# Global Credit Data

Supporting Lending Strategies – A hypothetical use case

FRM

Financial Resources Management (FRM) supports commercial banking strategy through driving material and visible improvement in the business' ability to understand and improve its financial resources. FRM provides expertise and support in optimisation identification, including:

- Optimising RWA to support capital investment
- Managing funding costs to de-risk business and identify potential revenue improvement
- Improving pricing capability
- Building analytical insights to support strategic decision-making and systemic optimisation realisation
- Mastering an end-to-end view of data from client contact to regulatory reporting
- Improving model input data and potential application
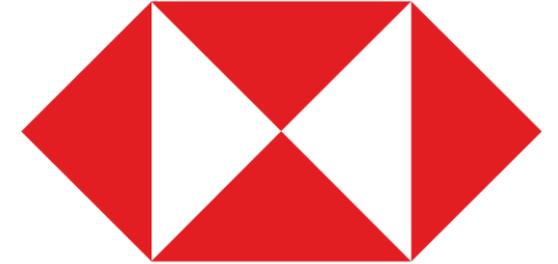
Strats

Partnering to strategically optimise profitability through Technology, Data and Modelling

At **FRM Strats**, we enable our partners within FRM and the wider HSBC community to make better decisions by:

1) **Providing transparency** on the first, second and even third order impacts of their decisions;
2) **Making data discovery simpler and faster** via creation of reusable patterns (code, data assets);
3) **Acting as a hub organisation and breaking down artificial barriers** that hinder communication and collaboration between different units of the organisation.

FELIS

Stellar network
Leading world class analytics for HSBC

Introducing Octagon Bank

Octagon Bank is:

- A commercial bank with an international portfolio.

- Not a charitable organisation, i.e. its investors expect a return commensurate with the level of risk on its balance sheet.

- Historically, returns have been acceptable. However, Senior Management are keen if capital can be 'optimised' to generate higher returns.

- The primary return metric is Returns on RWA (RoRWA):

$$RoRWA = \frac{Net\ Income}{RWA}$$

Octagon Bank's Portfolio

While Octagon Bank's portfolio is international, the composition of the portfolio varies by Country and Customer Size, as well as IRB permission. As a result, the returns vary.

Country	Cust. Size	Secured Lending		Unsecured Lending	
		RWA (USDm)	RoRWA (%)	RWA (USDm)	RoRWA (%)
United Kingdom	Tall	1,000	3.0	200	3.4
	Grande	5,000	2.9	500	3.1
	Venti	100	2.7	1,000	3.6
Canada	Tall	--	--	--	--
	Grande	100	2.2	--	--
	Venti	2,000	2.3	1,000	2.5

Q1: How do Octagon's returns compare?

Leveraging the GCD database …

1. Collate data into desired categories.

2. Extract PD and LGD data.

3. Apply desired 'transformations' to align with internal processes or frameworks.

4. Using 'transformed' PD and LGD values, derive risk weights per category.

5. Re-sample the data (e.g. using a bootstrapping approach) to construct a distribution of the risk weights.

6. Apply the category-specific risk weights to internal data.

7. Re-calculate RoRWA.

Q1: How do Octagon's returns compare?

Using the re-calculated RoRWA from Step #7, Octagon Bank's returns may be compared to other banks in a manner that provides a measurement of variance.

Country	Cust. Size	Secured Lending		Unsecured Lending	
		RoRWA (%)	Percentile Rank	RoRWA (%)	Percentile Rank
United Kingdom	Tall	3.0	60th	3.4	75th
	Grande	2.9	45th	3.1	55th
	Venti	2.7	35th	3.6	85th
Canada	Tall	--	--	--	--
	Grande	2.2	30th	--	--
	Venti	2.3	35th	2.5	50th

Q2: How should Octagon lend going forward?

Like many, if not all, commercial banks, Octagon Bank actively engages in strategy planning to shape the bank going forward.

Decisions on where and how much to lend are predicated upon, inter alia, the level of expected returns.

The analysis based on GCD data from Q1 can support the use of realistic assumptions in strategy-based scenario analysis, e.g.:

- In portfolios where Octagon Bank are not lending, what is a realistic level of return?

- Unsecured Lending in the UK delivers the highest returns; however, Octagon Bank's returns in this segment are already relatively high (55th - 85th percentiles). Are similar levels of return on new lending realistic?

- Secured Lending in Canada delivers the lowest returns; however, Octagon Bank's returns are relatively low (sub-50th percentiles). Could returns on new lending be considerably higher?

Q2: How should Octagon lend going forward?

Using the distribution of risk weights from the previous analysis, returns on new lending can be estimated using realistic assumptions, e.g. 50th percentile.

Country	Cust. Size	Secured Lending				Unsecured Lending			
		Extant Portfolio		New Lending		Extant Portfolio		New Lending	
		RWA (USDm)	RoRWA (%)	RWA (USDm)	RoRWA (%)	RWA (USDm)	RoRWA (%)	RWA (USDm)	RoRWA (%)
United Kingdom	Tall	650	3.0	500	2.8	150	3.4	200	2.9
	Grande	2,500	2.9	2,500	3.0	250	3.1	250	3.0
	Venti	70	2.7	40	2.9	700	3.6	500	2.8
Canada	Tall	--	--	50	3.1	--	--	50	3.0
	Grande	70	2.2	30	3.0	--	--	50	3.0
	Venti	1,000	2.3	500	2.8	700	2.5	300	2.5