



**FINANCIAL SERVICES
COMMISSION**

What do we about Credit Unions in Barbados?

KESTER GUY

Objectives

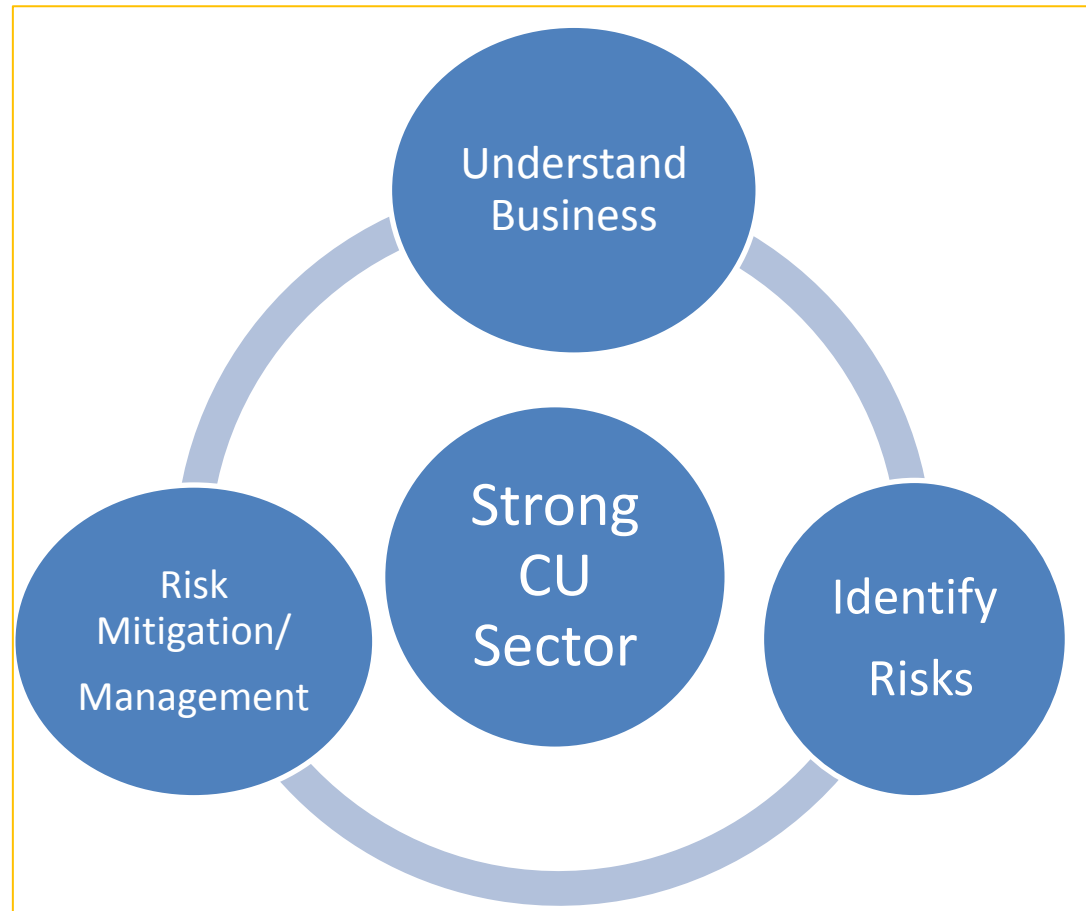
- Establish the topology
- Review trends
- Reviewing the regulatory framework

Motivation

Focus on Financial Stability

Principles-Based Regulatory Framework

- Sets down principles governing particular areas of concern
- Sets out compliance expectations based on expected outcomes
- Effective monitoring

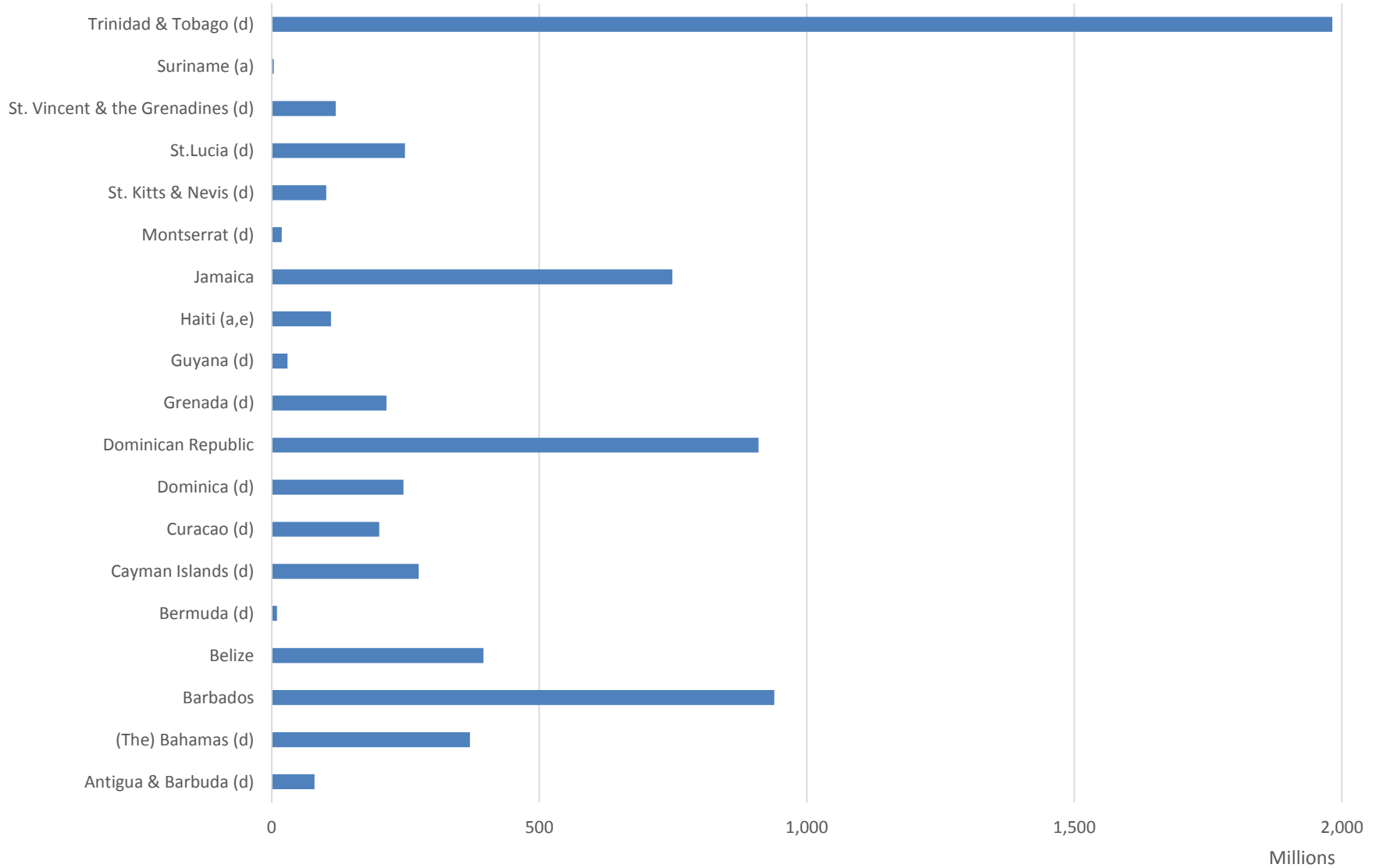


Selected Studies

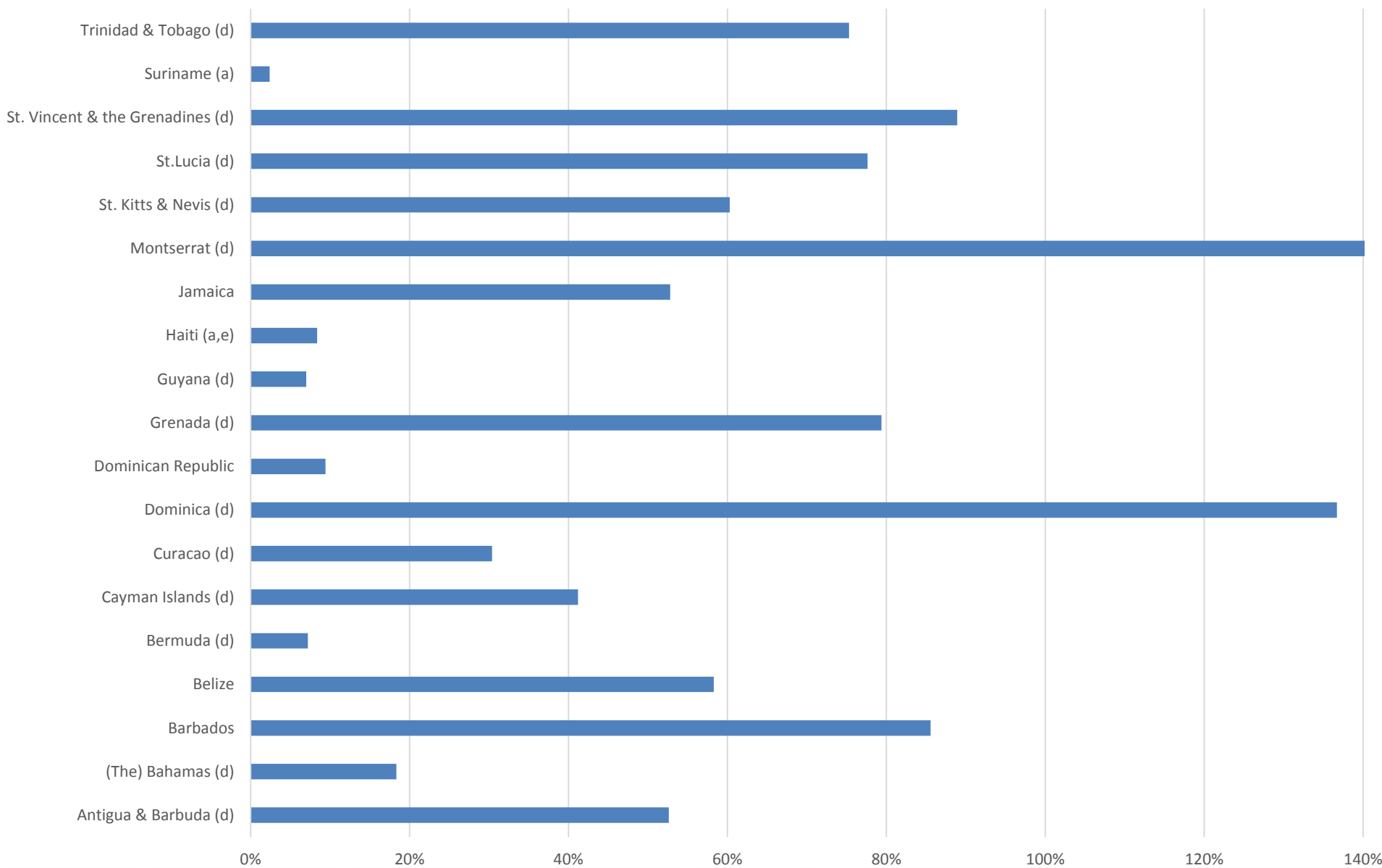
Within the Caribbean only a few studies on credit unions are readily available:

- **Hinds and Chase (1997)** “Credit Unions in Barbados: a case for enhance regulation”
- **Belgrave et al. (2002)** “Commercial Banks and Credit Unions: An Empirical Investigation”
- **Moore W. (2003)** “Determinants of Credit Union Efficiency in Barbados.”
- **Moore W. (2005)** “Is Efficiency Imperative for the Growth of the Barbados Credit Union Industry?”
- **Griffith et al. (2009)** “The Contribution of Credit Unions to the National Development of Barbados”
- **McKillop and Quinn (2017)** “Irish credit unions: Differential regulation based on business model complexity”
- **Van den End (2016)** “A macro-prudential approach to address liquidity risk with the loan-to-deposit ratio”

Assets



Penetration



Credit Union Sector in Barbados

Credit Union Sector in Barbados

As at June

	2017	2016	2015
Number of credit unions	33	34	34
Total Assets (billion)	2.13	1.97	1.82
Total Loans (billion)	1.58	1.47	1.39
Total Deposits (billion)	1.83	1.68	1.52
Capital Ratio	11.76%	11.66%	11.51%
Profitability	3.1%	2.6%	2.1%

Credit Union Sector Summary

Categorized by Asset Size as at June 2017

Category	Number of Credit Unions	Asset Size	Number of members
Greater than \$40m	7	92.5	178,074
\$10m to \$40m	6	5.1	4,932
Less than \$10m	20	2.4	7,577
Total	33	100	190,583

McKillop and Quinn (2017) ... Differential regulation based on business model complexity

- Adopting a technique which uses credit union characteristics to provide insight into both the likelihood of a multi-class model and the optimal number of classes.
- Focus on modelling the structural business model of a credit union as a production technology using an enhanced hyperbolic distance function.
 - *This distance function is to be estimated parametrically using a stochastic frontier approach (Aigner, Lovell, & Schmidt, 1977; Battese & Corra, 1977; Nahn & Vu, 2013).*

DATA

Model Outputs	Y1	Risk adjusted loans
	Y2	Risk adjusted earning assets
	Y3	Shares & deposits
	b	Bad debt proxy
Model Inputs	X1	Labour expense
	X2	Physical capital expenditure
	X3	Interest expense
	t	Trend variable
Financial Viabilities	ROA	
	CAR	
	L/A	Proportion on loans to assets

Key considerations included in the this proposal that can provide enhancements to Moore 2005

1. In the context of a CU one appealing feature of the distance function is that it allows for the description of the structural business model without the need for behavioural assumptions. Very important as given not-for-profit nature of CU (Bauer, 2008).
2. Due to size differences and divergent lines... latent clustering may emerge... if ignored, misinterpretations on improvements or reductions can result. Further calculating the economies of scale becomes unreliable (Orea & Kumbhakar, 2004).

Macro-prudential Regulation for CU

Key finding Mckillop & Quinn

- Our results, which have identified three classes of business model complexity, support the Commission's conclusion that a common regulatory framework for all credit unions is inappropriate.

Five Pillars of Risk Assessment

Early Warning Indicators

Risk Assessment Report

Stress Testing

Crisis Management

Cross Border Supervision

Macro-prudential Regulation for CU

Early Warning Indicators

Four (4) Components

- Capital Adequacy
- Asset Quality
- Liquidity
- Earnings



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THANK YOU