1 | INTRODUCTION

Imagine how different the world might look today if, in 1976, Apple Computers had not obtained the US$ 15,000 in financing they needed to buy the parts to fulfil their first order. How many entrepreneurial visions with the potential to change the world have fizzled out of existence due to a lack of funds?

For many micro, small and medium-sized enterprises (MSMEs) around the world today, access to financing can mean the difference between prosperity and bankruptcy. Working to identify, understand, and ultimately overcome the challenges that MSMEs face in their quest for acquiring financing will help to ensure that the next Apple Computers does not cease to exist before it has a chance to change the world.

This publication seeks to identify some of the most pressing of these challenges, understand them, and explore the potential application of digital technologies to mitigating their impact. To that end, the authors conducted interviews and surveys with experts in the field of MSME financing, including in some cases trade financing, to shed light on these issues and explore the ways that technology can be used. A more detailed description of the research conducted can be found in Appendix A.

This publication will begin by examining some of the challenges that have been identified as impacting MSME financing, as well as the role that the COVID-19 pandemic has had in moulding the landscape. Next, it will move on to examine key digital technologies, their potential benefit to the industry – in particular to MSME financing – a selection of case studies and companies utilizing these technologies,[1] the adoption challenges they face, and recommendations for overcoming these challenges. The technologies in question include cloud computing, optical character recognition (OCR), the Internet of Things (IoT), big data analytics, artificial intelligence (AI), quantum computing, distributed ledger technology (DLT)[2] and application programming interfaces (APIs).

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[1] The authors note that the case studies used throughout this white paper are not exhaustive; rather, they are a selection of use cases/case studies which are intended to illustrate the way technologies are used within MSME financing. Inclusion of case studies, companies, products or services does not imply their endorsement by TFG, ICC or WTO.
[2] From a technical standpoint, the terms "DLT" and "blockchain" are not interchangeable. However, it is currently very common to use them interchangeably in the vast majority of the non-technical literature, project descriptions and the business community. To avoid unnecessary discrepancies, this paper will follow the convention of using the terms DLT and blockchain interchangeably.

TABLE OF ABBREVIATIONS

ADB	Asian Development Bank
AI	artificial intelligence
AML	anti-money laundering
API	application programming interface
B2B	business-to-business
DID	decentralized identifier
DLT	distributed ledger technology
ERP	enterprise resource planning
fintech	financial technology
GVC	global value chain
ICC	International Chamber of Commerce
IFC	International Finance Corporation
IoT	Internet of Things
ITC	International Trade Centre
ITFA	International Trade and Forfaiting Association
KYC	know your customer
LEI	legal entity identifier
ML	machine learning
MLETR	UNCITRAL Model Law of Electronic Transferable Records
MSME	micro, small and medium-sized enterprise
OCR	optical character recognition
SME	small and medium-sized enterprise
SSI	self-sovereign identity
TFG	Trade Finance Global
UNCITRAL	United Nations Commission On International Trade Law
WCO	World Customs Organization
WTO	World Trade Organization