(g) of CRD IV. 100% shareholder approval was obtained on February 25, 2019 for IS Bank and IS Bank subsidiaries and branches for the 2019 fiscal year.

Variable remuneration represents a higher proportion of total remuneration for senior employees to ensure alignment with longer-term shareholder value creation. When determining the pay mix between fixed and variable remuneration, consideration is given to evolving market practice, balance between remuneration elements and maintaining flexibility through volatile markets, recognizing the possibility of paying a zero bonus.

## Deferral, vesting requirements and proportionality

All remuneration plans contain minimum remuneration deferral requirements for Regulated Employees in line with Regulatory requirements. Regulated Employees (regardless of variable compensation plan) whose variable remuneration is equal to or greater than 100,000 EUR must defer a minimum of 40% of their total variable remuneration over three years. In certain cases, where variable remuneration is equal to or exceeds 1,000,000 EUR, 60% of the award will be deferred over three years.

Regulated Employees who may be awarded variable remuneration equal to or greater than 100,000 EUR are subject to 50% of non-deferred variable remuneration being paid in the form of equity-linked instruments, a portion of their variable remuneration being deferred and the application of a retention period and ex-post risk adjustments to variable remuneration as detailed further below.

50% of variable remuneration for Regulated Employees is delivered in equity-linked awards which are subject to retention periods of 12 months post vesting. Regulated Employees awarded total annual variable remuneration equal to or greater than 100,000 EUR are not eligible for reinvested dividends. Effective 2018, deferral periods for certain categories of RBC IS management body (in its management function) and senior management (including Authorised Management) who are awarded total annual variable remuneration equal to or greater than 100,000 EUR increased to 5 years at 20% per annum. Furthermore, all equity deferrals are subject to a retention period of 12 months for members of RBC IS management body (in its management function) and senior management (including Authorised Management) who are awarded variable compensation equal to or greater than 100,000 EUR. RBC IS Bank confirmed with the CSSF that it would apply the 12 month retention period and the increased deferral periods in line with the EBA's Guidelines on sound remuneration policies from the performance year 2018 onwards.

Deferred remuneration awards granted to Regulated Employees can be adjusted downward at vesting and payout if there has been a material downturn in financial performance or a material failure of managing risk, and actual risk and performance outcomes are materially different from the assessments made at the time of grant.

Depending on the compensation plan, the vesting of deferred compensation is either:

- 25% at the end of year one, 25% at the end of year two, and 50% at the end of year three for the I&TS Share Unit Award Program (for RBCIS Bank business unit employees); or
- 20% at the end of year one, 20% at the end of year two, 20% at the end of year three, 20% at the end of year four and 20% at the end of year five for the I&TS Share Unit Award Program (for RBCIS Bank business unit members of Authorized Management);
- 100% at the end of year three for the RBC Deferred Share Unit (DSU) Program (for employees in Functions or Technology & Operations who support RBCIS Bank).

RBCIS Bank business unit employees (that are not within the scope of the deferral requirements outlined above) are subject to certain deferral arrangements (between 25% and 55%) based on if their total bonus allocation meets certain thresholds.

These practices align with our remuneration principles, whereby ensuring an appropriate balance between risk and reward.

### Variable remuneration for Control Functions

Performance measures for employees responsible for financial and risk control activities will be based on the achievements and objectives of the functions, and their remuneration will be determined independently from the performance of the specific business areas they support, therefore helping to prevent any potential conflicts of interest. Remuneration for employees engaged in Functions is reviewed regularly for market alignment to ensure that remuneration levels are competitive.

At RBC IS Bank, employees who fall under this arrangement include employees in Compliance, GRM, Internal Audit, Human Resources, Legal and Finance.

Variable remuneration for Functions employees who support RBC IS Bank, including all Regulated Employees in Control Functions, will be based only on individual, RBC IS Bank and overall RBC performance and not the performance directly linked to the business they support. Individual employee performance goals are determined separately from the business units they support, including results from business decisions where the Control Function may be involved. The criteria used for assessing the performance and risk is predominantly based on the internal Control Functions' objectives. The variable remuneration for Control Functions predominantly follows from control objectives. The IS Bank CRO, the IS Bank CCO and the IS Bank CIA have a People Management objective and a Risk & Compliance objective, in addition they have objectives related to all their control areas related to Compliance, Risk management and Internal Audit. The variable remuneration for these Control Functions employees is reviewed and reported to the RemCo to verify the rating through Audit or Compliance, the reception of level 1 rated issue, the Material Issue slippage rate compared to risk appetite of RBC IS Bank. The ratio between the fixed and variable remuneration for Control Functions employees is capped at 1:1 (or 100%). Employees in a Control Functions will be excluded in any request made by RBC IS Bank to Royal Bank Holding Inc. that seeks to set, where appropriate, the maximum variable remuneration at 2:1 (or 200%) of fixed remuneration.

### Share Ownership requirements

To reinforce the focus on generating long-term value for shareholders, RBC I&TS senior leaders (inclusive of IS Bank) have minimum share ownership requirements. Based on the level of responsibility and role, the share ownership requirements may vary from 1x (for Control Functions Vice Presidents and I&TS Managing Directors (inclusive of IS Bank) to 2x (I&TS Operating Committee members) of the average base salary of the most recent three years.

### Guaranteed variable remuneration and severance payments

RBC IS Bank will only in exceptional circumstances make a cash payment commitment to an employee for a specific payment amount, to be paid at a future date not exceeding 12 months following hire, where such future payment amount is guaranteed. In case such award is being made to a Regulated Employee, the award shall be subject to deferral. Any payment commitment will be consistent with delegated approval authorities. All severance payments must align with regulatory requirements, local market practices and shareholder interests. Payments related to the termination of employment will reflect performance achieved over time and do not reward failure or misconduct. Managers are required to undertake an assessment of the employee's performance on a multi-year basis and confirm that the proposed severance payment reflects performance achieved over the assessment period and that there has been no failure or misconduct on the part of the employee.

#### 10.1.4 The Link between Pay and Performance for Regulated Employees

Variable remuneration plans reward employees on the basis of several factors, including individual, business segment and enterprise results relative to established performance objectives that are aligned with the risk appetite of RBC. A significant portion of performance-based pay is deferred in the form of equity incentive awards (linked to RBC's share price performance) in order to align remuneration with the risk time horizon, motivate employees to generate longer-term value for shareholders and remain accountable for decisions with longer risk-tails.

To create a clear relationship between pay and performance, incentive awards are directly linked to performance and employees have an opportunity to earn higher remuneration for outstanding performance, and conversely, earn less remuneration when RBC, a business segment and/or individual results fall below expectations.

Variable remuneration awards take into account firm-wide, business unit level and individual performance metrics. Firm-wide metrics include the financial performance of RBC; business unit level metrics include the financial performance of individual business units (with the exception of Control Functions); individual performance metrics include (but are not limited to) the employee's contribution to overall performance, and the achievement of individual performance objectives. In order to protect the sound capital base of the bank, in cases where firm-wide performance is weak, or in a net-loss position, then the incentive pool would be impacted and this could result in a zero payout.

All employees will be assessed as part of a performance management process. This involves the assessment of performance relative to objectives set. Goals are set and performance is assessed on a multi-year basis. The performance management process is reviewed by the RBC I&TS HR department. At the individual level, there are a number of factors that are considered in determining the extent to which an employee participates in a discretionary variable compensation plan distribution. Typically, these include, but are not limited to, some or all of the following factors:

- reward for personal performance (both results and behaviors);
- RBC I&TS profit;
- adherence to all internal policies and procedures;
- incentive for retention of employees in future years;
- incentive for on-going performance in future years; and
- performance relative to risk and capital usage.

Individual performance is evaluated using both financial and non-financial measures

Select financial measures are applied at the individual level that demonstrates a contribution to overall business results based on financial and risk goals and objectives. These metrics include financial targets (related to income, revenue and cost savings), growth metrics, compliance with risk policies and limits and performance relative to risk and capital usage. For employees in non-revenue generating areas, the measures may include, but are limited to, completion of key tasks, process improvements/efficiencies and the achievement of other goals as agreed.

Non-financial measures considered in the discretionary bonus evaluation process include the following:

- Adherence to our Code of Conduct. RBC's Code of Conduct (Code) promotes standards of ethical behavior that apply to directors, senior management and all employees. Our Code fosters an open environment in which questions and concerns may be brought forward. It creates a frame of reference for dealing with sensitive and complex issues, and provides for accountability if standards of conduct are not upheld. All employees are expected to adhere to our Code, and failure to adhere through unethical or non-compliant behaviors results in disciplinary or corrective action, which may include immediate or eventual dismissal. All employees receive Code of Conduct training and testing on joining RBC and every year thereafter;
- Compliance with a full range of risk management policies specific to individual job requirements as outlined in employee Performance Management Documents;

- Assessment of key behaviors, which are part of the RBC Global Performance Management process;
- Reports from Control Functions, including those from Internal Audit, Compliance, and Group Risk Management regarding operational, market and credit risks, among others;
- Assessment of accountabilities and detailed action plans to implement and monitor changes required to close the gaps identified during risk management or internal audit reviews; and
- For employees who manage people, an assessment of metrics related to driving best in people management practices.

Employees that are not meeting the above mentioned non-financial performance standards for their role are subject to our corrective action process, which can include either a significant reduction in bonus amounts or dismissal.

Regulated Employees have an additional mandatory Risk & Compliance goal. Goal plans for all Regulated Employees are reviewed and approved by the CRO of RBC IS Bank.

### Ex-ante and ex-post adjustment

Prior to vesting, Regulated Employees deferred remuneration is subject to review under the firm's risk and performance adjustment process whereby actual risk and performance outcomes are reviewed and if materially different from assessments made when deferred remuneration was granted, or if misconduct has occurred, then deferred remuneration may be reduced or forfeited in full. Adjustments may be applied to entire remuneration programs, only to certain business units within a remuneration program, or only to certain employees, depending on the underlying nature of the assessed risks, actual performance and risk outcomes.

Adjustments for risk and performance under this process may be applied to variable remuneration at time of award (ex-ante) and/or at or before time of vesting of deferred remuneration (ex-post).

Ex-ante adjustments are applied at the time variable remuneration is awarded, based on forward looking quantitative and qualitative measures. For Regulated Employees, the IS Bank CRO conducts a review of their remuneration to ensure variable remuneration payouts adequately reflect risk and performance. The RBC IS CRO will review and assess the underlying risks associated with the Regulated Employees' roles and review the recommended variable remuneration for the current fiscal year and determine adjustments, if any.

Ex-post adjustments are applied to deferred, unvested variable remuneration at or before the time of award maturity and payout. Adjustments may be made if actual performance and risk outcomes are significantly different than assessments made when deferred remuneration was initially granted. At the end of each fiscal year, and before the vesting date of deferred remuneration, the RemCo will consider whether there has been a material downturn in financial performance or a material failure of managing risk. If actual risk and performance outcomes are materially different from assessments made when deferred remuneration was granted, and that information would have negatively impacted the amount of deferred remuneration awards when initially granted, the RemCo will determine the following: if downward ex-post adjustments should be applied to unvested deferred remuneration, the employees impacted, the portion of unvested deferred remuneration to which the adjustment applies; and the value of the adjustment to be applied. The RBC IS CRO leads the process of determining whether there has been a material downturn in financial performance, or a material failure in managing risk based on certain ex-post adjustment review process triggers; and provides to the RemCo any risk-related recommendations with respect to deferred remuneration awards vesting.

All variable compensation made to Regulated Employees under the RBC IS Bank's variable remuneration schemes are subject to malus and clawback under the Forfeiture and Clawback for Regulated Employees Policy – RBC IS Bank S.A. This policy enables RBC to recoup variable compensation awards that have been paid and cancel unvested variable compensation awards in certain situations including but not limited to misconduct as defined in the policy.

## 10.2 Disclosures on Remuneration

During the year ended 31st October 2019, remuneration for staff whose professional activities have a material impact on the risk profile of the business (Regulated Employees) was as follows.

Table 10-2 – Remuneration by business area

EUR mm	MB Supervisory Function	MB Management Function	Investment Banking	Retail Banking
<b>Total</b>	0.0	2.7	0.0	0.0
	Asset Management	Corporate Functions	Independent control Functions	All other
<b>Total</b>	0.0	0.9	2.6	8.2

Table 10-3 – Remuneration awarded during the year

EUR mm	2019	
	Senior Management	Other
Number of Regulated Employees	9.0	40.0
<b>Fixed compensation (EUR mm)</b>		
Cash Based	2.2	7.0
<b>Variable compensation (EUR mm)</b>		
Cash-based (non-deferred)	0.5	1.6
Cash-based (deferred)	0.2	0.5
Shares and share-linked instruments (non-deferred)	0.4	0.8
Shares and share-linked instruments (deferred)	0.5	0.7

Table 10-4 – Deferred compensation

EUR mm	2019	
	Senior Management	Other
<b>Outstanding (EUR mm)</b>		
Cash-based (vested)	0.0	0.0
Cash-based (unvested)	0.2	1.1
Shares and share-linked instruments (vested)	0.0	0.0
Shares and share-linked instruments (non-vested)	1.5	2.8
<b>Fiscal year payouts (EUR mm)</b>		
Cash-based	0.0	0.4
Shares and share-linked instruments	0.3	1.8



Table 10-5 – Special payments

	2019	
	Number of employees	Amount (EUR mm)
Sign-on awards	-	-
Severances	2.0	0.3
Guaranteed awards	-	-
Highest severance :	-	0.2

There have been 2 beneficiaries of severance payments. The total amount of severance payments paid is €300,401.40 and the highest severance payment to a single person is €225,000. All severance payments for the year were awarded and paid in full during the same fiscal year.

Table 10-6 – Analysis by compensation bands

	2019
EUR 1,000,001 to EUR 1,500,000	0.0
<b>Total</b>	<b>0.0</b>

### 10.3 The Role of the Board of Directors in the remunerations

The Board of Directors of RBC Investor Services Bank S.A., appoints the members of RBC Investor Services Bank Remuneration Committee (RemCo) and approves its mandate. The Board of Directors of RBCIS Bank appoints a Chair from among the members of the RemCo.

Based on recommendations from the Remuneration Committee, the Board of Directors approves:

- the design and operation of remuneration policies and practices across RBC IS Bank and its branches and subsidiaries.
- the criteria for the identification of Regulated Employees.
- the remuneration of senior executives, material risk takers, and other employees and Regulated Employees across RBC IS Bank including the Chief Risk Officer, the Chief Compliance Officer and the Chief Internal Auditor of RBC IS Bank.
- On an annual basis, the remuneration policy and practices for RBCIS Bank and its branches and subsidiaries.
- the Compensation Risk and Performance Adjustment process for Regulated Employees and any substantive changes.

## 10.4 Nomination Committee

The Nomination Committee is established under the specific authority of the Board of Directors into which it reports after each meeting. The purpose of the Nomination Committee is to assist the Board of Directors in overseeing nominations to the Board, Authorized Management and Key Function Holders. The Committee is a specialized sub-committee of the Board, as defined by CSSF Circular 12/552 (as amended).

Duties of the Nomination Committee:

- The Committee will monitor the composition of the Board, Authorized and Key Function Holders for compliance with legal requirements and the Bank's policies.
- The Committee will develop and maintain a matrix that specifies the existing experience and strengths of Board members and Authorized Management, as well as the areas of expertise and experience that should be represented on the Board and within Authorized Management. The Committee will monitor the current and future profile of the Board and Authorized Management and determine the competencies, skills and personal qualities it should seek in new members.
- The Committee will review annually the continuing eligibility of the directors, Authorized Management and Key Function Holders considering:
  - qualifications under the applicable laws and regulations;
  - compliance with eligibility rules under the conflict of interest requirements in respect to the law on commercial companies dated 10 August 1915 and amended from time to time and the Luxembourg CSSF Circular 12/552 point 25; and
  - the competences, skills, personal qualities and other characteristics of the individual.
- The Committee will receive an annual report from Human Resources with respect to succession planning for Authorized Management and Key Function Holders.
- The Committee will recommend suitable candidates to nominate for election or appointment as directors, members of Authorized Management and Key Function Holders, based on criteria established by the Committee. The Committee will focus on diversity, including gender diversity, when considering candidates and will ensure that the Bank complies with Article 435(2)(c) of Regulation (EU) No 575/2013.

## 10.5 Recruitment policy for the selection of the members of the management body

The Assignment and Nomination for Directors, Authorised Management and Key Function Holders of the Company Policy establishes the terms of reference for the appointment, succession and renewal of Key Function Holder mandates of the Company in accordance with the Law of 5 April 1993 on the financial sector as amended (the "LFS"), the circular CSSF 12/552 on Central Administration, Internal Governance and Risk Management, published 11 December 2012, as amended (the "CSSF 12/552") the Directives 2013/36/EU and 2014/35/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (the "CRD IV").

The Nomination Committee retains responsibility for the implementation of the relevant requirements related to this Policy within the Company's branches and subsidiaries, subject to local laws and regulations and taking into account the principle of proportionality and simple requirements for smaller institutions.

The Nomination Committee must identify, monitor, report and recommend candidates as Director, Authorised Manager or Key Function Holder of the Company.

Key tasks:

- Identify all Management Body roles and Key Functions Holders (annually).

- Identify and recommend to the Board for appointment individuals that fall within the scope of this Policy and who comply with the requirements for fitness and propriety (“suitability”) and for advising the Board of the status of potential nominees.
- Acknowledge each suggestion and proposal in writing.
- Keep update on new nominees and resignations and oversee the administrative appointment process (i.e.: Pre-Membership screening, DA form, Shareholder resolution, Appointment confirmation letter) which is defined in the SGO Policy.
- Have primary responsibility for ensuring escalation of resignations and open positions to the appropriate approving bodies and regulator where applicable.
- Maintain a central matrix identifying areas of experience and expertise contributed by each nominee and determine the competences, experience and skills it should seek in new nominees.
- Review annually the qualifications and suitability of nominees for election taking their background, diversity (gender and geography), qualities, skills and experience into consideration.
- Assist the Board of the Company in responding to shareholder proposals.
- Distinguish the different governing bodies and ensuring that assignments and nominations as well as resignations are correctly logged and classified through local internal and legal ruling and recommending processes (i.e.: LFS / CSSF 12/552 / the Company’s Articles of Association / RBC Corporate Governance Framework / SGO Policy / Appointment and Removal of Directors, Executive Committee Members and Chief Internal Auditor Process, February 2018).
- Ensure all nominations, assignments and resignations for the respective jurisdiction are acknowledged and reported.
- Monitor ongoing assignments to ensure fulfillment of responsibilities.
- Acknowledge the direction taken by the business as to effectively determine the persons with most adequate professional experience able to act with a high level of responsibility and autonomy.
- Define criteria under which the potential nominees may be assessed (i.e.: good repute, knowledge, skills, experience and time commitment) as required to fulfil their duties.
- Define criteria under which the “Management Body” may be assessed as required to fulfil collectively its duties.(i.e.: Structure, size, composition, performance, balance of knowledge, skills, diversity and experience).
- Notify the CSSF of all information which casts doubts on the qualification or professional standing of a nominated active member of the Key Function Holders.
- Ensure different mandates are and remain compatible with any other positions held as to avoid of conflicts of interest and time commitment issues.
- Oversee performance evaluations and professional training.
- Review regularly reports from Human Resources (“HR”) with respect to succession planning for Authorised Management and Key Function Holders.
- Coordinate with L&D to ensure adequate education and training for Directors.

## 10.6 Diversity

At RBC, the diversity is an important topic. This principle is expressively mentioned in the Policy on the Legal Governance of Subsidiaries. RBC is convinced that “A Subsidiary board derives its strength from the background, diversity, qualities, skills, competencies and experience of its members. Directors are selected in accordance with applicable laws, regulations and rules, taking into consideration the skills, diversity, geographies and areas of expertise already represented on the board.”

RBC receives awards from external observers, for example, for the third year (2017-2019), RBC has been named to the Bloomberg Gender-Equality Index (GEI), an annual review that measures gender equality across internal company statistics, employee policies, external community support and engagement and gender-conscious product offerings.

In Canada, RBC is an early signatory of the Catalyst Accord, a call to increase overall proportion of board seats held by women to 30% plus by 2022, and the 30% Club, a corporate consortium targeting 30% gender representation by 2020. RBC's board has in place a diversity objective that at least 30% of directors should be women (increased from 25% in 2014). Women currently comprise 38% of the Board of Directors, including the Chair of the Board.

Consistent with RBC's core values, including "Diversity for growth and innovation", gender and non-gender diversity will be considered when identifying candidates for nomination to Subsidiary boards. The interlocking directorship guideline and director tenure guideline are mechanisms to assist in driving increased diversity on Subsidiary boards by providing opportunities for ongoing board renewal.

During the fiscal year 2019, the women gender in the Board of Directors of RBC Investor Services Bank S.A., represented 11% and 29% at the level of the Executive Committee.

## 10.7 CRD IV mandates limitation

### Stephen Walker (until 30 October 2019)

Stephen is an Independent Director and the Chairman of the Board of Directors of RBC Investor Services Bank S.A. He is also a member of (i) the Audit & Compliance Committee, (ii) the Risk Committee, (iii) the Nomination Committee and (iv) the Remuneration Committee.

Before retirement in 2014, Stephen was Vice Chairman, RBC Investor Services & Head of Global Credit within RBC Capital Market.

Stephen had more than 30 years' experience within Royal Bank of Canada, where he held various senior executive roles in Global Credit, Corporate and Institutional Banking, Real Estate Finance and Portfolio Management.

He was also a founding member of the International Association of Credit Portfolio Managers and a member of the Loan Syndication and Trading Association.

He holds a Master of Arts from the McGill University and did Post Graduate Studies at University of Cambridge, at the Institut d'Etudes Politiques de Paris and at the Beijing Language Institute.

### Philippe Renard (from 14 November 2019)

As CEO, Philippe chairs the IS Bank Executive Committee and the Continental Europe & Offshore Operating Committee. Based in Luxembourg, he is also a member of the Board of Directors of RBC Investor Services Bank S.A. and a member of the Operating Committee of RBC Investor Services (RBC IS).

Philippe works with the Business, Function and Country Heads across Europe to advance the regional business and build a sustainable growth strategy in the region through RBC IS' high quality, full service provider approach. As part of his executive mandate, Philippe oversees regulatory relationships, ensures employee engagement in the region and manages the IS Bank entities as an essential part of the organization. Previously, Philippe was Chief Risk Officer of RBC Investor Services Bank S.A.

Philippe has been in business for 25 years and acquired first experience as operation/production manager in manufacturing industry during several years before joining the bank industry in 2000. Prior joining RBC, he worked in many capacities for BNP Benelux including Director Projects & Process Custody Business, Director Sub Custody Network management. Philippe joined RBC in 2007 as Head of Change and Effectiveness and became Head of Operational Risk in 2010 before being appointed Chief Risk Officer of RBC Investor and Services Bank S.A.

He holds an Honours BSc in Chemical Engineering from Liège University, Belgium.

### **Sergio de Horna**

Sergio is a Director of the Board of Directors of RBC Investor Services Bank S.A. since July 2016. Before being appointed Chief Executive Officer (ad interim) and Chairman of the Executive Committee in December 2018, Sergio was since October 2015 Chief Operating Officer accountable for the development and leadership of the I&TS Luxembourg COO Office Team in disciplines of Business & Project Management, Governance and Regulatory Solutions ("GRS"). Sergio resigned from the Executive Committee on August 30, 2019.

Sergio has broadened professional experience with over 30 years experience in financial markets, including 17 years at Citibank in Iberia (starting as General Counsel and last 7 years CEO for Spain and Portugal). He had also senior positions in other major financial institutions.

Sergio holds a Law Degree and a Master in Commercial and Banking Law from the University "Complutense" of Madrid. He is a long-time supporter of Junior Achievement Foundation in Spain where he was a founding member.

### **Francis Jackson**

Francis is a Non Executive Director of the Board of Directors of RBC Investor Services Bank S.A. . He is also member of the Risk Committee, Chairman of the Nomination Committee and the Remuneration Committee.

As Chief Executive Officer, Investor Services, Francis leads our Investor Services business globally and has oversight of the firm's asset services, custody, payments and treasury services for financial and other institutional investors worldwide. Francis has approaching 30 years' experience in banking and finance and significant business development, product management, operational and technical experience.

Francis joined RBC in May 2015 from JP Morgan where he held several leadership roles over the last nine years, including most recently as Head of Investor Services Sales & Relationship Management. He was also a member of their Investor Services Global Executive Management team.

Prior to this, Francis held a number of senior roles at SEI, Citigroup, Bankers Trust and Chase Manhattan Bank.

Francis has a Bsc (Hons) degree in Economics & Politics.

### **Bruce MacLaren**

Bruce is a Non Executive Director of the Board of Directors of RBC Investor Services Bank S.A. . He is also the Chairman of the Risk Committee and a member of the Nomination Committee. Furthermore Bruce is the Chief Risk Officer Europe and APAC, with responsibility for providing independent oversight of risk for all RBC businesses across the region. He sets the strategic direction of risk management and provides leadership in the implementation and execution of leading practices in risk oversight and governance for Europe. Bruce also has global accountability for risk oversight in Investor & Treasury Services, as well as the majority of RBC's Asian operations.

Based in London, Bruce is a member of the Investor & Treasury Services Operating Committee and the Capital Markets Europe Operating Committee.

Bruce is a graduate of the University of Toronto and York University. He joined RBC in 1987 and held various positions in client-facing roles in corporate banking, corporate finance, loan syndications and market management in both Toronto and London. He was appointed Vice President of Risk Management in 1997 responsible for financial institutions, and became Senior Vice President within Group Risk Management – Credit, in 2003. He assumed his current responsibilities since September 2015.

### **David Morgan**

David is a Non Executive Director of the Board of Directors of RBC Investor Services Bank S.A. and a member of the Audit & Compliance Committee. He is the RBC's Treasurer for Europe and APAC, with responsibility for all treasury matters including liquidity / capital measurement & management. He sets the strategic direction of Treasury in the region and provides leadership in the implementation of all treasury responsibilities.

### **Julian Presber**

Julian is an Independent Director of the Board of Directors of RBC Investor Services Bank S.A., and the Chairman of the Audit & Compliance Committee.

Prior to his retirement in late 2018, Julian was employed by the University of Luxembourg since 2009, in the Faculty of Law, Economics and Finance Co-coordinator Relations with the Financial Centre.

Julian is a senior figure in the Luxembourg financial center. He was for many years Managing Director of State Street Bank Luxembourg and Senior Vice President of State Street Corporation (1995 – 2009). Prior to that, he held senior positions at Clearstream Bank in Luxembourg (1989 – 1995), the banking payments network SWIFT in Brussels (1985 – 1989), and the Royal Bank of Canada in Winnipeg, Canada (1980 – 1984).

Previously, Julian served on the Boards of Directors of the Luxembourg Bankers' Association (ABBL) (2002 - 2006) and of the Association of the Luxembourg Fund Industry (ALFI) (2001 – 2009), and was president of the Association of American Banks in Luxembourg (2002 – 2006). He also served for many years on the Investment Funds Committee of the Luxembourg regulator, the CSSF.

Mr. Presber obtained his undergraduate degree at the University of Manitoba, Winnipeg, Canada, obtained an MBA (with Distinction) from INSEAD, France (1985) and a PhD from the International School of Management, New York (2018).

Mr. Presber has one other mandate.

### **Hervé Cloquette**

Hervé is a Non Executive Director and employee representative of the Board of Director of RBC Investor Services Bank S.A. He is a Senior manager Corporate Real Estate Luxembourg, with the responsibility for manage health and safety and building projects for Luxembourg office.

Hervé joined RBC Investor Services Bank S.A. in 1998 as IT Service Delivery Manager responsible for financial and accounting IT services. He joined the Internal Audit team in 2009 and Risk Management in 2012 as Operational Risk Manager. In 2015, he was appointed as Business Continuity manager for ITS Europe. He has a strong experience in IT, Audit and Risk management and Business continuity.

In 2013 and 2019, he was elected as Staff Representative.

### **Isabelle David**

Isabelle is an Executive Director and employee representative of the Board of Director of RBC Investor Services Bank S.A.

Isabelle joined Dexia-BIL in 2000 and held various clerical roles. Before, she worked in the financial sector in Switzerland.

Since 2006 she is a permanent Staff Representative.

### **Gennaro Casale**

Gennaro is a Non-Management Director and employee representative of the Board of Directors of RBC Investor Services Bank S.A. and a member of the Remuneration Committee. Gennaro joined RBC in 2002 and he held several positions in the Transfer Agency, principally with German and Swiss clients.

Between 2007 and 2015, he worked in Operational Risk Management with focus on the Shareholder Services activity.

In 2008, he was elected as Staff Representative.

Gennaro holds a Master of Arts from the University Trier, Germany, and a Post-Graduate in International and Diplomatic Sciences from the University Institute for European Studies, Turin.

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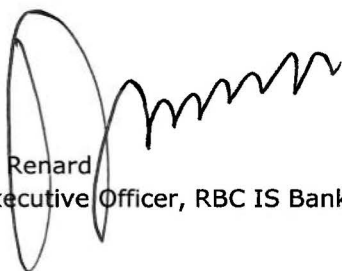
Investor &  
Treasury Services

January 16, 2020

To whom it may concern

**ATTESTATION**

We hereby declare, on behalf of the authorized management of RBCIS Bank S.A. ("the Bank"), that the risk management arrangements and systems put in place within the Bank are adequate with regard to the Bank's profile and strategy.

  
Philippe Renard  
Chief Executive Officer, RBC IS Bank S.A.

  
Alexandre Simon  
Chief Risk Officer