

Risk-Based Supervision for Inclusive Digital Financial Services

Course syllabus

Mode of offering:	This eight-week online course aims to strengthen inclusive digital financial services (DFS) by equipping participants with the skills to apply an inclusive, risk-based approach to supervision. By combining technical learning with peer engagement and applied problem-solving, the programme enables participants to translate knowledge into practice, building supervisory approaches that are responsive to inclusive DFS.
Estimated work effort:	To gain the most from this course, we recommend dedicating at least one hour per day to learning activities. As this is an interactive, peer-based learning experience, maintaining a consistent pace alongside your fellow participants is essential for meaningful engagement and collaboration.
Most suitable for:	This course is tailored for supervisors involved in DFS. It aims to equip supervisors to identify, appropriately prioritise, and address supervisory issues, both existing and those arising from new digital financial service models and technologies, using risk-based supervision. In doing so, participants will play a key role in driving more inclusive DFS.

Learning outcomes

By the end of this course, participants should be able to:

1. **Describe** risk-based supervisory approaches and practices relevant to proportional supervision for inclusive DFS. (KS)*
2. **Select** appropriate combinations of risk-based supervisory tools to advance inclusive DFS and other statutory goals. (KS)*
3. **Address** priority risks through timely and proportionate supervisory actions that enable the development of inclusive DFS. (B)*
4. **Discuss** emerging approaches and tools for risk-based DFS supervision, and how they can be used to promote inclusive DFS. (KS)*
5. **Identify** and appropriately **prioritise** supervisory issues emerging from innovation in business models, products and services, and technologies for more inclusive DFS. (KS/B)*
6. **Implement** proportionate and inclusion-aware risk-based supervisory approaches to support the development of appropriate, financially inclusive solutions. (B)*
7. **Promote** inclusive DFS by incorporating a gender perspective to risk-based DFS supervision, making use of gender-disaggregated data (B)*
8. **Connect** and **collaborate** with other supervision practitioners in-country to share challenges and develop strategies for integrating new technologies, gender awareness, proportionality, and a risk-based approach to supervision into national policy, thereby promoting financial inclusion. (S)*

*KEY: KS – Knowledge and Skills; B – Behaviour; S- Social

Summary

Module	Topics	Duration
Module 1: Introduction to Proportionality	<ul style="list-style-type: none"> • What is proportionality? • How to achieve proportionality in supervision <ul style="list-style-type: none"> ◦ Introduction to risk-based approach for supervision ◦ Modularization ◦ Supervisory structures • Innovation facilitators <ul style="list-style-type: none"> ◦ Deep dive into regulatory sandboxes • The role of gender in proportional supervision 	1 Week
Module 2: Risk-Based Supervision	<ul style="list-style-type: none"> • Introduction to risk-based supervision • How to use supervisory tools strategically • Intra- and Inter-agency coordination • Risk-based approach to licensing and authorisations 	1 Week
Module 3: Data-Driven Supervision	<ul style="list-style-type: none"> • Introduction to data-driven supervision • Developing a data strategy • Ensuring quality of supervisory data • Using gender-disaggregated data • Leveraging SupTech • Using AI-powered SupTech 	1 Week
Module 4: Prudential Supervision	<ul style="list-style-type: none"> • Introduction to prudential supervision • Incorporating gender perspectives in prudential supervision • Deposits and payments • Credit • Innovation in inclusive insurance • Sustainable inclusive finance • Anti-Money Laundering (AML) and Countering the Financing of Terrorism (CFT) • Virtual assets and financial inclusion • Data and cyber security related risks • Cloud computing 	2 Weeks
Module 5: Consumer Protection and Competition	<ul style="list-style-type: none"> • Introduction to consumer protection and competition • Using a risk-based approach for consumer protection supervision • Incorporating gender perspectives in consumer protection supervision • Incorporating competition goals into supervision • Deposits and payments • Digital credit • Insurance • Crowdfunding • Virtual assets • Open finance • Data privacy 	1 Week
Module 6: Capstone	<p>Apply what you have learned to a fictitious scenario. Develop a Five-Year Strategy for Data-Driven Risk-Based Supervision of Digital Financial Services and a Pilot Programme for AI-Enabled Inclusive AML/CFT using a fictitious country profile.</p>	2 Weeks

Course Syllabus Full

Topic	Outcomes
Module 1: Introduction to Proportionality	
Module Aim	Identify the implications of new business models and products for applying proportionality as a supervisory approach, and appropriately direct resources to the most vulnerable consumers and those most in need, with a particular focus on gender.
What is Proportionality?	<ul style="list-style-type: none"> • Describe why proportionality in regulation and supervision is essential in the context of emerging DFS Providers and new business models. • Identify some of the risks that need to be considered by supervisors exercising proportionality. • Discuss how proportionality helps the efficient allocation of supervisory resources and supervisory planning based on risk assessment. • Identify different supervisory structures, including how authorities can organize internally for effective and inclusive DFS supervision
Innovation Facilitators	<ul style="list-style-type: none"> • Identify how to facilitate innovation in supervision in DFS. • Discuss the role of innovation facilitators in serving as a bridge between the pace of innovation and the objectives of financial authorities. • Identify the benefits, limitations, and design considerations of certain innovation facilitators. • Select appropriate innovation facilitators for various use cases. • Describe how innovation facilitators help supervisors to spot risks while supporting inclusion and innovation.
The Role of Gender in Proportionate Supervision	<ul style="list-style-type: none"> • Recognise the disparity in gender in DFS and why it is a problem. • Identify what needs to be considered around gender and the impact this can have for financial inclusion, as well as risks around not doing so. • Identify where to gather gender data, what FSAs can do with their own data to promote gender awareness, and promote financial inclusion. • Identify why supervisory organizations need to reflect on their own gender practices. • Take appropriate steps to promote gender inclusion in supervision. • Incorporate gender analysis in your supervisory activities by tracking and analysing gender. • Explain how transparency in gender at supervisory level can help ensure appropriate, proportionate, and inclusive supervision in DFS.
Interview	Reflections on implementing proportionality in practice.
Module 1 Quiz	10 Multiple Choice Questions testing concepts covered in the Module
Module 1 Assignment	A scenario where you get to apply what you have learned to a given context.



Topic	Outcomes
Module 2: Risk-Based Supervision	
Module Aim	Use relevant supervisory tools when applying a risk-based supervisory approach, recognising how a risk-based approach helps achieve proportionality and the benefits thereof.
Introduction to Risk-Based Supervision	<ul style="list-style-type: none"> • Discuss the concept and purpose of risk-based supervision. • Implement a risk-based supervisory approach in your supervisory activities. • Use risk-based supervision to appropriately allocate limited resources. • Explain how risk-based supervision supports balancing policy objectives such as inclusion, stability, integrity, and consumer protection.
How to Use Supervisory Tools Strategically	<ul style="list-style-type: none"> • List the range of supervisory tools available for risk-based supervision of digital FSPs. • Identify how different tools, such as market monitoring, offsite supervision, onsite inspection, and enforcement, can be strategically applied. • Strategically select appropriate tools for specific use cases and your supervisory activities.
Inter- and Intra-Agency Coordination	<ul style="list-style-type: none"> • Describe why effective coordination is essential in supervising DFS, both within supervisory authorities and across different agencies. • Use the mechanisms that support collaboration, including data-sharing, memoranda of understanding, and multi-stakeholder committees. • Discuss the importance of cross-border cooperation in DFS supervision and how global and regional initiatives facilitate information sharing.
Risk-Based Approach to Licensing and Authorisations	<ul style="list-style-type: none"> • Identify the factors that contribute to efficient licensing of DFS providers (flexibility, proportionality, and technical understanding). • Explain how proportional, flexible, and well-informed licensing processes can balance policy objectives while fostering innovation. • Describe how DFS supervisors can increase the flexibility in licensing procedures. • Promote the use of flexible licensing within your own context.
Interview	Reflections on implementing a risk-based approach to the supervision of digital financial services.
Module 2 Quiz	10 Multiple Choice Questions testing concepts covered in the Module
Module 2 Assignment	A scenario where you get to apply what you have learned to a given context.



Topic	Outcomes
Module 3: Data-Driven Supervision	
Module Aim	Design and implement encompassing data strategies that ensure data quality and prioritise Supervision Technology (SupTech) investments, recognising and mitigating the risks involved with these technologies (including AI), to advance inclusive DFS.
Introduction to Data-Driven Supervision	<ul style="list-style-type: none"> • Explain why a data-driven approach to supervision is necessary. • Discuss how becoming data-driven requires supervisors to change how they view and value data. • Recognise that high-quality accessible data is a prerequisite before adopting any SupTech. • Describe how to become a data-driven DFS supervisor. • Develop a plan to facilitate the change for your organisation to become more data driven.
Developing a Data Strategy	<ul style="list-style-type: none"> • Recognise the reliance on regulatory data that supervisors use for their analyses and reviews. • Describe why a data strategy is necessary to become a data-driven organisation and the consequences of not having such a strategy. • Develop encompassing data strategies that integrate into the broader digital transformation strategy of the organisation, while including guidance for data governance frameworks, workforce integration, and change management. • Identify and address weaknesses in data quality and data infrastructure ahead of implementing SupTech and other data-driven supervision tools.
Ensuring Quality Data	<ul style="list-style-type: none"> • Identify the various data types and formats involved in supervisory analyses. • Identify common data quality issues and how to address them. • Discuss the importance of data validation in ensuring quality data. • Describe why data standardisation is critical for quality data and essential before investing in SupTech. • Integrate provisions to ensure data quality into your data strategy.
Using Gender-Disaggregated Data	<ul style="list-style-type: none"> • Explain what gender-disaggregated data is. • Describe how supervisors can get gender-disaggregated data and promote the collection of gender data in your own context. • Mitigate the challenges involved when collecting disaggregated data. • Recognize the limitations of gender disaggregated data and collect additional demographic data for supervisory analysis.



<p>Leveraging SupTech</p>	<ul style="list-style-type: none"> • Describe the functions that SupTech can assist with in DFS Supervision. • Develop a SupTech strategy as part of the broader data and digital transformation strategies for the organisation, that prioritises SupTech investments to advance financial inclusion. • Drive the successful implementation of SupTech into your organisation. • Identify and address weaknesses in data infrastructure ahead of implementing SupTech and other data-driven supervision tools. • Use SupTech tools for better risk-based proportional supervision. • Explain why SupTech is not a substitute for supervisors.
<p>Using AI-Powered SupTech</p>	<ul style="list-style-type: none"> • Identify the organisational advantages of AI-Powered SupTech. • Describe how AI can assist across the three main functions for DFS supervisors. • Identify how AI can contribute to financial inclusion across transmission channels. • Identify the risks involved with AI-Powered SupTech and how to mitigate them. • Integrate AI-Powered SupTech into your SupTech and data strategies. • Use SupTech tools, including AI, for better risk-based proportional supervision.
<p>Interview</p>	<p>Reflections on the need for high-quality supervisory data, the shift towards more granular data and implementing SupTech.</p>
<p>Module 3 Quiz</p>	<p>10 Multiple Choice Questions testing concepts covered in the Module</p>
<p>Module 3 Assignment</p>	<p>A scenario where you get to apply what you have learned to a given context.</p>



Topic	Outcomes
Module 4: Prudential Supervision	
Module Aim	Implement a proportional and risk-based supervisory approach, selecting an appropriate combination of supervisory tools (including new and emerging tools), to address priority prudential risks that enable the development of inclusive DFS.
Introduction to Prudential Supervision	<ul style="list-style-type: none"> • Distinguish between prudential and consumer protection supervision. • Identify the most significant prudential risks for DFS providers. • Discuss the primary objectives for prudential supervisors. • Select appropriate supervisory approaches for providers, based on their different prudential risk profiles. • Identify some of the broader prudential regulations and requirements in place for DFS providers.
Incorporating Gender Perspectives in Prudential Supervision	<ul style="list-style-type: none"> • Consider gender perspectives when conducting prudential supervisory assessments. • Use gender disaggregated data and gender-based analysis in prudential supervisory assessments, including gender data about the providers and supervisory authorities. • Discuss examples where incorporating gender-disaggregated data has led to better supervisory assessments, improved policies and regulations, and ultimately financial inclusion.
Prudential Supervision: Deposits and Payments	<ul style="list-style-type: none"> • Use a modern, adaptive supervisory approach to ensure appropriate prudential supervision for deposits and payments in DFS. • Identify the main prudential risks involved for e-money issuers. • Mitigate the risks involved for customers of e-money issuers, by considering deposit insurance and broader regulatory and supervisory frameworks. • Use a risk-based proportionate supervisory approach, and select the appropriate supervisory tools, to supervise e-money issuers. • Recognise the role of agents in advancing financial inclusion and why proportional regulation and supervision are critical for sustainable growth. • Use effective supervisory tools and procedures for the oversight of agent networks, while maintaining the focus on the digital FSPs rather than individual agents.



<p>Prudential Supervision: Credit</p>	<ul style="list-style-type: none"> • Identify the barriers that low-income individuals, women and MSMEs face in accessing credit and the consequences of these barriers. • Discuss how recent digital innovations are helping close the credit gap and what implications this may have. • Identify prudential risks associated with digital credit and implement strategies to mitigate them. • Differentiate lenders according to the regulatory spectrum and adjust supervisory approaches based on their categorisation. • Select appropriate supervisory tools and use a risk-based, proportionate supervisory approach to conduct supervision of digital lenders.
<p>Prudential Supervision: Innovation and Inclusive Insurance</p>	<ul style="list-style-type: none"> • Describe inclusive insurance and the role it can play in fostering financial inclusion. • Identify how technology and innovation enable inclusive insurance. • Identify the risks involved with inclusive insurance and why it requires prudential supervision. • Discuss examples of technological innovation enabling insurance to become more inclusive. • Select an appropriate combination of supervisory tools, and a risk-based proportionate supervisory approach, to supervise inclusive insurance, as an emerging product/service that fosters financial inclusion.
<p>Prudential Supervision: Sustainable Inclusive Finance</p>	<ul style="list-style-type: none"> • Describe how sustainable finance is relevant to inclusive DFS and prudential supervision. • Take appropriate supervisory actions to enable sustainable, inclusive finance. • Demonstrate how inclusive finance can counteract climate risk and foster financial inclusion through the virtuous cycle. • Advocate for the appropriate regulatory and legal instruments to address the growing risks posed by climate change. • Use appropriate prudential supervision to mitigate the risks of financial exclusion from climate-related financial regulation.
<p>Prudential Supervision: Anti-Money Laundering (AML) and Countering the Financing of Terrorism (CFT)</p>	<ul style="list-style-type: none"> • Apply the principles of a risk-based approach to AML/CFT supervision and consider how this approach will inform supervisory resource allocation. • Conduct risk assessments that distinguish between inherent and net ML/TF risk. • Recognize the importance of internal controls and governance in mitigating risks associated with ML/TF. • Develop your own supervisory plans to appropriately supervise prudential risks related to ML and TF that include monitoring unusual transactions, addressing de-risking practices, and leveraging SupTech solutions. • Discuss how financial inclusion contributes to AML/CFT objectives, while reducing reliance on cash. • Apply a proportionate, risk-based approach to customer due diligence to support financial inclusion, without compromising AML/CFT effectiveness. • Use insights from regulatory and supervisory practices, including simplified CDD and use and oversight of agent networks, in your own supervisory plans.



<p>Prudential Supervision: Virtual Assets</p>	<ul style="list-style-type: none"> • Describe the potential benefits and risks of virtual assets, including stablecoins, especially in the context of financial inclusion. • Discuss why the regulation and supervision of virtual assets are necessary to protect consumers, preserve financial integrity, and ensure stability. • Apply appropriate supervisory priorities to your own supervisory plans for supervising virtual assets.
<p>Prudential Supervision: Data and Cyber Security Related Risks</p>	<ul style="list-style-type: none"> • Identify the main data security and cyber risks faced by digital FSPs, and their implications for consumer trust, financial inclusion, and financial stability. • Select appropriate supervisory actions to mitigate the risks and enhance protection around data security, operational resilience, and incident response among digital FSPs. • Explain how collaboration, capacity building, and international coordination can strengthen cybersecurity frameworks in EMDEs.
<p>Prudential Supervision: Cloud Computing</p>	<ul style="list-style-type: none"> • Identify the main prudential risks for digital FSPs using cloud computing technologies. • Select appropriate supervisory actions and tools to mitigate the risks involved with cloud computing. • Discuss current regulations for cloud computing and how such regulations aim to protect consumers and digital FSPs that rely on these technologies. • Take appropriate and timeous action to address the complex concerns associated with cloud service providers in your own context.
<p>Interview</p>	<p>Reflections on applying a risk-based approach to the prudential supervision of digital financial services, with a focus on AML/CFT.</p>
<p>Module 4 Quiz</p>	<p>10 Multiple Choice Questions testing concepts covered in the Module</p>
<p>Module 4 Assignment</p>	<p>A scenario where you get to apply what you have learned to a given context.</p>



Topic	Outcomes
Module 5: Consumer Protection and Competition	
Module Aim	Take timely and proportionate supervisory actions, selecting an appropriate combination of supervisory tools, to address priority consumer risks and issues in competition, and enable the development of inclusive DFS to protect consumers and advance competition goals.
Introduction to Consumer Protection and Competition Supervision	<ul style="list-style-type: none"> • Discuss why consumer protection is essential for building trust in digital finance. • Describe why it is necessary to supervise competition as part of the supervision of DFS. • Differentiate between prudential and market-focused supervision that focuses on consumer protection and competition.
Using a Risk-Based Approach to Consumer Protection Supervision	<ul style="list-style-type: none"> • Identify the leading consumer risks across the various DFS segments and their implications for consumers. • Discuss the importance of market monitoring as part of consumer protection supervision. • Apply the supervisory cycle in your consumer protection supervision. • Develop a consumer protection risk-based supervision framework. • Select appropriate supervisory tools and use a risk-based, proportionate supervisory approach, tailored to consumer protection, to mitigate the risks and conduct consumer protection supervision for DFS.
Incorporating Gender Perspectives in Consumer Protection Supervision	<ul style="list-style-type: none"> • Recognise the importance of the customer-centric approach for consumer protection supervision • Discuss the importance of gender and other identifiers when collecting customer-centric data • Explain what gender data enables supervisors to do and how it contributes to more inclusive consumer protection and ultimately more inclusive digital finance. • Include gender perspectives when conducting consumer protection supervisory assessments. • Discuss how FSPs and regulators can promote gender inclusion.
Incorporating Competition Goals into Supervision	<ul style="list-style-type: none"> • Identify barriers to competition in DFS and how regulators can reduce these barriers. • Discuss how supervisors can facilitate competition and protect DFS consumers. • Adopt appropriate supervisory practices that lead to greater competition in DFS.



<p>Consumer Protection: Deposits and Payments</p>	<ul style="list-style-type: none"> • Identify key consumer protection issues involved with inclusive deposits and payments. • Discuss how supervisors can address these issues. • Adopt outcome-based and risk-based approaches in your supervisory activities to ensure fairness, safety, and transparency in DFS markets. • Incorporate insights on competition, interoperability, and open access to digital infrastructure support consumer welfare and sustainable market development in your supervisory activities.
<p>Consumer Protection: Credit</p>	<ul style="list-style-type: none"> • Identify consumer protection challenges and competition issues related to digital credit. • Discuss key risk areas for consumer protection and credit, such as transparency, suitability, fairness in algorithmic decision-making, and fraud vulnerabilities. • Use appropriate supervisory measures to promote responsible digital lending and consumer protection. • Discuss the role of competition in managing the consumer risks involving digital credit. • Balance the protection of consumers against exploitative practices with measures to remove structural barriers.
<p>Consumer Protection: Inclusive Insurance</p>	<ul style="list-style-type: none"> • Identify consumer challenges related to digital insurance. • Use appropriate supervisory procedures to address challenges and mitigate the associated risks for consumers of digital insurance. • Discuss how to protect consumers through targeted interventions. • Apply appropriate supervisory measures to protect consumers from issues related to AI. • Use appropriate supervisory procedures to foster competition in inclusive insurance markets. • Identify and use appropriate SupTech tools to support your supervisory activities involved with inclusive insurance.
<p>Consumer Protection: Crowdfunding</p>	<ul style="list-style-type: none"> • Discuss how crowdfunding benefits competition and financial inclusion in capital markets. • Describe how crowdfunding is currently regulated in various countries. • Discuss supervisory concerns for crowdfunding. • Use appropriate caution and supervisory processes when supervising crowdfunding.
<p>Consumer Protection: Virtual Assets</p>	<ul style="list-style-type: none"> • Identify specific consumer risks such as fraud, cyberattacks, and lack of transparency with virtual assets. • Apply appropriate supervisory measures to address consumer protection risks involved with virtual assets. • Recognise and advocate for stronger consumer protection in this emerging and evolving market. • Use insights from emerging global regulatory responses to inform your own supervisory approaches to this market and apply these to other new and emerging DFS models and products.



Consumer Protection: Open Finance	<ul style="list-style-type: none"> • Differentiate between open banking, open finance and open data. • Discuss the impact of open finance on consumer protection regulation and competitive dynamics. • Describe how open finance is currently regulated. • Use appropriate supervisory tasks, practices, and analyses when supervising open finance for consumer protection.
Consumer Protection: Data Privacy	<ul style="list-style-type: none"> • Recognise the limitations of traditional consent-based data protection models in the digital world. • Explain alternative approaches for data privacy and protection that shift responsibility from consumers to providers. • Use appropriate supervisory actions to ensure fairness, transparency and inclusion in data-driven DFS ecosystems.
Interview	Reflections on the challenges of consumer protection supervision and how to mitigate these, while incorporating competition and fostering innovation.
Module 5 Quiz	10 Multiple Choice Questions testing concepts covered in the Module
Module 5 Assignment	A scenario where you get to apply what you have learned to a given context.

Title	Description
Module 6: Capstone	
Module Aim	Participants will develop an implementation plan to apply the new technologies and risk-based approaches to supervision learned in the online learning component, fostering inclusive digital financial services within the context of their own country or organisation.
Capstone: Part 1: Strategy	Produce a board-ready strategy (5 - 10 pages) that sets the fictional country of Meridia on a path to full adoption of data-driven, risk-based supervision for DFS within five years.
Capstone: Part 2: Pilot	Prepare a pilot proposal (3 - 5 pages) on how AI and improved data quality can help reduce financial exclusion while improving AML/CFT effectiveness.



Course Creators

Course Creators **Denise Dias** and **Mehmet Kerse**.

Denise Dias



Denise has 24 years of experience with financial sector policy, regulation, and supervision, having worked in multiple countries. She provides regulatory advice and technical assistance to financial sector authorities on consumer protection, digital financial services, retail payments, open finance, and innovation. She works as an independent consultant for CGAP, the World Bank, the Toronto Centre, the Gates Foundation, Digital Frontiers, and other organizations.

Denise's background includes regulating and supervising banks and nonbanks at the Central Bank of Brazil, founding and managing an online marketing business, and auditing government programs for the Brazilian Ministry of Finance. She holds an MBA in International Banking and Finance and an MBA in Financial Sector Economics. She speaks Portuguese, English, and Spanish, and is learning French.

Mehmet Kerse



Mehmet is a consultant specializing in the regulation and supervision of digital finance. His recent work focuses on areas such as fintech, digital banking, embedded finance, tokenization, and artificial intelligence in financial services. He works as a consultant with multiple organizations such as the World Bank Group, IMF, UNCDF, and Digital Frontiers. With over 15 years of experience in financial regulation and supervision, Mehmet has collaborated with numerous central banks and financial regulators primarily in Sub-Saharan Africa, Southeast Asia and Arab countries.

Mehmet began his career as a bank supervisor at the Banking Regulation and Supervision Authority of Turkey and later worked on anti-money laundering and combating the financing of terrorism projects for the World Bank. He is a Certified Fraud Examiner.

He holds a Master's degree in Public Administration from Harvard University and a Bachelor's degree in Economics from Bilkent University in Turkey.