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Access to Finance for SMEs: Alternative Sources of Finance in Georgia

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ABBREVIATIONS AND ACRONYMS

SMEs[1]	Small and Medium-sized Enterprises
OECD	Organization for Economic Cooperation and Development
ADB	Asian Development Bank
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
EC	European Commission
WB	World Bank
CBDC	Central Bank Digital Currency
FinTech	Financial Technology
FCI	Factors Chain International
IMF	International Monetary Fund
BIS	Bank for International Settlements
VC	Venture Capital
NBG	National Bank of Georgia
AA	Association Agreement
DCFTA	Deep and Comprehensive Free Trade Agreement
CEB	Council of Europe Development Bank
EIF	European Investment Fund
GEFF	Green Economy Financing Facility
MSMEs	Micro, Small and Medium-sized Enterprises
BOG	Bank of Georgia
USAID	United States Agency for International Development
EG	Enterprise Georgia
GITA	Georgia's Innovation and Technology Agency
API	Application Programming Interface
RDA	Rural Development Agency
ERDF	European Regional Development Fund
SBA	Small Business Act
FDI	Foreign Direct Investment
P2P	People to People
IMD	Institute for Management Development
EOS	Executive Opinion Survey
POS	Point of Sale
EMI	Electronic Money Institution
PI	Payment Institution
SPB	Special Purpose Bank
SEPA	Single Euro Payments Area
KYC	Know Your Customer
AML	Anti-Money Laundering
BGK	Bank Gospodarstwa Krajowego
PFR	Polish Development Fund Group
PARP	Polish Agency for Enterprise Development
SMBA	Small and Medium Business Agency
CFP	Crowd Funding Platform
FDB	First Digital Bank
ICO	Initial Coin Offering
STO	Security Token Offering
SAFT	Simple Agreement for Future Tokens
SNC	Start-up Nation Central
ISA	Israeli Securities Authority
IIA	Israel Innovation Authority

[1] The paper uses the definitions of the National Statistics Office of Georgia. A small-sized enterprise has an annual turnover of less than GEL 12 mln. and employs no more than 50 people. A medium-sized company has annual turnover of between GEL 12-60 mln. and has 50-250 employees. In statements that are provided by other sources, the definitions may vary according to the definitions adopted by those particular sources.

ABSTRACT

This paper explores the alternative financial instruments that are or could become available to Georgian SMEs. Through the examination of various secondary sources and several interviews with relevant stakeholders, the paper identifies obstacles and opportunities in the path toward development of two asset-based instruments (leasing and factoring) and two equity-based instruments (crowdfunding and venture capital) that currently have limited availability and/or are being discussed by the regulatory authority of the country. The paper also looks into several innovative practices that are increasingly being implemented around the world to support the creation of alternative sources of finance, namely open banking, regulatory sandboxes, digital banks, and central bank digital currency (CBDC).

Based on secondary sources, the paper also includes three case studies on Lithuania, Poland, and Israel. Meanwhile, the paper ultimately provides several recommendations to foster the development of the alternative instruments reviewed in the paper in Georgia.

Keywords: ***alternative finance, access to finance, leasing, factoring, crowdfunding, venture capital, FinTech, open banking, digital banks, regulatory sandboxes, central bank digital currency.***

INTRODUCTION

SMEs receive a disproportionately small share of credit from the banking sector around the world, despite being key contributors to the economy (Beck, Demirgüç-Kun and Martinez Peria 2008). Access to finance for SMEs has been identified as one of the biggest obstacles for entrepreneurs, especially in emerging markets[2], where financial markets are largely dominated by traditional debt finance offered by commercial banks (Modak 2018), leaving alternative financial instruments (such as leasing, factoring, and crowdfunding) underexplored and underdeveloped. However, the ever-growing capacity and potential of financial technologies and innovations may offer some exciting opportunities to improve the status quo. (The World Bank n.d.).

In Georgia, SMEs are important contributors to job creation and inclusive economic development. Specifically, they represent about 99.6% of all registered businesses in the country and contribute about 60% in gross value-added and about 60% in employment (National Statistics Office of Georgia 2021). However, despite the growing share of SMEs in the loan portfolios of commercial banks, access to finance is still one of the main obstacles to the development of SMEs in Georgia. In fact, it was reported as the second-largest problem after political instability according to the World Bank's Enterprise Survey in 2019 (Enterprise Surveys, what businesses experience 2019).

Banks have a dominant position in the Georgian financial structure and account for more than 90% of the financial system. Other alternative sources of finance are either nonexistent or at an initial stage of development. Faced with limited options, SMEs frequently turn to banks for finance. Currently, 38% of SMEs are indebted to banks, while the rejection rate of loans for SMEs stands at about 21%. Among the main obstacles in getting credit from banks are lack of collateral (banks on average require 191% of the loan amount), lack of credit history, difficulty of forecasting and managing risks, and low quality of business plans (Ministry of Economy and Sustainable Development 2021).

The use and discussion of alternative financing sources have been growing steadily around the world over the past decade. According to the OECD's Financing SMEs and Entrepreneurs 2020 report, besides efforts targeted at making traditional banking services more accessible by expanding credit guarantee schemes, governments are now progressively promoting alternative funding mechanisms. Specifically, OECD Secretary General Angel Gurría at the launching event of the Scoreboard[3] in Wash-

[2] The paper uses the term "emerging markets" based on a broad definition as an economy that experiences considerable economic growth and possesses some, but not all, characteristics of a developed economy. These are countries that are transitioning from the "developing" phase to the "developed" phase.

[3] Financing SMEs and Entrepreneurs 2019: An OECD Scoreboard.

ington, D.C. (oecd.org 2019) stated: "Uptake of alternative financing instruments by SMEs is growing like never before, while bank lending to SMEs is growing less strongly"The report states that the rapid expansion of financial innovations and FinTech enabled online alternative finance to grow by a median rate of 54% in 2018 (for the 48 countries included in the report). The use of factoring, leasing, and hire purchase by SMEs around the world is also on the rise, while the year-on-year growth in venture capital volumes went from 0.4% in 2015 to 20.9% in 2018 (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020).

This paper takes a close look at the currently underutilized alternative financial instruments and mechanisms in Georgia. The aim of the report is to identify and explore the potential and limitations of such instruments in this country's context. It focuses on leasing and factoring as examples of asset-based financing instruments, and venture capital and crowdfunding as examples of equity-based financing instruments. In addition, the paper explores the potential of certain financial technologies and innovations as catalysts for the development of the general financial system in the country. FinTech products and FinTech-conducive regulations are expected to increase financial competitiveness and make financial services more accessible to a wider group of customers by driving down prices of financial services globally through more precise, data-driven practices and decision-making (ADB 2021). To understand these developments better, the paper explores the respective potential of CBDC, digital banks, regulatory sandboxes, and open banking.

The paper is organized as follows:

The first part provides a brief overview of the available instruments and a general description of the alternative sources of finance around the world.

The second part describes the existing financial system in Georgia and explores the current scene. This part incorporates information acquired through interviews with the following:

1. Banking Association of Georgia - Mr. Giorgi Bagrationi (Executive Director), Mr. David Rusia (Analytical Director), and Mr. Ioseb Kurdadze (Legal Specialist).
2. Bank of Georgia – Mr. Levan Tetradze (Factoring and Trade Finance Squad, Product Owner).
3. National Bank of Georgia - Mr. Otar Gorgodze (Head of the Supervisory and Financial Technologies Department).
4. Georgia's Innovation and Technology Agency - Mr. Avtandil Kasradze (Chairman).
5. Enterprise Georgia - Mr. Irakli Gabriadze (Deputy CEO).

Thereafter, the third part presents brief summaries of the case studies with a closer look taken at three specific economies - Lithuania, Poland, and Israel - with the ex-

tended studies of these countries found in Annex 1. Lithuania was chosen to observe the efforts it has made to capitalize on its potential as a regional FinTech hub, while Poland was chosen because of its wide use of factoring and leasing instruments, and Israel – known as the "start-up nation" – was chosen because of its impressive venture capital investment opportunities.

Finally, the fourth part, based on the case studies and conducted interviews, concludes by providing specific recommendations to Georgian policymakers and other relevant stakeholders about what can and needs to be done in Georgia's economic environment to increase access to finance for SMEs through alternative sources of finance.

PART I: GENERAL OVERVIEW OF AVAILABLE SOURCES OF FINANCE FOR SMES

TRADITIONAL DEBT FINANCE

The most widely used source of finance for SMEs is straight debt. In particular, the most common sources of external finance for SMEs are bank loans, overdrafts, and credit lines. The OECD distinguished two mechanisms through which such financing is processed:

1. *Transaction lending* – This is based on quantitative data acquired mostly from financial statements. It largely depends on the availability of data, which means that this type of lending is only accessible to "informationally transparent borrowers."
2. *Relationship lending* – This is also referred to as small business credit scoring, and is largely based on qualitative information regarding the personal history of the owner of the enterprise rather than the enterprise itself. This may be applied to SMEs that do not have good credit or transaction history yet.

It is widely accepted that this sort of bank financing already plays, and will continue to play, a crucial role in the SME sector. Thus, policy measures in many countries are still largely oriented towards facilitating SMEs' access to debt finance. However, traditional debt finance, on top of high interest rates and high collateral requirements, involves complex applications and long delays. Applying for loans through the traditional banking system can be a major drain on SMEs' resources. Such issues have generated a need for diversified options for SME financing to support long-term investments, to mitigate the adverse effects of credit market shocks on SMEs, and to keep pace with the evolving regulatory environment (OECD 2015). Thus, the options other than traditional debt finance - frequently referred to as alternative sources of finance – have gained attention from the relevant stakeholders. To understand what these options are, this chapter reviews the alternative sources of finance in more detail.

ALTERNATIVE SOURCES OF FINANCE

According to the OECD, alternative sources of finance could be divided into four categories based on balance-sheet items and risk/return profile (see Table 1). However, the term 'alternative finance' has been subjected to a number of definitions. For example, the Cambridge Centre for Alternative Finance defines alternative finance as that which "includes digital finance activities that have emerged outside of the incumbent banking systems and traditional capital markets and occur online" (Ziegler,

et al. 2021). For the purpose of the study, this term is not constrained by the activities that only occur online. Instead, the paper explores all sources other than traditional debt finance, including the potential of financial technologies.

Table 1: Alternative Sources of Finance for SMEs

Low Risk/Return	Low Risk/Return	Medium Risk/Return	High Risk/Return
Asset-based Finance	*Alternative Debt*	*"Hybrid" Instruments*	*Equity Instruments*
Asset-based lending	Corporate Bonds	Subordinated Loans/Bonds	Private Equity
Factoring	Securitized Debt	Silent Participations	Venture Capital
Purchase Order Finance	Covered Bonds	Participating Loans	Business Angels
Warehouse Receipts	Private Placements	Profit Participation Rights	Specialized Platforms for Public Listing of SMEs
Leasing	Crowdfunding (debt)	Convertible Bonds	Crowdfunding (equity)
		Bonds with Warrants	
		Mezzanine Finance	

Source: (OECD 2015)

Subsequent sections, following the definitions provided by the OECD, analyze two asset-based financing instruments - ***factoring*** and ***leasing*** - and two equity-based instruments – ***venture capital*** and ***crowdfunding*** - in more detail. The paper also specifically explores novel FinTech concepts, such as open banking, central bank digital currency (CBDC), and regulatory sandboxes to determine their roles in increasing access to finance for SMEs.

Asset-based Finance

Leasing

Leasing is an asset-based alternative financing source with a relatively low risk and low return. A lease enables a business customer (e.g. an entrepreneur or a lessee) to use a piece of equipment owned by a lessor over a period of time in return for periodic payments, or lease rentals. This enables the lessee to use expensive equipment without having to purchase it.

There are several types of leasing (CFA Journal 2021), including:

1. ***Finance leasing*** – A long-term lease over the expected lifespan of the equipment, which means that after the lease, the lessee can sell the equipment. The leasing company does not take back the equipment. Although the client does not own the equipment during the period of the lease, he/she is responsible for its maintenance and insurance. Over the period of the lease, the leasing company recovers the full cost of the equipment plus interest. The leased asset should be on the company's balance sheet as a capital item, or an item that has been bought by the company.
2. ***Operating leasing*** – An arrangement for cases when the leased equipment is not needed by the lessee for its entire expected life. At the end of this period, the leasing company takes the equipment back. In this arrangement, the leasing company is responsible for maintaining and insuring the equipment, and the client does not have to show it on the company's balance sheet.
3. ***Leaseback*** – An arrangement in which the company (client) sells an asset to a leasing company to then lease back that same asset from it.

Currently, an overwhelming majority of the leasing market is in the hands of bank-owned leasing companies in OECD countries. It could be argued that for leasing to become a viable financing alternative for SMEs, it is important that non-bank-related leasing companies emerge on the market. FinTech, which uses streamlined technology, represents a possibility here. Specifically, FinTech solutions promise enhanced customer intelligence and better credit evaluation models. More generally, FinTech is expected to contribute to automating and, ultimately, digitally transforming the way leases are managed and marketed (Mittal 2020).

Factoring

SMEs frequently face liquidity-related challenges due to delayed payments from their customers. These challenges, if not addressed quickly, may cause firms to become insolvent and could possibly lead to bankruptcy. SMEs struggling with the problem of overdue receivables sometimes turn to factoring to regain their financial liquidity.

Factoring, an asset-based alternative source of finance, is a flexible service that can facilitate liquidity management for a company (Aleksandra and Ostrowska 2017). It happens when a company (client) sells (or assigns) accounts-receivable invoices to a financier, also referred to as a factor, at a discount. The factor later collects the full amount of the invoice owed from the company's customer (the debtor), making a profit in the process. In the factoring cycle, the **factor** is a financial entity providing factoring facilities. The factoring **client** is a supplier business, which has a contractual relationship with a factor - an asset-based lender. **The debtor (buyer)** is a business that has been supplied with goods or services by the client and is obliged to pay them.

Factoring fulfils three functions for companies: first, the factor purchases the receivables (or the client assigns the receivables to the factor); second, the factor accepts the risk of the debtor's default;[4] and, third, the factor manages the receivables and collects debts on the client's behalf. Since in most countries the factoring market is not regulated and there is no special legislation for these activities, there are many different types of service provider offering numerous types of factoring. The most common types of factoring are (The EU Federation for the Factoring 2016):

1. ***Recourse factoring*** – The credit risk of debtor failure remains with the client (no credit protection service). If the debtor fails to pay, the client must repay the factor.
2. ***Non-recourse factoring*** - The factor offers a credit protection service; therefore, the credit risk of debtor failure remains with the factor. However, if the debtor refuses to pay due to a dispute or dissatisfaction over the product delivered by the client, then the client will still need to repay the factor.
3. ***Reverse factoring*** - The agreement is made between a factor and a (usually strong) debtor. The factor offers the debtor's suppliers the possibility to assign any receivables approved for payment by the debtor.
4. ***International factoring*** – This includes import/export factoring, usually performed through the two-factor system, which means that the process involves four parties – importer, exporter, import factor, and export factor - which are connected through an international organization (Factors Chain International (FCI).

The factoring market around the world was given a CAGR[5] of 12% during the period of 2014-2019, and the "strong growth" this represents is expected to continue during the 2020s (ResearchAndMarkets.com 2020). Although this tool is successfully utilized and widely used in Western European countries, it is less prevalent in Eastern European Countries.

Equity-based Finance

The shortcomings of traditional debt financing are especially visible with innovative early-stage SMEs with high-growth potential (OECD 2015). SMEs at an early stage of development lack credit history and collateral, operate in a risky and highly dynamic environment, and have an extremely high chance of failing. At the very early stage, feasible options of financing mainly start and end with FFF - fools, friends, and family. Occasionally, some government support is available in the form

[4] It should be underlined here that factors usually do not assume quality risk – referring to cases where the debtor refuses to pay due to inadequate quality of the service/product provided to them by the client.

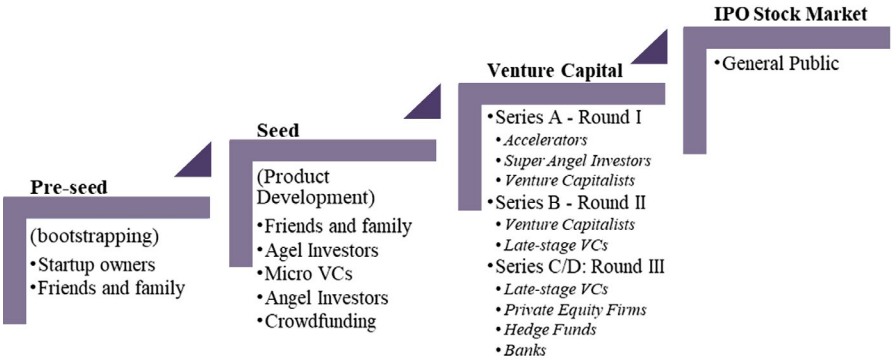
[5] CAGR - Compounded Annual Growth Rate.

of grants. In later stages, if a startup survives, options expand to include angel investors, venture capital (foreign and local), and equity crowdfunding (direct public offerings) (Guidant 2021).

Venture Capital

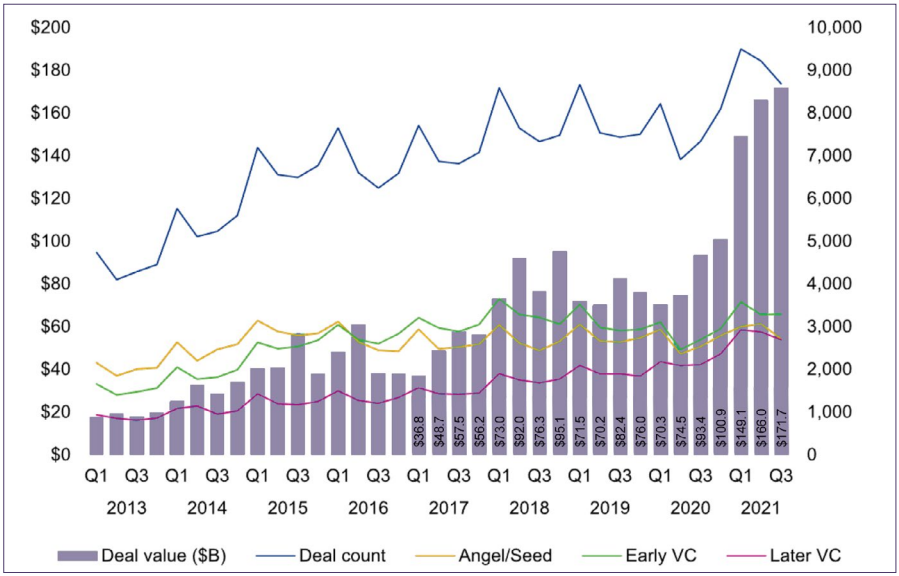
There are different types of funding available for startups at all stages of their operation. From pre-seed to IPO, financing options can be broken down, as shown below in Figure 1. In this cycle, it is crucial for newly-established SMEs to reach the VC stage. Venture capital, which is an equity-based financial instrument, promises support for the future growth and development of a business. Venture capitalists – ranging from business angels and accelerators to specialized VC funds – complement investments with business expertise and guidance, and typically invest in enterprises at the seed and VC series A-D stages. In return for the higher risk of investing in early-phase enterprises, VC funds usually expect higher-than-average returns on the investment.

Figure 1: Startup Funding Options by Stage (Sajid 2021)



According to KPMG's Venture Pulse Report (Global analysis of venture funding 2021), global venture capital funding reached new heights in 2021. In the first three quarters of 2021, total funding exceeded USD 486 billion, which already surpasses all previous entire year totals and clearly indicates the growing global popularity of the tool.

Figure 2: Global Venture Financing Trends, 2013-Q32021, Billion USD



Source: Venture Pulse Q3'21, Global Analysis of Venture Funding, KPMG Enterprise

Venture capital is almost uniformly popular throughout the world. Here are few noteworthy deals from the third quarter of 2021: in India – a USD 3.6 bln raise by Flipkart, and a USD 1.7 bln raise by Byju; in China - a USD 1.5 bln raise by Svolt; in the US - seven USD 1 bln+ deals including Rivian (USD 2.5 bln), Generate (USD 2 bln), Databricks (USD 1.6 bln), Articulate (USD 1.5 bln), Devoted Health (USD 1.2 bln), Chime (USD 1.1 bln), and GoPuff (USD 1 bln); in Germany - Gorillas raised USD 950 mln; and in the UK, Revolut raised USD 800 mln (Global analysis of venture funding 2021).

According to KPMG, the global popularity of VC funding is in part caused by growing interest from non-traditional investors such as private equity firms, hedge funds, mutual funds, and pension funds who have an interest in the returns generated by private companies. In 2021, investors have thus far demonstrated a particular interest in electric vehicles, clean energy, mobility, and infrastructure, albeit FinTech, health and biotech, B2B services, and logistics and delivery all remain popular areas as well.

Crowdfunding

Crowdfunding is another type of non-bank financial instrument particularly relevant to startup companies. Crowdfunding allows SMEs to draw on a multitude of investors without having to meet excessive reporting requirements and undergo due diligence. The downside, however, is that it usually does not offer adequate investor protection, unless embedded in a dedicated legal framework.

Table 2: Crowdfunding Models

Category	Business Model	Stakeholders
Equity-based	Equity-based Crowdfunding	Individuals or institutional funders purchase equity issued by a company.
	Real Estate Crowdfunding	Individuals or institutional funders provide equity or subordinated debt financing for real estate.
	Revenue/Profit Sharing	Individuals or institutions purchase securities from a company, such as shares or bonds, and share in the profits or royalties of the business.
Non-investment-based	Reward-based Crowdfunding	Backers provide funding to individuals, projects, or companies in exchange for non-monetary rewards or products.
	Donation-based Crowdfunding	Donors provide funding to individuals, projects or companies based on philanthropic or civic motivations with no expectation of any returns.
	Crowd-led Microfinance	Interests and/or other profits are re-invested (forgoing the interest by donating) or microcredit is provided at lower rates.
Other		Community shares, pension-led funding, and other models falling outside of the existing taxonomy.

Source: Cambridge Centre for Alternative Finance (Ziegler, et al. 2021)

Crowdfunding became widely accessible after 2013 when the then-US-President Barack Obama signed the Jumpstart Our Business Startups (JOBS) Act. This act allowed newly-established enterprises to raise funds from the crowd by issuing securities while remaining a private company (Efrat, Gilboa and Berliner 2020).

Crowdfunding does not have a universally-applied model through which it enables SMEs to have access to finance. Rather, it is a quite complex and emerging new tool which appears in various forms. One common taxonomy shown in Table 2 presents seven different crowdfunding models. It must be emphasized here that the term "crowdfunding" first became popular through donation-based crowdfunding, which has been gaining popularity ever since and in 2020 managed to raise USD 7 bln according to the Cambridge Centre for Alternative Finance (Ziegler, et al. 2021).

The main feature of an environment rendering it conducive to successful non-investment-based crowdfunding is the market size, or the product's scalability (i.e. the possibility to go global). Thus, donation- and reward-based models have limited application in countries with relatively small populations. A feasible crowdfunding model for such countries is the equity-based variety, which raised USD 1.5 bln globally in 2020 (Ziegler, et al. 2021). Thus, the paper mainly focuses on equity-based crowdfunding.

FINANCIAL TECHNOLOGIES

Increasing the number of available instruments on the market is not the only way to improve access to finance for SMEs. FinTech solutions, and innovative financial practices in general, can significantly transform the status quo. Streamlined technology can potentially decrease transaction and operation costs for financial service providers, increase competitiveness in the financial sector (thus motivating providers to minimize costs and offer optimal prices for their products), and enhance credit-scoring models to reduce the perceived risks of lending and ensure more informed decisions.

The use of technologies in financial services is not a new phenomenon. This after all is the industry that introduced credit cards, ATMs, internet banking, and contactless payments. Yet, based on the results of Google Trends, the term 'FinTech' became popular only by the end of 2014 (Graham 2017). The term was popularized by startups using technology to compete with banks. Even though the term 'FinTech' has been making headlines, big money today is still controlled by the traditional banking industry with multi-trillion-dollar market capitalization and an ever-increasing appetite for financial innovations (Kagan 2020). However, FinTech advances can bear fruit for other, smaller actors in the market as well.

Digitalization of finance has created two sets of technologies with potential to increase access to finance for SMEs. The first type of technology is based on platforms, which facilitates matching firms or projects with investors. Platform-based activities, such as crowdfunding and peer-to-peer (P2P) lending, use technology to standardize information and provide means through which to settle investments, but the individuals choose the project(s) they wish to finance. The second type of technology provides for total disintermediation through recourse to distributed ledger technology (DLT). The best-known DLT is a blockchain technology, in which there is no centralized authority registering transactions or organizing the market (Bollaert, Lopez-de-Silanes and Schwienbacher 2021). Blockchain technology enables peer-to-peer financial transactions on a large scale. In other words, it is a way of cutting out the 'middleman' (i.e. the banks) in financial transactions. Blockchain has a variety of uses that have not yet been fully explored but today it is increasingly used to record transactions, verify identity, and establish contracts (Schou-Zibell 2017).

It is still very difficult to predict the scale to which advances in FinTech will transform the financial markets of countries around the world. However, it is safe to say that the potential of digitalizing processes, creating data-driven models, and increasing the competition on the supply side will drive down operation- and transaction-related costs and associated risks, thereby improving the financial market for all customers, SMEs included. In this part, the paper explores four digital products/practices that are currently subjects of various vivacious discussions and pieces of research around the world: CBDC; digital banks; regulatory sandboxes; and open banking.

CBDC

CBDC is a relatively new option to have been brought about by recent technologic advancements. Although currency in general is already digital and the vast majority of the money in circulation today is deposited online and converted into a digital code by a commercial bank, the basic underlying model of banking has stayed fundamentally unchanged. In the system, the digital code issued by commercial banks is convertible into paper cash, which is a central bank liability. If central banks started to issue digital currency it would become a direct liability of the issuing central bank, not of a commercial bank. As Fintech expert Ajay S. Mookerjee argued in the Harvard Business Review, CBDC "would be safer for depositors, would eliminate the need for commercial banks to directly take deposits from consumers and households, render much of the physical infrastructure of banking redundant, enable more effective monitoring and regulation of the financial system, and prove more inclusive" (Mookerjee 2021).

Apart from its general benefits, CBDC offers certain improvements to SMEs as well. A digital currency could be an efficient payment instrument for both domestic and international transactions (Smith 2020), significantly reducing the associated costs for SMEs by removing the intermediary financial institution. This effect is most vividly observable in cross-border payments that as of today are slow, expensive, and ambiguous due to the necessity of multiple financial intermediaries being engaged, adding service fees and sometimes delays because of mismatches in operating hours. Thus, it is crucial that central banks design their digital currencies in a way that can ensure they can interoperate with one another.

Interoperability is an issue towards which the Bank for International Settlements (BIS) is currently shifting its focus.[6] On 9 July 2021, the BIS published a paper (BIS, IMF, WB 2021) urging countries to collaborate in designing CBDC to enable and facilitate cross-border payments. If interoperability is achieved and frictions are minimized (or, hopefully, eliminated), CBDC can significantly increase transnational flows of finances. This would mean increased volumes of remittances, e-commerce, and even cross-border stock purchases (Ledger Insights 2021).

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[6] By the definition of BIS, interoperability "refers to the technical or legal compatibility that enables a system or mechanism to be used in conjunction with other systems or mechanisms. Interoperability allows participants in different systems to conduct clear and settle payments or financial transactions across systems without participating in multiple systems" (BIS 2021, 21).

CBDC also has considerable implications for domestic use. One risk associated with the prospect of issuing CBDC is that it may potentially shift funds away from bank deposits, increasing a bank's funding costs and possibly driving down the total investment in the economy (Federal Reserve Bank of Philadelphia 2020). Another concern is that countries with high inflation rates and volatile exchange rates may fall into the trap of currency substitution, which happens when the citizens of a country increasingly choose to use a foreign currency for domestic transactions instead of the national currency. However, the BIS reports that these risks can be mitigated and possibly eliminated through coordinated actions of issuing and receiving central banks (BIS Annual Economic Report 2021).

Being a relatively new instrument, the full implications and potential of CBDC remain unknown, but there are clearly multiple risks and opportunities. It could however be argued that CBDC, if done right, can encourage and contribute to more accessible, cheaper, and more efficient financial services for SMEs around the world.

Digital Banks

Advances in financial technologies have also brought about the prospect of digital banks. The term 'digital bank' applies to an institution that offers all of its services online and has no branches or physical offices.

Having no physical office directly translates to less operational costs for digital banks, compared to conventional banks, due to reduced administrative expenses. Less operational costs enable banks to offer more competitive prices to SMEs, thus increasing their access to finance.

Although cost-effectiveness is an obvious attraction, the main and more important point about digital banks lies deeper. Digital banks are data-driven entities that rely on artificial intelligence to automate back-end operations. Thus, digital banks compete on the market through data modeling and financial innovations rather than merely saving costs by having fewer employees and no branches (Phaneuf 2021). The implication for SMEs is that with better credit-scoring models, automated procedures, and lower operational costs, they may be better placed to offer more optimal prices and services catered to SMEs' needs.

Regulatory Sandboxes

Many of the FinTech services and solutions are too risky to be implemented without proper regulation of and consideration for its implications. To mitigate this risk factor, the UK Financial Conduct Authority pioneered the world's first regulatory sandbox in 2015 (Cornelli, et al. 2020). Regulatory sandboxes represent a way for FinTech companies and banks to test their innovative services in a live, controlled environment, where the financial regulatory bodies are able to assess risks and design suitable regulations. Essentially, this helps FinTech companies to smoothly enter the financial market, thus increasing the number of supply-side agents and available instruments, encouraging competitiveness, and improving the overall quality of the market.

Since the first sandbox was launched in 2015, the practice has become quite common. Today, more than 50 countries around the world have adopted the policy. A 2020 BIS paper by Cornelli et al. tested several models on UK data and arrived at some promising conclusions. They observed a 15% increase in capital raised in firms to have entered a sandbox compared to those that had not entered. Entering a sandbox also increased the firms' probability of raising capital by 50%. Their results suggested that sandboxes help firms access capital through two main channels: reducing asymmetric information (referring to leveling the playing field for FinTech companies/banks and regulators by revealing information that was previously only known to only one side or another); and reducing regulatory costs/uncertainty.

Regulatory uncertainty, along with regulatory fear, has been brought about by rapid FinTech development. In simple terms, regulatory uncertainty happens when regulations are unable to keep up with innovations. Regulatory fear, on the other hand, is exhibited by risk-averse regulators that are unwilling to allow for innovative products even when they are in full compliance with the existing regulations (Quan 2021). These risks can be minimized with the help of regulatory sandboxes through which regulatory entities may observe the effects of technologies and services in a controlled environment, can better understand its implications, and amend regulations accordingly (Financial Inclusion, Infrastructure & Access Global Unit in the World Bank Group's Finance 2020).

However, these sandboxes are also associated with certain risks. Specifically, there is always a possibility of misusing or abusing a sandbox and creating an uneven playing field for certain financial institutions or FinTech companies. Regulators must therefore proceed with caution and awareness of these negative implications.

Open Banking

Open banking is a practice that is conducive to the development of financial technologies in a country. In short, it refers to secure access to financial information for all involved parties. More precisely, this is a practice that gives third-party financial service providers open access to information about the consumer's financial transactions and other relevant data upon the approval of the customer by banks and non-bank financial institutions through application programming interfaces (APIs). In other words, open banking allows the customer to share his/her financial information with a third party, such as a FinTech company, of their choice. This is done specifically to help FinTech companies to develop more flexible and consumer-oriented financial services by providing them with readily available data about consumer behavior.

This notion effectively holds that the data are the property of the customer, not the financial institution. This enables SMEs at the first stage of implementation to combine accounts across multiple banks, with recent technology promising more freedom and better services through incorporating data-driven FinTech solutions.

PART II: ACCESS TO FINANCE IN GEORGIA

SME LANDSCAPE

According to the National Statistics Office of Georgia (National Statistics Office of Georgia 2021), in 2020, 99.6% of all active enterprises in Georgia were SMEs, accounting for 59.3% of total business sector employment, 40.8% of total business sector turnover, and 58% of total business sector output.

Meanwhile, the National Statistics Office of Georgia reported that 438 large, 1,797 medium, and 117,550 small firms operated in Georgia at the end of 2020. Compared to the previous year, the number of large firms increased by 5.5% (or 23 units), and the number of small firms decreased by 10.5% (a drop of 13,719 units). According to the definition of the National Statistics Office of Georgia, small firms are those employing fewer than 50 persons, with an annual turnover of under GEL 12 mln. In Georgia, the majority of firms have fewer than 20 employees, while more than half of all SMEs are based in the capital city of Tbilisi. The firms based outside the capital are mainly found in the Imereti and Adjara regions (OECD iLibrary 2019).

TRADITIONAL LENDING

According to the EIB's 2019 report ***Financing in Georgia: Small and Medium Enterprises and the Private Sector*** (Conde and Gattini 2019), Georgia's financial sector is largely dominated by banks. As at September 2019, the report provided the following breakdown: commercial banks accounted for 93% of the financial sector, microfinance organizations comprised 4.1%, insurance companies made up 1.6%, and pawnshops reached 1.3%. As can be seen from these figures, banks play a prominent role in the financing of all businesses in the country, including SMEs (EIB, 2019).

According to the National Bank of Georgia (National Bank of Georgia 2021), SME lending has grown significantly in recent years in absolute terms. In particular, the official figures show a 150% increase from 2016, and a 23% increase from 2019, amounting to GEL 9.987 bln by 2020. The proportion of SME loans in total loans also increased by almost 10 percentage points from 33.8% in 2010 to 43% in 2020. This shows that banks' already significant role in funding Georgian SMEs is increasing.

In addition, in 2010, non-performing SME loans constituted 10.3% of total SME loans and 3.5% of all business loans. These numbers decreased to 4.9% and 2.1% respectively in 2019, before bouncing back to 9.8% and 4.2% in 2020, largely because of the pandemic. Moreover, notably, in 2020 the interest rates for both large firms and SMEs decreased, and the difference between the two reached an all-time low of 0.9% in 2020.

In addition to government initiatives to expand traditional lending (detailed in the last part of this section), there are several non-government initiatives that have aimed to make bank credit more accessible to Georgian SMEs. Some pertinent examples are as follows:

1. **Deep and Comprehensive Free Trade Area (DCFTA) Initiative East (2016-2021)** (EU4Business 2021) – Designed by the EIB in collaboration with the European Commission, this initiative aims to strengthen economic development in countries with an Association Agreement with the EU by enhancing access to finance in the form of improved lending terms and conditions, enabling local intermediary banks to take on more risk and diversify into underexplored sectors of the economy.
2. **InnovFin Guarantee** (InnovFin SME Guarantee Facility 2021) - Established under the "EU InnovFin Finance for Innovators" initiative developed under Horizon 2020 whereby the European Investment Fund, acting for both the EIF and the EU as the implementing body, covers a portion of the losses incurred by financial intermediaries on loans, leases, and guarantees between EUR 25 000 and EUR 7.5 million which they provide under the InnovFin SME Guarantee Facility. These loans are provided at preferential interest rates and with 50% less collateral (ProCredit Bank, Georgia 2021).
3. **InnovFin Guarantee (extension)** (Europian Investment Bank 2020) – Under the EU4Business initiative, to help combat the economic effects of the Covid-19 pandemic, the EIB and the Bank of Georgia signed an agreement to provide EUR 60 mln to the businesses most affected by the crisis (Agenda.ge 2020).
4. **The CEB Program Loan** (ProCredit Bank, Georgia 2021) – The Council of Europe Development Bank (CEB) and ProCredit Bank's co-financing program aims to fund SMEs with high countrywide job creation potential.
5. **Green Economy Financing Facility** (GEFF in Georgia 2021) – Under the Green Economy Financing Facility (GEFF), three Georgian banks (TBC Bank, ProCredit Bank, and Basis Bank) offer loans which provide new financing opportunities to SMEs planning to invest in energy-efficient, renewable electrical power and environmentally-friendly initiatives.
6. **EIB's loans to MSMEs** (European Investment Bank 2020) – In August 2020, under its Georgia Outreach Initiative, the European Investment Bank provided a EUR 10 mln loan to Credo Bank to provide more affordable loans to the country's micro, small, and medium enterprises.

Despite these measures, according to the Small and Medium Enterprise Development Strategy 2021-2025, differences in the credit rejection rates are still vast between large firms and SMEs. Indeed, the rejection rate for large firms was reported to be 2.6%, while for SMEs it stood at 20.6% (Ministry of Economy and Sustainable Development 2021). This could be partly explained by the fact that SMEs are characterized by persistently higher credit risk and often have insufficient or inadequate credit histories. In addition,

the OECD reports that micro-enterprises, startups, innovative firms, and businesses in rural areas face particularly high transaction costs in relative terms. These transaction costs alone may potentially be enough to exclude these firms from traditional sources of financing (OECD 2018).

NON-TRADITIONAL LENDING

According to the OECD's SME Policy Index for Eastern Partner Countries 2020 (OECD, European Commission, ETF, EBRD 2020), Georgia is a leader when it comes to access to finance among the Eastern Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine). In terms of sub-indices, Georgia is the top performer in legal and regulatory framework, bank financing, and financial literacy. However, in terms of non-bank financing, which includes factoring, leasing, and microfinance, Georgia only outperforms Azerbaijan among these countries. Within this sub-dimension of non-bank financing, Georgia, along with Moldova, is the best performer in terms of microfinance, and the worst performer along with Azerbaijan in terms of both leasing and factoring. The OECD reports that while both services are available in all countries, their levels of use and development are low. An important limitation identified here is the low awareness of these opportunities and benefits of these instruments, along with a lack of adequate legislation supporting these operations. Meanwhile, leasing activities focus on vehicle leasing rather than equipment leasing, and factoring penetration is below 1% in all of these economies compared to the 6.3% average across OECD countries.

In terms of VC, the report states that none of the Eastern Partnership countries had made significant progress in developing a dedicated legal framework to facilitate VC investments. Due to limited opportunities, innovation financing is largely dominated by the given state or is donor-funded. In this respect, Georgia ranks second to Armenia, albeit with a relatively low score.

As mentioned above, the main source of non-bank finance that SMEs turn to in the event of the unavailability of traditional bank loans is microfinance organizations. Although still a debt instrument, such organizations are playing a rapidly increasing role in providing funding for SMEs. The National Bank of Georgia reported that by the end of 2020, there were 40 microfinance organizations operating on the Georgian market. The growth in microfinance lending to SMEs over the last decade has been tremendous – going from 87 loans of a combined amount of GEL 1.7 mln in 2010, to 1477 loans of a combined amount of GEL 41.3 mln by the end of 2020. Due to the similarity of the structure of this instrument to traditional banking loans, its use has been expanding rapidly without any targeted government efforts. Notably, microfinance is more commonly used by individuals than SMEs with the volume of loans issued to individuals almost 30 times the volume of loans issued to legal entities.

The following part of this section explores the potential of factoring, leasing, VC, and crowdfunding as alternative financing instruments in Georgia. Here, it must also be noted that statistical information/data about transacted volumes through each of these instruments is not readily available. Indeed, the lack of reliable aggregate data can be admitted as a limitation of this research.

Asset-based Finance

Factoring

Factoring services are fairly new to the Georgian financial market. Even though there is no official law requiring a banking license from providers of this service, currently only a few commercial banks supply this service. Pertinently, Bank of Georgia (BOG) advertises this service as the "easiest and most flexible product to finance trade." According to Mr. Levan Tetradze, Factoring and Trade Finance Product Owner at BOG, in June 2020, Bank of Georgia became the first bank in the country to digitalize this service. First, the buyer and the supplier have to sign an agreement with the bank which must be done in person. After that, they can use an online platform developed by BOG, where businesses (suppliers) can electronically upload their invoices, which, upon being confirmed by the buyer, are paid for by the bank. The costs include two charges: one is a commission fee, which is calculated based on the volume of the invoice, and the second is the annual interest rate, which is based on the duration of financing. Digitalization of the service marks a step towards making the instrument more easily accessible (Bank of Georgia 2021).

The information provided by Mr. Levan Tetradze of BOG is summarized into the following main points:

- The first type of factoring offered by the bank (in this section, taken to mean BOG unless stated otherwise) was reverse factoring. In one such case, the debtor is a trusted and important client of the bank, who is assigned a limit by the bank. The suppliers (clients) selling their receivables to the bank (factor), also become clients of the bank. In the other such case, the bank sets the limit on the side of the suppliers (clients). Here, the debtor does not have to be a client of the bank. The law does not require the debtor to confirm or sign for the invoice in order for the bank to finance it. Both services are offered but, currently, reverse factoring accounts for most of the factoring portfolio held by the bank. However, the composition of the portfolio (in terms of to which side the bank assigns the limit) changes quite often, considering that, usually, the service covers a period of two or three months.
- Tapping into state procurement would be an interesting avenue of development for the factoring service. For example, there is an approximate GEL 1.5 bln turnover in the medical sector, and payments are delayed for up to six months. Infrastructure projects could also be covered through this service. Mainly, these are the two spheres that can benefit from factoring services. If the Government

is the debtor, the bank can afford to bear the risk. The bank would treat this transaction as a low-risk transaction and would be able to offer the service to its clients at better rates. This case would represent non-recourse factoring, meaning that if the Government refuses to pay the client due to inadequate service/product delivery, the bank will seek to recover its losses from the client. This is also specified in the contract signed with the client.

- When there is a big debtor on one end, the debtor is usually required to confirm the invoice assigned to the factor by the supplier (client), to attest to the satisfactory quality of the delivered product/service, and to confirm that the payment will be scheduled. Where a government is involved, a platform that would facilitate quick confirmation of these invoices would be an optimal solution. In Turkey, the government has set up such a platform where the government itself sells its invoices. Italy also has a platform that is often quoted as best practice. They sell invoices on the platform to authorized factors, helping businesses with possible liquidity-related issues.
- Today in Georgia, if the bank was to provide a factoring service to the State, the bank would need two confirmations - one from the ministry that purchased the good/service, and another one from the treasury. The whole process of assigning an invoice to the factor has to be cleared up and fixed. Ministries and government organizations, based on their own internal regulations, have to pay their service/product providers directly, and do not consider paying the bank. This makes engaging in factoring with the State very risky, and the bank is put of by the prospect of a possible legal dispute with the State. It is thus necessary to agree on a scheme with the Government according to which all parties can proceed. This will not require any amendments to existing laws, and would only require amending the internal regulations. The support and engagement of the Ministry of Finance in this would be essential, while international organizations such as the ADB, the EBRD, and USAID, may also be interested in getting involved in the process.
- The NBG treats factoring as a debt-based product. There is no official requirement to have collateral for the set limit. Just like a bank can issue a debt without asking for collateral, it can engage in a factoring transaction. However, the banks may obtain improved factoring rates if the NBG started treating factoring as a low-risk service, and not like any debt instrument. Currently, many companies may prefer credit lines to solve their liquidity problems.
- So far, the bank has been very risk-averse with factoring. Transactions are usually safeguarded by the client's credit line, and the bank has not yet had any experience with a bankrupt debtor. However, in cases where the transaction is not secured, the bank would have to go to court to demand its money back, much like in the case of a loan.

An interview with representatives of the Banking Association of Georgia revealed the following information and views:

- No non-bank actors operate on the market. At least in the near future, commercial banks are expected to be the only viable providers of this service. Other banks and non-bank actors may be discouraged from expanding into this market for several reasons, including lack of related experience and knowledge, and an inadequate legal framework. If legal issues are resolved, the Association expects more banks to start offering factoring services.
- Today, there is no single law that regulates and defines the rights and obligations of parties involved in such a contract. Market operators refer to several articles in the Civil Code, but there is no common understanding of factoring services in the court system. If a contract is violated and the case is taken to court, there is a risk of the court misinterpreting relevant articles due to inadequate experience and understanding of the process. Moreover, there are significant delays in processing legal cases. This, essentially, defeats the purpose and main attraction of factoring in the first place (i.e. that it is quick and flexible). Reducing legal risks will mark a step towards making the instrument more attractive to smaller banks and maybe even some non-bank actors. Currently, relevant agencies, headed by the Investor's Council under the Prime Minister, are working on a draft law.
- The demand is there, and it is growing, but this instrument is mostly used by big retail sellers (buyers) that buy products from multiple smaller suppliers (suppliers).
- Banks are extremely risk-conscious and risk-averse when it comes to factoring. They almost exclusively provide the service in cases where both sides of the contract are clients of the given bank. For that bank, risks are minimized to almost zero in this case as it has access to the bank accounts of both sides. They can automatically deduct the payable amount from the buyer on a predetermined date or, in case they are unable to retrieve their funds from the buyer's side, they can return the invoice and recall the amount given to the seller. However, unless banks increase their risk-bearing capacity, the use of the instrument will remain limited. The passing of an adequate law would represent a very important step towards greater popularity as well.
- Unless the National Bank of Georgia accepts invoices as guarantees, the development of this instrument is highly unlikely. Otherwise, it will count it as an unsecured loan and require reserves, which will be an excessive burden for even the biggest banks. However, as far as the Association is concerned, the National Bank of Georgia is not currently working on factoring-related matters.
- Currently, the Association is working on a concept of a technical platform with government agencies (namely the Ministry of Economy and Sustainable De-

velopment, and Enterprise Georgia). The purpose of this is to extend factoring coverage to state procurement (for example, infrastructure and construction tenders). This could help contractors to get paid on the date specified in the contract, instead of having to wait for the payment to go through several layers of bureaucracy. A centralized technical platform is needed so that a government official, possibly someone at Enterprise Georgia, confirms the legitimacy of the invoice. Although this would not completely eliminate risk, the financier of the invoice would bear the rest of it. The healthcare system could also greatly benefit from this service. According to the Association, currently there may be delays of up to six months for payments. The relevant invoices could easily be financed through factoring. As state purchases are basically guaranteed payments, most banks would be willing to participate and the Government was to go through with this initiative, state procurement could be responsible for a significant portion of total factoring use in the country.

- As for a state factoring guarantee scheme, the Association reports that, although it had not considered this previously, it may be a good temporary tool at the initial stage, so that more customers/financiers can get acquainted with the instrument. However, it has no plans to design such a program. In general, the Association is not a big supporter of government intervention on such a scale, and maintains that improving dispute settlement procedures, contract enforcement, and the legal framework should be prioritized.
- One rough idea presented was that if there was a unified platform where suppliers could upload their invoices, and if the State provided such guarantees, non-bank actors and even private investors may want to compete to purchase those invoices.

The above feedback shows that there are actually targeted efforts being made at increasing the use of factoring in the Georgian financial market.

Leasing

Leasing is a viable and promising source of financing for Georgian SMEs. This service has been available for many years, and the service providers already have some knowledge and know-how regarding how this instrument works. A government program operated by Enterprise Georgia, which currently offers to subsidize 15% of interest payments on leased equipment for 36 months,[7] has been running since 2014 with slightly modified conditions.

The main issue regarding the leasing market is that it is still in its initial phase of development and remains undiversified. According to the February 2021 Assessment Report on the Legal, Tax and Regulatory Environment of the Leasing Market (Report 1) (Abt Associates 2021) and Assessment Report on Best International

[7] Further details about this government support program are provided in the last part of this section.

Practice (Report 2) (Abt Associates 2021), the Georgian leasing scene is characterized by the following features:

- According to Report 2, the leasing market consists of three service providers, all of which are subsidiary companies of commercial banks. There are no independent players on the market. Indeed, two of the three players, TBC Leasing and Georgian Leasing Company account for 97% of the whole leasing market. It is hard for new providers to enter the market and compete with the interest rates offered by existing leasing companies that are already well-established on the market. At the same time, the low level of market development deters big international players from entering the market.
- Report 1 contains recent statistics about the leasing portfolio in the country. The figure below shows data from the three main leasing providers – Georgian Leasing Company, TBC Leasing, and Crystal Leasing – assumed to account for around 98-99% of the total leasing market.

Figure 3: Leasing Portfolio in Georgia

Source: Report 1

- Report 2 also stated that most of the funding comes from international financial institutes and commercial banks. Funds, especially in the local currency, are scarce and hard to acquire. Despite this, leasing companies have an obligation to fund transactions of up to GEL 200,000 in the local currency. This is problematic for customers as well because the interest rates in the local currency are 4% higher for leases compared to bank loans. Although some businesses still prefer this instrument to a bank loan (maybe due to the fast procedure and low-

er collateral requirement), many micro and small businesses can rarely afford it. This also means that the clientele opting for leasing services will be those with a high-risk profile that cannot secure bank loans. In fact, the lack of availability of the local currency in Report 2 is described as "most likely the largest inhibitor in the development of the Georgian leasing industry." According to Report 1, the GEL-denominated portfolio doubled in 2019 compared to the previous year, while the foreign-denominated portfolio remained roughly the same. This brought the share of the GEL-denominated portfolio up by almost 10 percentage points, to approximately 45% of the total portfolio.

- Another factor that puts leasing companies at a disadvantage, according to Report 1, is that they have limited access to information held by the credit bureaus.
- The new tax regulation that will come into force in January 2022 includes a different taxation method that may have heterogeneous effects on different services, leasing included. Report 1 stressed the importance of further clarification on what the new law will mean for leasing companies and their customers.
- According to Report 2, MSMEs are not fully aware of the advantages of leasing. Indeed, lack of financial literacy represents a major hindrance. Moreover, it mentioned the legacy of "ownership culture" which points to a general preference among small business owners to own their capital. On the supply side, leasing companies also struggle to create and maintain specialists in the field. Leasing companies have to foster close relationships with vendors and resellers, and capitalize on their knowledge of the given asset and its long-term resale value.
- Report 2 also found that the secondary equipment market is underdeveloped if not nonexistent, and that leasing cannot be a viable facilitator of MSME growth if the equipment being leased is never returned to the leasing companies. The liquidity of this secondary market is of crucial importance to the establishment of a sound leasing market. Report 2 also claimed that such a secondary market only existed for cars at present.

Equity-based Finance

Venture Capital

In Georgia, VC is also underdeveloped. The Government established Georgia's Innovation and Technology Agency with the aim of helping this market to develop.[8] Although in recent years several actors have emerged on the scene, the development of the market is still slow and underwhelming. There are no concrete statistics about funds invested by existing VC funds.

[8] More details about GITA will be provided in the last part of this section.

The findings from an interview conducted with Mr. Avtandil Kasradze, Chairman of GITA, have been summarized into the following points:

- SME funding issues in general do not concern GITA. It focuses exclusively on innovative companies with global scalability potential and supports these companies from their inception phase, which is the most difficult phase. Such startups may need a year or two before they can generate any income, meaning that these companies are initially ineligible for traditional financing options, such as bank loans. In other countries, the first source of funding is family and friends. At this stage, the startup is nothing more than an idea. They need this initial sum of money to develop a prototype with which they can then seek an investor. But Georgia has a very small middle class, so this source of funding is extremely limited. The Government's solution to this was to issue grants. After obtaining a grant, a company can develop its business further, possibly enough to persuade an investor to talk to them. Here too, they need an investor who believes in their concept because it is not likely to generate significant cash flows for several years. This is where angel investors are needed (of which there are only a few in Georgia), and VC funds (which do not yet exist in Georgia). However, several Georgian startups, first funded by GITA, have managed to raise funds through foreign VC funds. Meanwhile, a Georgian venture capital fund, the first of its kind, will be created in November this year; it will exclusively invest in Georgian startups.9
- Legislation in this area is nonexistent. GITA is now working with the NBG to duly define the terms and processes involved.
- The Georgian startup ecosystem is not fully developed as GITA counts only 200-250 innovative startups in Georgia today, which is not a sufficiently vibrant market to draw the interest of foreign funds.
- GITA is currently working on reforming its own website, where it plans to incorporate information about the startups to have received any sort of funding from GITA.
- To date, GITA has given out GEL 15 mln in grants to more than 200 startup companies, out of which 25 companies created a product, recorded sales, and generated revenues and/or raised further capital. These 25 companies in turn generated more than GEL 150 mln from the private sector.

Elsewhere, Mr. Otar Gorgodze of the National Bank of Georgia (NBG) agreed that equity financing is exceedingly difficult to acquire in Georgia. FinTech companies need to scale-up, but the small size of the domestic market is problematic. One way to help in this regard would be to align the standards at the NBG to the Berlin Group standards, which are commonly applied in Europe.

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[9] In November 2021, first venture capital investment fund – Catapult Georgia One was incorporated in Georgia. The fund pledges to invest USD 50 mln. in Georgian Startups.

Crowdfunding

Crowdfunding is a concept that has garnered some attention over the last few years. Indeed, there are several crowdfunding platforms operating in the country, however without much traffic, and statistics and data about projects implemented and money raised are currently unavailable. The relevant platforms include investme.ge, raa.ge, fundraiser.ge, orbelianimeti.ge, and crystalcrowd.ge all of which are donation- or reward-based crowdfunding platforms.

Interviews with Mr. Otar Gorgodze, Head of the Fintech Department at the National Bank of Georgia, and Mr. Avtandil Kasradze, Chairman of GITA, revealed how different stakeholders regard the potential of crowdfunding in the country.

Mr. Otar Gorgodze outlined that opinion was split regarding crowdfunding platforms. He stressed that crowdfunding practices and experiences differed from one country to another and that there is no specific "correct" course of action. Moreover, there are ongoing internal debates around the issue, and he believes that eventually the NBG will have to design a legal base. However, currently, there is no specific course of action being pursued, and it is still very much under deliberation. According to him, crowdfunding is extremely risky and problematic for the NBG because the risk is borne by the individual investor. The NBG is reluctant to launch the platform without having a toolkit via which people can assess underlying risks. The pertinent question here is: will small private investors be able to manage these risks properly? He then also stressed the importance of developing an advanced credit-scoring system as part of a potential solution, and the prospects of such a scoring system are discussed in the next subsection.

Otherwise, Mr. Kasradze's views on the issue were different. He asserted that with the right regulations, this mechanism could serve as a good platform for innovative Georgian startups to raise money specifically, and for the development of the country's capital markets in general. His views on this subject have been summarized into the following points:

- Innovative startups, after receiving small grants from GITA, are often in need of further funds before they can attract the interest of private investors. GITA provides a second-stage funding mechanism in the form of grants of up to GEL 650,000, but in this mechanism the requested grant amount needs to be matched by the startup. Startups can do this by engaging another investor. In Georgia, currently, an investor is the only source of funds at this stage. However, as there are not many angel investors in the country, acquiring funding at this stage is rather difficult. To remedy this, GITA is working to develop a crowdfunding platform. In particular, a crowdfunding campaign could better prepare entrepreneurs for their meetings with potential investors. It is important to note here that GITA is not concerned about donation- or reward-based crowdfunding. These two types are not currently regulated, however so far there have been

no successful examples of either. Donation-based crowdfunding mobilizes more money for social purposes, while reward-based crowdfunding is limited because of the small market size in the country. Another factor that limits the potential of reward-based crowdfunding is that around 95% of innovative Georgian start-ups provide B2B solutions, not B2C products, so there is not much demand for presales, or interest in startups' brand merchandise. GITA thus aims to develop debt-based or equity-based crowdfunding but doing so requires changing the current Law of Georgia on Securities Market, which states that a public offering is an offering made to more than 100 persons or to an unspecified group of persons.[10] Under this definition, equity-based crowdfunding campaign is a public offering which means that companies willing to participate would have to meet the same criteria/requirements as a company wanting to announce an IPO on the stock market. These relatively high requirements are impossible to meet for the kind of companies that would use this crowdfunding platform, especially startups.

- However, the NBG has been reluctant to cooperate with GITA and allow necessary changes. The NBG is concerned that financial literacy in the country is too low for such a mechanism and that people may be naïve enough to believe that a certain startup might become the next Google, and may even sell their houses to fund the project. Then, once the startup fails, which happens 90% of the time, they would lose everything, and would likely direct blame towards the NBG.
- To mitigate these risks, GITA has tried to incorporate the following mechanisms in the draft law, supposed to be a single additional chapter in the Law of Georgia on Securities Market:
    - No startup would be able to request more than GEL 500,000 a year;
    - A citizen of Georgia cannot invest more than GEL 2,000 a year through an online crowdfunding platform, which can be monitored easily;
    - If the person's income is more than GEL 40,000 a year (people are required by law to fill out a property declaration form, so this will be public information), they can invest up to 10% of their annual income on the crowdfunding platform (the upper cap for this will be set at GEL 150,000).

  Some of the IPO requirements for crowdfunding campaigns are to be relaxed, analogous to what has been done in the US and the UK already. Other safety measures taken by foreign crowdfunding platforms (and required by their respective legislations) include multiple definitions regarding the high risk of projects listed on the platform, and multiple warnings that all money invested may be lost completely. In other words, at every stage, the platform has to confirm

[10] Law of Georgia on Securities Market, Consolidated versions (14/07/2020 - 15/07/2020), Legislative Herald of Georgia.

that the person investing is aware of all the risks of investing in a startup. Another measure is that specific crowdfunding campaigns cannot be advertised on TV or social media.

- If the legal situation improves, crowdfunding has significant potential in the country. The private sector is very interested in investing in the development of such a crowdfunding platform. In addition to the actual money generated on the platform, this also provides a sort of market validation for companies that raise funds through this platform. After reaching their crowdfunding goal, the company can go to an investor and say that, for example, 10,000 people believed in the product and invested in it. This would increase the chances of the investor believing in the startup as well. Meanwhile, crowdfunding platforms could inspire middle-income citizens to invest, and several commercial banks have even made an offer whereby if a startup could raise 80% of funds through crowdfunding, the given bank would provide the remaining 20%. Moreover, the main role in the development of the platform and its practices should be played by the private sector.
- The reluctance of the NBG to back this legislation could potentially be explained by a conflict of interests. Unlike most other countries, in Georgia both the capital market and the banking system are regulated by the same entity – the NBG. Due to the role the banking system plays in the financial stability of the country, banks are the NBG's priority. In reality, the banking sector and the capital market represent two competing sources of funds. In the US and the UK, both develop separately and are under the supervision of different entities.
- A Georgian startup cannot participate in foreign equity crowdfunding, which is tied to the given country's legislation. Once proper legislation on this area has been passed, citizens of any country will be able to put money into Georgian startups. Especially interesting in this regard is the potential investment from the Georgian diaspora, many members of which may be willing to invest small sums in Georgian Startups.
- Regarding state guarantees for crowdfunding loans, Mr. Kasradze believes this would go against the core principles of crowdfunding. A better strategy here in his view would be to raise awareness about financial risks in society, rather than providing state guarantees. He compares this proposed practice to providing state guarantees for gamblers at casinos and when it was suggested to him that state-guaranteed crowdfunding loans could replace grants, he maintained that grants would be a better substitute for first-stage funding (i.e. friends and family money).

FINANCIAL TECHNOLOGIES

The level of innovation in Georgia's SME sector, according to the 2019 EIB Report (Conde and Gattini 2019), which was based on the findings of a Business Environment and Enterprise Performance Survey carried out in 2012, is quite low. This report found that only around 11% of SMEs in the country had introduced new or significantly improved processes in practice during the three years leading up to the report. Since then, the Government of Georgia has taken multiple measures to promote innovative practices, one of which was establishing GITA in 2014. GITA's main aim was to promote innovative practices, goods, and services in the country. Elsewhere, the NBG has been at the forefront of developments, winning Best Fintech Policy at the Central Banking FinTech RegTech Global Awards in 2020 and 2021 (National Bank of Georgia 2021). In its acceptance statement, the NBG indicated that the prize was attributable projects such as "open banking, instant payments, digital Lari, and digital banking [that] ensure reduced fixed costs for Fintech companies."

More recently, according to the OECD's 2020 SME Policy Index (OECD, European Commission, ETF, EBRD 2020) report, which includes the Innovation and Business Support pillar, Georgia is a leader among the Eastern Partnership countries in two of the pillar's three dimensions, namely business development services and innovation policy. In the third dimension – green economy policies – Georgia sits second behind Belarus. This pillar assesses the reforms implemented by governments to promote innovation and to support SMEs in overcoming productivity-related challenges.

Financial technologies and innovative financial practices could be key to transforming the way governments and businesses think about finance. Amid rapid changes and constant technological breakthroughs, it is important that regulators and government agencies work to eliminate structural barriers that may hinder innovative and experimental practices.

Accordingly, the NBG, through the Financial Innovations Office of its Financial Technologies Department, seems to be taking a proactive role in supporting the development of a dynamic financial services market. In so doing, the NBG aims to provide an "effective communication framework between financial innovators and supervisors" (National Bank of Georgia 2020). The following part describes and explores the practices/initiatives that are now being implemented or are currently the subject of active research.

Open Banking

Open banking in Georgia is being implemented by a committee staffed by representatives of commercial banks. From 2021, during stage one of implementation, commercial banks were given a directive to make certain information accessible to third-party providers. Currently, at the first stage, data are only accessible among banks. At the next stage, which is set for late 2021, information will be made avail-

able to FinTech companies as well. The Banking Association of Georgia is currently working on a national standard of open banking. The standardization process follows the standards of the Berlin Group (European Standards Initiative 2021) but is tailored to the specifics of the Georgian financial sector (Banking Association of Georgia 2020).

The data issue was revisited multiple times during the interview with Mr. Otar Gorgodze of the NBG. His ideas about data usage and scope go beyond this open banking initiative, as outlined in the following points:

- Open banking basically adheres to the idea that just like you manage the money you deposit in a bank, you should similarly be able to manage the information that the bank holds about you. This means that any movement of information between market participants about a person must be approved by that person. FinTech solutions are important and necessary to rule out mistakes and fraud in this regard, while open banking is beneficial for SMEs because if banks use a standardized API (to be designed by the Banking Association of Georgia), their information can be unified across multiple financial institutions and may be more extensive. This could serve as a partial solution to the scalability problem.
- To Mr. Gorgodze, the data issue surpasses banks and financial institutions. Pertinently, for FinTech solutions to develop, the problem of information scarcity must be solved. This also ties in with the goal of increasing access to finance for SMEs for which a good credit-scoring system is needed. Big bank information is not enough but, luckily, big banks are not the only sources of information today, with the volume of human digital footprints increasing every year. For example, when clients shop at big supermarkets or big pharmacies, those companies acquire valuable information about their shopping patterns. This, along with mobile data, can be very valuable data for scoring systems. Today, the creditworthiness of a person is decided by a credit officer although banks can be reluctant to expend human resources on small loans. Accordingly, streamlining this process with automatic decision-making through a comprehensive scoring system could increase access to finance by decreasing these associated costs.
- Neither the data nor the scoring algorithm has to be centralized. An important point here is that the information collected and distributed by these different market participants has to be uniform and easily integrable. Information must be exchanged in a standardized manner, and then the private sector, in this case banks or FinTech companies, can develop their own scoring algorithms and compete in data processing and data-driven innovative ideas.

Central Bank Digital Currency

CBDC is a relatively recent concept that central banks around the world have started to research and consider, including the NBG. The interview with Mr. Gorgodze of the NBG revealed how CBDC may be an exciting avenue for additional funds and how it may affect access to finance for SMEs. The main points made by this interviewee are summarized below:

- CBDC is part of a broader subject, namely that new technologies enable cheaper delivery of financial services. In one part, this is because the technology needed is cheaper, and in another this is because with new technologies, there is no longer the need for a financial intermediary.
- Currently, banks are needed for all financial transactions. If a person wants to give money to another person who uses a different bank, then both banks and the central bank must be open. In these transactions, people move a bank's assets, not their own. The money deposited to a bank account is no longer the person's own money, but rather a sum that the bank owes the person. By contrast, CBDC would be a cash substitute, meaning actual electronic money that the person would own and would be able to manage without a financial intermediary. This money can be sent as easily as an e-mail.
- The biggest risk factor brought up in CBDC discussions is how its issuance will affect the banking system. If too many people decide to hold their assets in CBDC rather than make deposits at banks, this may be problematic for the financial stability of the entire economy. This is especially true in the Georgian financial environment, in which banks play a key role. So, the NBG is looking to launch CBDC, but in a controlled and limited environment. Currently, the NBG is researching available technologies and a test version should be launched soon. However, full CBDC with all of its important features may take years to materialize. Meanwhile, it is not considering issuing a collection coin but is rather aiming to produce a tradable coin directly.
- Another issue that is currently being debated with regard to CBDC is interoperability. This is a legal issue on which the Bank for International Settlements (BIS) is currently working. Collaboration will be key to enabling and facilitating cross-border CBDC payments.

Regulatory Sandbox - RegLab

In the interview with Mr. Gorgodze of the NBG, the concept of a regulatory sandbox was mentioned. The NBG launched its sandbox, RegLab, in April 2020[11] in an effort to respond to the growing challenge of striking a balance between protecting custom-

[11] Information in this paragraph is from an interview, and is complemented by information in the following article: O. Gorgodze, Regulatory Laboratory – Essential Component of a Fintech Ecosystem, forbes.ge, April 28, 2020.

ers' rights and managing risks on one hand, and developing innovative and globally competitive services on the other. This mechanism enables the NBG to adapt and design regulations at the same time as innovative services are being developed.

RegLab allows FinTech companies to test their new services and models in the real world, under specific limitations and regulations of a controlled environment. The sandbox is especially interesting for startup FinTech companies trying to enter the financial services sector.

The mechanism was developed through tight collaboration of the NBG and the World Bank and was further adjusted through public discussions. This practice differs from the traditional way because a regulatory sandbox implies adjusting regulation to practice, rather than adjusting practice to regulation.

Any entity regulated by the NBG or a non-regulated FinTech startup is eligible to apply to RegLab. In the case of the latter, the non-regulated FinTech company must be planning to enter the regulated market independently or with another financial institution. Moreover, the product must be innovative, must significantly improve the efficiency and accessibility of financial services, and its testing must require a change in the existing regulatory framework.

The RegLab includes the following three stages: testing of the idea; testing of the concept; and testing in the real world. In the first stage, the NBG contemplates how the given technology meets the innovation criterion, and what effect it may have on systemic risk. Meanwhile, testing of the concept implies constructing a test model and demonstrating its prototype. In this process, the main parameters of the technology must be tested, while focus groups may also be used. In the third stage, the technology is released into the real world, but on a limited scale and for a limited period of time. During this period, several regulations may be lifted if necessary and there may be several sub-stages, possibly include expanding the scale and taking note of the technology's risks. If all stages are completed successfully, the technology must be approved by the supervisory board, and the regulatory framework must be duly adjusted.

To further promote the visibility and competitiveness of Georgian FinTech companies, the NBG is a member of the Global Financial Innovation Network (GFIN) (The Global Financial Innovation Network (GFIN) 2021), which is a leading platform that unites innovative regulatory entities of many countries. One of the main groups in the Network is currently working on a sandbox that covers several jurisdictions, that will allow FinTech companies to test their technologies at the same time in different countries. Collaboration with the GFIN could represent another opportunity for Georgian financial institutions and FinTech companies to go global.

Since the launch of RegLab, two digital onboarding technologies have been tested in the sandbox (details are given below in Table 3) and, as of September 2021, 12 more are being tested (National Bank of Georgia 2021).

Table 3: Completed Projects in the NBG's RegLab

Organization	Project Description	Completion Date
JSC Credo Bank	Remote identification/verification service that provides for the identification of user data. In particular, it compares biometric data using the "face recognition" system, checking the "liveness," extracting textual information from the document and checking its validity.	12.07.2021
JSC Pasha Bank Georgia	Remote identification service using the "face recognition" system. The program "Kvalifika" of a FinTech company JSC "Identity and Trust Solutions" is used in the remote authentication process, which also uses FaceTec-certified "Liveness" and 3D authentication technology, as well as Amazon Web Services infrastructure.	16.06.2021

Source: NBG (National Bank of Georgia 2021)

Digital Banks

Although banks in Georgia are actively using digital technologies, there is currently no fully digital bank operating in Georgia without any branches. The NBG is however considering the development of principles for licensing a digital bank (National Bank of Georgia 2020).

According to the NBG, the aims of developing a digital bank model are to support the development of innovative business models, to encourage the diversification of available financial products, to improve big data usage and analysis, to help develop a fast, flexible, and affordable digital financial ecosystem, and to facilitate the integration of technology companies. The initiative aims to bring in new high-tech players on the market to boost competition in the financial sector (National Bank of Georgia 2021).

According to the NBG, open banking has the potential to "significantly improve access to finance" while promoting sound competition (National Bank of Georgia 2021).

Georgia Relief and Recovery for Micro, Small, and Medium Enterprises

Georgia Relief and Recovery for Micro, Small and Medium Enterprises is a World Bank program, approved in 2021. It aims to improve access to funding for MSMEs by enhancing practices. The information presented in this subsection was taken from an interview with Mr. Irakli Gabriadze, Deputy CEO of Enterprise Georgia. The components of the program include:

1. **Upgrading payments infrastructure** – This component will be implemented by the NBG. Under this initiative, the WB will provide funds to cover operation-

al costs, investments, and technical assistance to introduce an instant payment system (IPS) to promote more efficient electronic payments. IPSs are being implemented around the world because they allow for funds to be instantly accessible by the payee, at the same time as being cost-efficient for the end user. Promoting fast cashless payments will streamline financial transactions for firms, improving their ability to manage liquidity.

2. **Support for COVID-proofing and digitization** – Recent surveys indicate that firms, through greater digital immersion, can significantly mitigate shocks caused by the Covid-19 pandemic. Therefore, this component aims to provide technical assistance to firms trying to adjust to the emerging needs of their business operations through adapting their managerial practices and moving to digital platforms, with an explicit consideration for the needs of female entrepreneurs. This subcomponent is implemented by Enterprise Georgia and aims to create programs reforming managerial capabilities to eventually foster a local market for consultancy services.

3. **e-KYC and Know-Your-Customer registry** – Identity verification is a critical issue when discussing digital financial services, particularly for individuals and MSMEs that will participate in the digital economy. To address this issue, the WB through this subcomponent will provide funds to establish an e-KYC infrastructure and a KYC registry. The subcomponent will be implemented by the Ministry of Economy and Sustainable Development.

    a. e-KYC infrastructure could serve as a solution to the barriers to digital onboarding of customers, and will increase access to financial services for many. This feature would enable financial institutions to confirm the identity of their potential customers remotely.

    b. A KYC registry is essentially a centralized repository of customer due diligence (CDD) records, built on a unique ID system. The registry will no longer require the customer to have their CDD documents verified each time they decide to engage with a new financial organization. This registry can help increase access to finance for SMEs and entrepreneurs for whom the existing CDD requirements are a major deterrent in acquiring financial products. The registry will be built on the existing ID system - MyGov.ge.

4. **Secured transactions reform** - This final subcomponent of the project aims to address the issue of overreliance on immovable assets as collateral by lenders, and facilitate the registration of movable collateral for MSMEs, such as vehicles, equipment, and intellectual property. This subcomponent will be implemented by the Ministry of Economy and Sustainable Development. Under this subcomponent:

    a. EUR 600,000 will be allocated to improve the legal and regulatory framework for secured lending. This will include the drafting of legal amendments.

b. EUR 800,000 will be allocated to modernize the collateral registry, including preparation of technical specifications and procurement of a customized software solution.

c. EUR 300,000 will be allocated to the capacity-building of users.

GOVERNMENT SUPPORT

Strategy Papers and Completion Reports

Supporting SMEs has been one of the top priorities for the Government of Georgia throughout the last decade. In this regard, Georgia designed and implemented the 2016-2020 Development Strategy for Georgia's Small and Medium Enterprises (Ministry of Economy and Sustainable Development 2020). According to this strategy, improving access to finance was one of five main priorities of the SME policy. In terms of non-bank finance, the strategy envisioned raising awareness and literacy regarding alternative financing sources, including equity financing and VC. It also aimed to attract VC funds to the Georgian market, but no specific foreign funds had been identified by the end of the five-year period. However, the completion status report of 2020 (Ministry of Economy and Sustainable Development 2020) reported the following new developments in the legal sphere:

1. On 14 July 2020, a new Law on Investment Funds (Legislative Herald of Georgia 2020) was adopted. The law determined the tax regime for investment funds, which, according to the report, is in line with international best practices. The law was modified and adjusted as a result of public-private dialogue (GRATA International 2020).

2. On 29 June 2020, the Law of Georgia on Securities Market (Legislative Herald of Georgia 2020) was amended. The amendments aimed to improve the transparency framework and the proper use of insider information. The main purpose of the amendments was to better protect the interests of the investors, which, along with standards of transparency, constitutes the basis for the development of the capital markets. The report also explicitly stated that the new reforms will have a long-term effect on SME development through fostering sound competition and transparent practices, and improving access to diversified financial instruments (GRATA International 2020). However, these amendments have not changed anything with regard to crowdfunding.

3. The report also remarked that in 2020 the Government started collaborating with the Asian Development Bank (ADB) on the new Capital Market Development Strategy, one of the main aims of which is to complement and expand the sources of finance for SMEs. This includes the development of crowdfunding or peer-to-peer lending platforms, along with registering securities under certain exceptions, implementing and standardizing smart contracts between entrepreneurs and investors, and introducing various other FinTech solutions. This document has not yet been finalized.

The intention to develop crowdfunding platforms is explicitly stated in the 2020 Status Report. The Ministry of Economy and Sustainable Development of Georgia also finalized the Small and Medium Enterprise Development Strategy for Small and Medium Enterprises 2021-2025 (Ministry of Economy and Sustainable Development 2021) in collaboration with GIZ and the OECD. The strategy identified seven policy priorities, which again includes increasing access to finance and diversifying available financial instruments. Another priority relevant to our discussion is supporting the internationalization of SMEs and encouraging innovations and R&D practices. The main strategic tasks are developing leasing and factoring, creating a VC- and business-angel-friendly environment, strengthening linkages between SMEs and investments, and deepening ties between research and industry. The action plan for 2021-2022 calls for the following two specific actions to diversify financing instruments:

1. Develop a leasing market development strategy and action plan (the target is to increase the volume of the leasing portfolio by 20% in 2025, compared to its 2019 figure); and
2. Draft a law on factoring (the target is to have a regulatory framework in place by 2025).

Government Agencies

There are three state agencies that provide support to SMEs in Georgia, namely Enterprise Georgia, GITA, and the Rural Development Agency.

Enterprise Georgia

Enterprise Georgia (EG) (Enterprise Georgia 2021), established in 2014, is one of the major implementing agencies of the "Produce in Georgia" state program. The aim of the program was to support the development of the private sector by increasing access to finance for SMEs. Parts of the program implemented by Enterprise Georgia include:

1. **Industrial Component** – EG covers refinance rates plus 3% of bank interest on commercial bank loans and refinance rates plus 5% of interest rate payments on leases for three years for SMEs in the priority sectors identified by the Government. This component is effective until 1 January 2022.
2. **Credit Guarantee Scheme** - EG provides 90% of guarantees on loans ranging from GEL 50,000 to GEL 5 mln, for a maximum of 10 years.
3. **Business Universal** – The most recent program, enforced from 1 September 2021. Through the program, EG offers a subsidy on the loan interest rate of the refinancing rate minus 5% for the full term of the loan and guarantees of up to 60% of the loan principal amount for a maximum period of 10 years. For leasing, EG finances the refinance rate minus 3% for the full term of the lease project. The program covers more than 300 activities from about 60 types of economic activity selected for their exporting and import substitution potential, beneficiaries are eligible to get 15% of the loan or leasing amount in the form of grants.

4. **Film in Georgia** – Cash rebate program of 20-25% of qualified expenses for domestic and foreign filmmakers.

5. **Micro Business Support** – Consulting services and co-matching grants for micro entrepreneurs with a beneficiary contribution of at least 20% of the grant amount. Trained and selected project owners receive co-matching grants of up to GEL 30,000 from the Government.

Georgia's Innovations and Technology Agency (GITA)

GITA operates three grant programs (Georgia's Innovations & Technology Agency 2021) aimed at financing innovative startups:

1. **Grants of GEL 15,000** – These grants are essentially in place to serve as friends and family money that usually finances the very initial phase of the development of an innovative startup. Grants are classified into one of the following:

    a. Prototype Grant – allows the startup to develop a prototype of the product;

    b. Event Grant – supports the organization of hackathons, makeathons, and creathons to create a software, an innovative business idea, or a prototype; and

    c. Travel Grant – supports participation in international events in the field of innovation and technology.

Up until 2020, GITA approved and financed 392 applications in total in all three directions.

2. **Grants of GEL 100,000** – This is a financing opportunity for innovative startups with less than two years of experience. Ten percent of the awarded grant must be matched by the entrepreneur. The program had 118 beneficiaries by August 2021, with a total grant amount of GEL 11,582,135.2.

3. **Grants of up to GEL 650,000** – This is the biggest financing opportunity that GITA offers, but it requires 50% co-financing from the entrepreneur's side. This often means that the startup needs to attract other investors to match the amount of the grant. By August 2021, this program had 20 awardees, with a total grant amount of GEL 9,830,057.8.

Rural Development Agency

The RDA is another government agency deployed to help Georgian SMEs. In 2020, they were operating eight different government programs (OECD iLibrary 2020), including a preferential agricultural credit project, co-financing of agricultural processing and storage enterprises, a tea plantation rehabilitation program, and agricultural insurance.

PART III: CASE STUDIES

In this part, the paper takes a closer look at the available alternative financial sources and support mechanisms in Lithuania, Poland, and Israel. These three countries were each chosen for the following reasons: Lithuania is grooming itself to be the next big FinTech hub in the European Union after Brexit; Poland boasts the biggest factoring market in Eastern Europe; and Israel has managed to develop one of the most dynamic startup ecosystems in the world. This section provides key take-away points from the three case studies, while full texts of the case studies are given in Annex 1.

LITHUANIA

- **Factoring** has been increasingly used in recent years in Lithuania. INVEGA (state authority that supports SMEs) has been providing portfolio guarantees for factoring transactions since April 2018 (Invega 2021), but it must be noted that the trend was moving before INVEGA introduced this tool. Nevertheless, despite the increasing amount of factoring transactions, their volume has stayed at roughly 1% of the country's GDP (FRED, Economic Data since 1991 2021).
- **Leasing** practice has also been steadily increasing during the last decade, and INVEGA also operates a program that offers leasing guarantee services. Lithuanian Civil Law specifically details and regulates leasing, factoring, and hire purchase contracts (LithuaniaLaw 2000).
- The Baltics **VC market** is undergoing rapid development. Notably, Lithuania is the leading Baltic state with EUR 148 mln in terms of the amount raised by nationally focused funds. Out of the EUR 148 mln of raised capital, EUR 112 mln was provided by government agencies, EUR 30 mln was provided by private individuals, and EUR 5 mln was provided by pension funds. Although reliance on public institutions and public funding is reported to have been steadily decreasing, the main VC funds are currently being funded by INVEGA, several Lithuanian Ministries, and ERDF (Deloitte 2020).
- The Government of Lithuania adopted the Law of **Crowdfunding** of the Republic of Lithuania in November 2016. Although the law permits all types of crowdfunding activities, the Lithuanian practice is categorized as p2p lending. The Government of Lithuania also launched a state program Avietė (Lithuanian for raspberry) (Beiliūnienė and Griskevicius 2021) through INVEGA, which enables SMEs to borrow funds through crowdfunding platforms. This instrument was established because banks have increasingly demonstrated a tendency to turn away from financing micro enterprises due to the implied high risk. By design, the instrument finances 40% (up to 10,000 EUR) of the required loan from its own funds (financed through INVEGA reflows), and the rest is financed by the

private investors registered on the platform. Here, INVEGA acts as market investor and bears full credit risk. At present, the instrument is only available on one platform, Finbee (regulated by the government), but the number of available platforms is expected to grow.

- Most notably, Lithuania has, in recent years, built a reputation for itself as a prominent **FinTech hub** in the region. In 2016, the Government of Lithuania and the country's central bank shifted their focus to promoting the development of the FinTech sector in the country (Ministry of Finance of the Republic of Lithuania 2016). Since then, the number of FinTech companies operating in Lithuania has grown by 180%, from 82 in 2016 to 230 in 2020 (Invest Lithuania 2021). To recognize its innovative initiatives, the Bank of Lithuania was awarded the Global Impact Award at the FinTech & RegTech Global Awards in 2020 (Central Banking 2020). The Global Fintech Rankings Report 2021 by Findexable ranks Lithuania 10th globally (Findexable 2021). Some of the initiatives of the Bank of Lithuania are listed below:
    - **Regulatory Sandbox** – Lithuania was the first country in the region to launch a sandbox in 2018 (Turp-Balazs 2020). The Bank of Lithuania stressed the importance of fostering collaboration between the FinTech companies and regulators, and dealt with the process of testing the new services as a process of learning and knowledge accumulation (Bank of Lithuania 2018).
    - **LBChain** – Along with the regulatory sandbox mentioned above, Lithuania pioneered a blockchain sandbox in 2018 (LBChain 2020). With this, they stressed the importance of developing blockchain-based solutions in the financial sector and set out to gain competencies in this direction as well.
    - **LBCoin** – To deal with the intricacies of issuing a CBDC, considering the Bank of Lithuania's limitations in issuing a digital euro, it designed a digital coin for collection purposes (Bank of Lithuania 2019). The bank describes this initiative as a steep learning curve in terms of various legal, cybersecurity, and technological matters relevant to the issuance of a tradable CBDC.
    - **CENTROLink** - According to the Bank of Lithuania, CENTROLink is a local payment system that provides all types of payment service providers, such as banks, credit unions, and e-money and payment institutions, a gateway to the Single Euro Payments Area (SEPA)) (Bank of Lithuania 2020).

POLAND

- In Eastern Europe, Poland leads statistics in terms of total **factoring** volumes by a large margin, amounting to about 13% of its GDP. According to the Polish Factoring Association, the factoring market in Poland has reported on average 18% year-on-year growth. A notable aspect of the Polish factoring market is that its supply

side is quite diversified and not dominated by commercial banks. In 2020, out of the 52 financial entities providing factoring services, 43 were non-bank organizations specializing in factoring services. The remaining nine were trade finance departments of commercial banks. Moreover, non-banking institutions dominate in terms of both the number of clients and the number of invoices purchased with the shares of 86.4% and 85.2%, respectively (Statistics Poland 2021).

  - One of the biggest obstacles for the factoring market was previously related to tax deductibles. Until February 2021, there was no uniform approach to how the taxpayer should recognize tax-deductible costs on factoring transactions. The ambiguity was resolved however by the ruling of the Minister of Finance who explicitly stated how tax-deductible costs are calculated in this situation and showed how to calculate those cost (WTS 2021).
  - Another supporting mechanism for factoring services introduced recently by the Polish government is the Guarantees of Factoring Limit Repayment which was approved under a state aid program to support companies affected by the pandemic. EUR 2.6 bln has been allocated for this program and it will be implemented by Bank Gospodarstwa Krajowego (BGK) (Europian Comission 2021). The scheme covers recourse as well as reverse factoring, with up to 80% of the guarantee (Polish Development Fund Group 2021).

- In terms of **leasing** – while the Polish leasing market is also diversified with 82 organizations providing leasing services in the country, the total leasing volume was more than six times smaller compared to the total factoring volume in 2020 (Statistics Poland 2021).
- **Venture capital (VC)** in Poland has seen a massive spike during the last two years. In particular, 2020 was a record year with Polish startups managing to attract EUR 477 mln, marking a 60% increase compared to 2019, which was also a record year. The Polish government plays an important role in the success of VC flow. The special agency PRF Ventures was established to support the development and creation of a VC market. The agency manages Polish government and EU funds, and invests in projects through 50 funds making decisions about investment. Combined, they already have more than 300 projects in the portfolio (PFR Ventures 2021).

ISRAEL

- Israel has seen some remarkable developments in the past few decades and has even been given the nickname "start-up nation" for its unique entrepreneurial ecosystem. The **VC market** in Israel is in its fourth decade of development and there are now over 300 VC firms in the country (Start-up Nation Finder 2021). Some of the first companies on the market are still going today. The early success

of VCs has been associated with a rare example of a successful government intervention. In the early 1990s, the Government of Israel established Yozma Group with a starting capital of USD 100 mln. Today, Yozma Group is recognized as the 'founder of Israel's VC industry' (Yozma Group 2021). Notably, Israel has a unified platform, Start-up Nation Central, that connects VC funds with startups with high-growth potential. The platform acts as a means of confirming the validity and legitimacy of participants at both ends of potential venture investments. It could be argued that this accessibility and availability of data about innovative firms is a driving force behind the success of Israeli VC.

- **The crowdfunding landscape** in Israel is mainly dominated by equity crowdfunding platforms (CFP), because of the limited scalability potential of a country of 9.3 million people.[12]
    - The first CFP was established in 2013 by OurCrowd. Since then, it has managed to raise over USD 120 mln for more than 60 companies across a wide range of sectors including agriculture, consumer goods and services, cybersecurity, energy, enterprise, FinTech, healthcare, and mobility. OurCrowd raises funds from qualified investors only and operates as a VC fund as well.
    - There are other types of CFP too in Israel, like ExitValley, founded in 2014, which has managed to raise more than USD 20 mln for about 50 companies. ExitValley charges startups an administration fee of approximately USD 4,300 (+ VAT) upfront and 10% (+ VAT) of the total fundraising amount. ExitValley makes the offer available to only 35 investors, so it is not fully publicized (Efrat, Gilboa and Berliner 2020).
    - Another type of equity CFP was introduced in 2017, where shares of equity can be offered publicly. This was enabled by the Israel Securities Authority that amended mass financing regulations, providing SMEs an additional channel to raise funds through mass financing platforms (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020).
    - Following the model, PipelBiz has successfully managed to raise USD 17 mln for more than 42 companies from 7,766 individual investors. Thus, this model enables all Israelis to finance SMEs through crowdfunding platforms (Efrat, Gilboa and Berliner 2020).
- The Israeli financial ecosystem has all of the necessary preconditions in place to quickly adopt **financial technologies** and transition smoothly into a more digital, data-driven provision of financial services. Meanwhile, the coalition of the Prime Minister Naftali Bennett proposed two reforms as part of the Economic Arrangements Bill in 2021 (Ministry of Finance of Israel 2020).

[12] Although, there are non-equity crowdfunding sites, most notably Headstart.

- The first proposal is 'a unique **regulatory sandbox'** that will allow regulators to monitor activities of FinTech companies.
- The other proposal is about the adoption of the practice of **open banking**. This is supposed to happen in three stages: from April 2021, data about account balances and transactions have been shared; the next stage grants access to card transactions, enabling the initiation of payments from the customer's bank account; and at the final stage, which will take effect in 2022, data about credit and loans, deposits, and securities will become accessible (Ben-David 2021).

- Israel's traditional banking landscape went relatively unchanged from 1978 until 2019 when the Bank of Israel granted a license to a new bank – the **First Digital Bank**. According to the FDB, it offers all of the traditional services banks offer, but what makes them different is that they do not have to fund branches, or outdated computational systems and operational models through interests and fees. The main advantage of the digital bank is its cost-effective and high-tech processes. The bank envisions deploying artificial intelligence in their services to offer clients the best experience, help them find best solutions to their problems, and better save money. The key is that the system will learn the needs of the customers based on their financial behavior and will forecast their future needs (Ben-David 2021)..
- In April 2019, the **Central Credit Database** was launched in Israel for households as well as SMEs. The primary goal of the database is to improve competition and data accessibility (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020).

PART IV: POLICY RECOMMENDATIONS

TO THE GOVERNMENT OF GEORGIA:

1. Create and adopt a regulatory framework for factoring.
2. Support the creation of a unified factoring platform where all transactions will be registered, including public procurement invoices.
3. Introduce a temporary factoring guarantee scheme to boost the development of factoring services.
4. Consider creating support mechanisms for VC funds, including direct contributions to venture capital firms. The experiences of Poland, Lithuania, and Israel show that government funds play a pivotal role in the initial stage of the development of VC funds.
5. Create and adopt a regulatory framework for crowdfunding to minimize risks for potential investors and support this market's development.
6. Consider Crowdfunding as an opportunity to shift focus from awarding grants to giving away co-funded microloans through crowdfunding platforms (similar to Lithuania's Aviete). Grants offered by GITA and Enterprise Georgia could also be modified to fit this model.
7. Consider issuing a collection coin at the first stage so that the issuer can learn about its practical features and the buyers can familiarize themselves with the concept of a digital coin.

TO NGOS, DONORS AND/OR OTHER STAKEHOLDERS:

8. Establish a factoring association to advocate for the inclusive participation of various financial institutions in the factoring market and coordinate actions.
9. Establish a non-government non-profit organization (such as Start-up Nation Central in Israel) to act as a nexus between VC funds and startups, gathering data regarding all of the startups operating in the country. Apart from public data, information about the financial situation in each startup should be visible to qualified VC representatives or angel investors (with the permission of the startup owners).
10. Implement new standards to access and process all the relevant customer data stored by, for example, large supermarkets and pharmacies, following the successful collaboration on Open Banking between the NBG, Banking Association, the Banks, and other stakeholders. The customer should be able to access this information freely through FinTech solutions.

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ANNEX 1: CASE STUDIES

CASE 1: LITHUANIA

General SME Landscape

According to Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard (OECDiLibrary 2020), 99.6% of all operating enterprises in Lithuania are SMEs, of which 81.9% are micro-enterprises. In 2018, SMEs constituted almost 70% of gross value added and 73% of total employment.

Traditional Lending

Despite these numbers, share of SME loans in total outstanding loans, has remained unchanged at around 40% during the last several years. In other words, this means that roughly 40% of loans of commercial banks goes to firms that generate almost 70% of gross value added. The report also shows that despite its stagnant share in total loans, the volume of SME loans has increased by 21.3% over 2015-18. This shows that while traditional debt financing remains to be an important source of funds for SMEs, there is a whole host of SMEs that are unable to participate in this market due to various reasons, such as inexistent or imperfect credit histories. Startup Lithuania estimates that as much as 40% of SME loan applications are rejected in the country (Startup Lithuania 2021).

According to the 2019 SBA Factsheet on Lithuania (Europian Comission 2019), banks have been growing increasingly reluctant to provide loans to SMEs since 2017. The government has put a stronger focus on alternative financing sources for SMEs, such as angel and venture capital investment and crowdfunding. Despite these measures, Lithuania still has one of the lowest rates of venture capital investment as a percentage of GDP, and thus, overall availability of funding to SMEs is perceived as weak in the Factsheet, notably due to reduced traditional lending. However, recognizing this is an initial stage of development for these alternative financing instruments, the government of Lithuania is continuing its efforts to innovate and diversify alternative sources of finance. To this end, in February 2019 Lithuania enforced new rules for investment funds, which the Government dubs as "one of the most innovative regulatory frameworks for funds in the EU". According to the 2019 Factsheet, this regulatory package revised limits for pension funds investing in venture capital, private equity, and other alternative asset classes, increasing their ability to participate in these markets.

Non-Traditional Lending

The OECD Scoreboard reports that although the use of alternative financing sources is still in its nascent stage in Lithuania, the demand for them is growing rapidly.

This was especially visible in 2018 when Lithuanian commercial banks curbed SME lending by tightening credit terms and conditions. For example, in 2018, new total business lending by commercial banks decreased by 600 million Euros compared to the previous year. During the same period, new loans issued by ***crowd funding platforms*** increased more than six-fold, albeit from a low number (from 1.29 million EUR in 2017 to 8.54 million EUR in 2018). Lithuania is among the countries that have a clear legal regulatory framework for crowdfunding: in November 2016, the government adopted the Law on Crowdfunding of the Republic of Lithuania, which removed legal barriers to the establishment and operation of the crowdfunding platforms (Alois 2016).

In the Global Competitiveness Report 2019 (Schwab 2019), Lithuania is ranked 39th among 141 economies. The country performs exceptionally in terms of land administration (1st with 4 other economies), macroeconomic stability (1st with 32 other economies), trade tariffs (7th), flexibility of wage determination (5th) and workers' rights (12th). Lithuania is ranked low in terms of social capital (97th), burden of government regulation (85th), government's responsiveness to change (94th), complexity of tariffs (113rd) and labor tax rate (131st).

Lithuania is ranked 35th out of 180 economies (with 4 other economies) by the Corruption Perceptions Index 2020 of Transparency International (Transparency International 2020). In the Economic Freedom of the World annual report of 2020 by Fraser Institute (Fraser Institute 2020), Lithuania is ranked 11th among 123 countries along with Denmark.

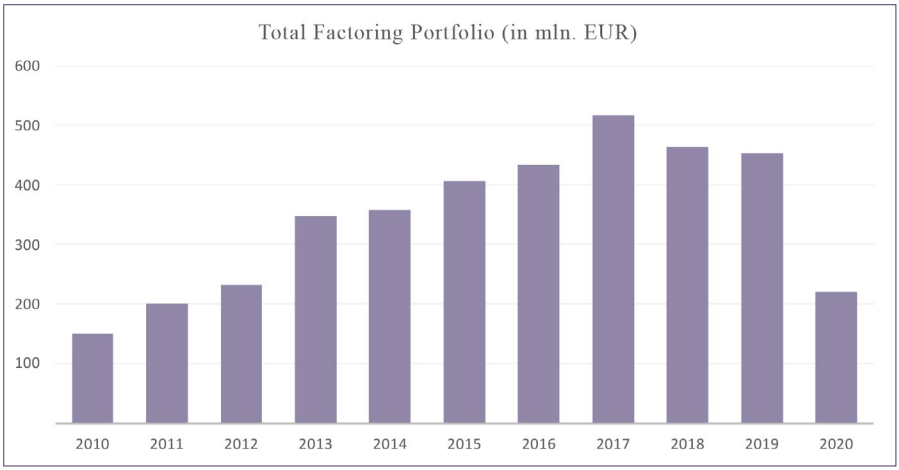
Asset-based Finance

Factoring

Factoring is another tool that has been increasingly used in the recent years in Lithuania. INVEGA provides portfolio guarantees for factoring transactions since April 2018, however, as shown by the figure below [13] the trend was increasing before INVEGA introduced this tool. To be specific, from 2011 to 2019 total factoring portfolio shows a 126.1% increase. Despite this increase in the absolute volume of total factoring portfolio, the figure remains stagnant at around 1% of the country's GDP (with the exclusion of 2020, when it fell to 0.45% of GDP) (FRED, Economic Data since 1991 2021). These services are not subject to any licensing in the country (LithuaniaLaw 2000).

[13] These figures depict total factoring portfolio and, therefore, also include large enterprises. However, these were the figures that were included in the OECD's Scoreboard: Financing SMEs and Entrepreneurs 2020, and the paper uses an updated version of that statistics in this report to observe the overall trends in the use of this financing tool.

Figure 4: Total Factoring Turnover14 in Lithuania 2011-2020 (international and domestic) (Lithuanian Banking Association 2021)



Leasing

Total leasing portfolio also saw a noticeable growth during the last decade. The volume of the portfolio grew by 93.7% from 2011 to 2019. In terms of % of GDP, leasing portfolio gradually grew from 4 to 6%, falling back to 5.74% in 2020. This figure reached its highest in 2018 at 6.49% of GDP. The regulatory framework for hire purchase contracts, leasing[15] and factoring is detailed in the Lithuanian Civil Law, which was last amended in 2010 (LithuaniaLaw 2000).[16] The figure below shows the volume of total leasing portfolio in EUR mln. over the last decade.

[14] Figures from before 2015 are converted to Euros from Lithuanian Litas at rate of 0.29 LTL per 1 EUR.

[15] For more on regulatory framework for leasing and hire purchases, visit: https://www.sulijapartners.com/finance-operative-lease

[16] Similarly, to the factoring data given above, these figures do not exclusively refer to SME leasing, but for the same reason as given above, the paper uses them to look at the overall trend in the economy.

Figure 5: Total Leasing Portfolio[17] in Lithuania in mln. EUR (Lithuanian Banking Association 2021)

Equity-based Finance

Venture Capital

According to Invest Europe's 2020 Central and Eastern Europe's Private Equity Statistics (Invest Europe 2020), all private equity investments in 2020 accounted for 0.087% of GDP, which is just below Central and Eastern Europe average of 0.101%. This shows that this market in the country is not sufficiently explored. As for annual investment volume, Invest Europe reports EUR 6, 68, 331 and 42 mln. EUR for 2017, 2018, 2019 and 2020 respectively.

These numbers may not reflect the optimism that local startups and venture capital investors in Lithuania feel about the dynamic ecosystem with more than 20 business hubs and accelerators and strong rankings in intellectual property production (Butcher 2021). Deloitte's Baltics Private Equity and Venture Capital Market Overview 2010-2019 (Deloitte 2020) reports that Baltics VC market is in rapid development stage. 14 new funds were launched in 2019, of which 5 focused Lithuania exclusively, and 8 had a pan-Baltic focus. Notably, Lithuania led Baltic states with EUR 148 mln. in terms of the amount raised by nationally focused funds. According to the report, the figures for Estonia and Latvia were EUR 37 mln. and EUR 117 mln. respectively. Points given below summarize several findings of the report:

[17] Figures from before 2015 are converted to Euros from Lithuanian Litas at rate of 0.29 LTL per 1 EUR.

- Annual investment amount in Lithuanian entities reached a record high in 2019 with EUR 37 mln. invested in 74 companies.
- Total investments made by Baltics Private Equity and Venture Capital funds during 2010-2019 amounted to EUR 433 mln., of which the biggest share at 34.3% went to Lithuania.
- 75.3% of Lithuania-only based investment funds was provided through public funding, while Pan-Baltic funding is predominantly private, with only 38.7% from public sources). However, reliance on public institutions and public funding has been steadily decreasing.
- Out of the EUR 148 mln. raised capital, EUR 112 mln. was provided by government agencies, EUR 30 mln. was provided by private individuals, and EUR 5 mln. was provided by pension funds.

Currently, some of the existing venture capital funds include:

- **Accelerator 2** – fund of EUR 18 mln. for individuals and micro and small enterprises, established on 30 December 2020 by the financing agreement concluded between the Ministry of Economy and Innovation, the Ministry of Finance and INVEGA (state-established financial entity for SME support), and is financed from the state budget.
    - The pre-acceleration program - for developing ideas, designing models;
    - The acceleration program - consulting on company formation, law, fundraising, sales, and other relevant issues.
    - The venture capital investments - for micro and small (SE) enterprises in the pre-seed and seed stages.
- **Accelerator Funds** – fund of funds for micro and small enterprises totaling EUR 16.36 mln., financed by the European Regional Development Fund (ERDF) and founded by the Ministry of Economy and Innovation, the Ministry of Finance and Invega, for micro and small enterprises. It is implemented by two fund managers "Start-up Wise Guys" and "70 Ventures".
    - The team of **Startup Wise Guys** manages:
        - The pre-seed venture capital fund Wise Guys Pre-seed Fund I – first provides training and consulting on business development;
        - The seed fund Wise Guys Seed Fund I - co-invests in young enterprises at an early stage.
    - The team of **70 Ventures** manages:
        - The pre-seed venture capital fund 70 Ventures Accel - provides training and consulting on business development to start-ups;

- The seed fund 70 Ventures Seed - provides funding for young enterprises at the subsequent stages of their development.

- **Business Angels Co-Investment Fund** – for micro, small and medium-sized enterprises, funded by ERDF of EUR 10.23 mln., with an additional EUR 260,000 from business angels (Europian Comission 2019). Through this fund, enterprises selling to the EU and other markets will be able to attract investments of up to EUR 600,000 from the fund, with an additional investment from a business angel. This additional investment should be 50% or more of the total investment.

Other Venture capital funds operating on the Market are given in the table below:

Table 4: Venture Capital funds operating in Lithuania

Fund	Budget	Financing Source
Co-Investment Fund	EUR 15 mln.	Ministry of Economy and Innovation
Co-Investment Fund for Transport and Communications	EUR 1.6 mln.	Ministry of Transport and Communications
Co-Investment Fund II	EUR 9.28 mln.	ERDF
MILInvest	EUR 13.5 mln.	INVEGA, Ministry of Defense
Baltic Innovation Fund	EUR 130 mln.	INVEGA, Altum (Latvian counterpart), KredEx (Estonian counterpart), the European Investment Fund
Baltic Innovation Fund II	EUR 156 mln.	INVEGA, Altum, KredEx and EIF
Development Fund I	EUR 22 mln.	ERDF
Development Fund II	EUR 23.78 mln.	ERDF
Early Stage and Development Fund I	EUR 20 mln.	INVEGA
Early Stage and Development Fund II	EUR 16 mln.	ERDF

Crowdfunding

As mentioned above, the Government of Lithuania adopted the Law of Crowdfunding of the Republic of Lithuania in November 2016. The law aimed to remove legal barriers to the operations of crowdfunding platforms. Although the law does not limit the operations of equity-based crowdfunding platforms - Startup Lithuania reports that "Funds can be granted through equity, non-equity, loan, other credit arrangements" (Startup Lithuania 2021) - Lithuania is mostly using debt-based crowdfunding. Type of crowdfunding platforms operating in Lithuania is categorized as P2P Lending (Crowdspace 2021).

The Government of Lithuania started a state program Avietė (Beiliūnienė and Griskevicius 2021) (Lithuanian for raspberry) through INVEGA (a government agency for SME support), which enables SMEs to borrow funds through crowdfunding platforms. This instrument was established because banks have increasingly demonstrated a tendency to turn away from financing micro enterprises due to the implied high risk. The aim of this instrument is to introduce an alternative finance source – crowdfunding platforms, to accelerate the development of financial technology sector in the country, and to encourage the retail and corporate investors, physical and legal entities, to finance businesses in the country. By design, the instrument finances 40% (up to 10,000 EUR) of the required loan from its own funds (financed through INVEGA reflows), and the rest is financed by the private investors registered on the platform. Here INVEGA acts as market investor and bears full credit risk. Right now, the instrument is only available on one platform Finbee (regulated by the government), but the number of available platforms is expected to grow.

To increase the accountability and trustworthiness of crowdfunding platforms detailed and comprehensive regulation is key. These platforms are expected to work with small clients with low financial literacy, who are not fully capable of presenting themselves/their business ideas properly. Trust needs to be established for people to invest their own money in the platform. Avietė does so by assuring investors that if the default rate exceeds 20% of the portfolio, the program will be terminated. Another assurance is provided by the fact that the activity is conducted under the supervision of a government body. Currently, the platform on which the program operates is a fintech company, FinBee. This business has also benefited from the program. The CEO of FinBee reports that the growth of the platform doubled after deployment of Avietė, and that the large volumes of funds allowed the platform to reduce interest rates from 18% to 11%.

Financial Technologies

Lithuania's experience and efforts to support the development of financial technologies and innovation during the last several years deserves a closer observation. Since 2016, Lithuania has been putting active efforts into positioning the country as one of the biggest fintech hubs and most dynamic of startup ecosystems in the EU. Lithu-

ania SBA Factsheet 2019 reports the technology start-up community growth of 58% to more than 500 companies in 2018, attracting more than EUR 70 mln. of venture capital – 70% growth from the figure reported in 2017 (Europian Comission 2019). The country is globally acclaimed for its efforts to create the most attractive jurisdictions for the fintech industry (ICLG 2021). FDI Intelligence Tech Start-up FDI Attraction Index ranked Vilnius as number 1 globally in 2019 (Irwin-Hunt 2019).

World Competitiveness Yearbook 2021 of the Institute for Management Development (IMD) ranks Lithuania 3rd among 64 countries in terms of technological skills of the workforce. The same report lists reliable infrastructure, dynamism of the economy and business-friendly environment as most frequently listed key attractiveness factors by the respondents of the Executive Opinion Survey (EOS) (IMD, World Competitiveness Center 2021). In terms of business agility, which refers to businesses being able to adapt quickly to market conditions, rapidly respond to market demand, continuously seeking and developing competitive advantage (Agile Business Consortium 2021) – Lithuania is again ranked 3rd among 63 countries in the World Competitiveness Digital Ranking 2020 (IMD, World Competitiveness Center 2021).

To capitalize on the strengths described above, the government has launched several initiatives to support the development of an innovation-friendly technology hub in Lithuania. One of these initiatives was launched in 2017 as a part of a new immigration legislation that aimed to attract ambitious entrepreneurs from outside the EU, dubbed as "start-up visas". As of September 2021, the website reports 750 received applications, 350 accepted applications, of which 61% raised investment during their operation in the country (Startup Visa Lithuania 2021).

According to the 2020-2021 report of Invest Lithuania, The Fintech Landscape in Lithuania, the number of fintech companies in the country has grown from 170 in 2018 to 230 in 2020. The number of people employed by the sector grew from 2,600 to more than 4,000 during the same period. These figures show a 35.3% and 53.8% growth respectively (Invest Lithuania 2021). Figure 6 below shows the breakdown of these 230 fintech companies by their core business activity. According to the data, 50% of fintech companies focus on payments and financial software. The first includes services such as cross-border payments, online payments, e-commerce, online foreign exchange, while the latter focuses on payment software, lending software and Points of Sale (POS). The report also shows that after Brexit, Lithuania will be the first country in the EU in terms of issuing the most the most EMI (Electronic Money Institution), PI (Payment Institution) and SPB (Special Purpose Bank) licenses. Figure 7 shows the top 5 countries in the EU by number of licenses issued. The Bank of Lithuania has trademarked "Licensed in Lithuania" as a sign of quality. Despite the high number of licenses issued, licensing procedure is described as thorough by sources, taking up to six months (Koronka 2021).

Figure 6: Fintech Companies in Lithuania by their Core Business Activity (Invest Lithuania 2021)

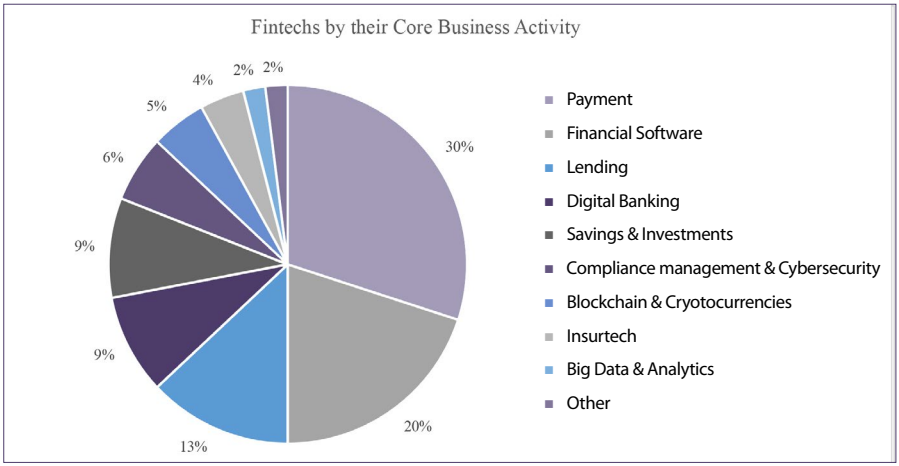
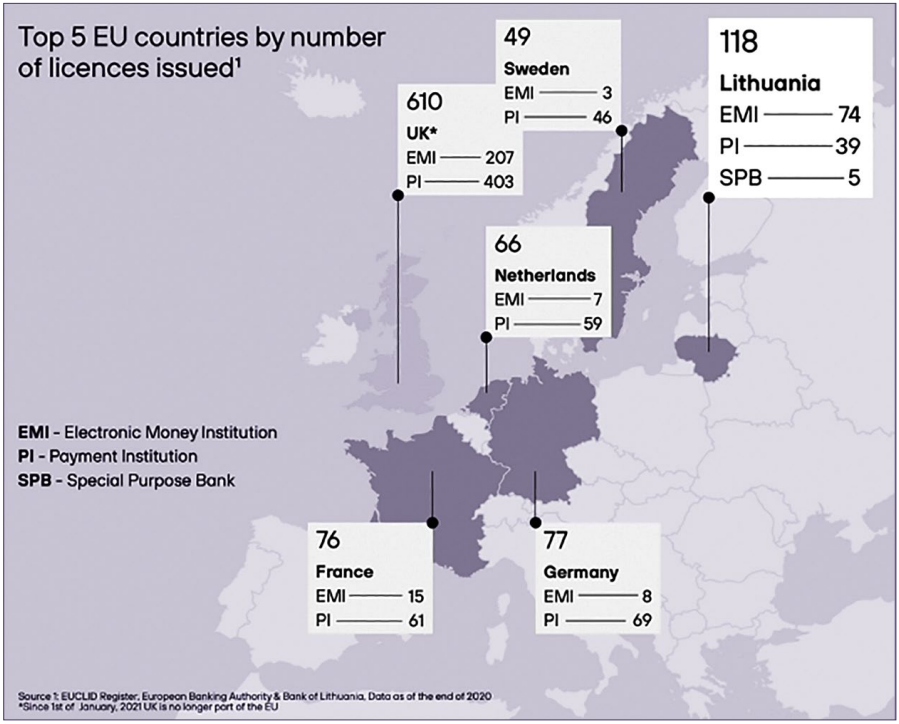


Figure 7: Top 5 EU Countries by number of licenses issued (Invest Lithuania 2021)



The Central Banking FinTech & RegTech Global Awards 2020 granted the Bank of Lithuania the Global Impact Award to recognize its efforts to adopt cutting edge technology, namely, artificial intelligence, cloud integration, promotion of FinTech and RegTech, new data applications, etc. The award committee mentioned the regulatory sandboxes, LBChain, CENTROlink payment system and advancements in the field of digital numismatics as some of the examples of the Bank's successful endeavors (Central Banking 2020). These initiatives are detailed one by one in the subsections below.

Regulatory Sandbox

Lithuania was the first in the region to launch a regulatory sandbox in 2018, a fintech-conducive regulatory and supervisory environment designed to foster innovation in the financial sector (Turp-Balazs 2020). Essentially, regulatory sandboxes in Lithuania are live, closed environments with real customers for tech companies to test their innovative services under the supervision of the Central Bank of Lithuania. This may include temporarily lifting some supervisory requirements, and is open to both, start-ups and already authorized financial institutions (Shah 2018). The 2018 Emerging Europe article quotes a bank statement, which says that this tool has been exceedingly useful in cases where the regulation needed for the innovative product/service is ambiguous or incomplete. The sandbox is there to foster close cooperation between regulators and innovators to design optimal regulatory framework that will identify possible risks and curb potential negative effects and shortcomings of the innovation. If testing proves the product/service successful, it can leave the sandbox borders and be applied for wider use. If the product/service owner is a start-up, they can proceed to apply for a relevant license. Admission of FinTech companies to the sandbox is application-based and rests on several criteria, including how innovative their proposed program/solution is and its benefits to the society (Bank of Lithuania 2018). The sandbox in Lithuania already tested a p2p insurance platform (Bank of Lithuania 2021) and a sustainability report prototype (Bank of Lithuania 2021).

LBChain – Blockchain Sandbox

The bank expanded the scope of the sandbox by introducing LBChain (LBChain 2020) in 2018 as well – the world's first blockchain sandbox developed by a financial market regulator that aims to serve the key needs of fintech start-ups by providing them with opportunities to study, research, test and adapt block-chain based services. Bank of Lithuania reports that the platform has already been used by 11 fintech companies from 8 different countries that tested 10 different financial products/services, including KYC (Know Your Customer) solution for AML (Anti-Money Laundering) compliance, cross-border payments, smart contract for factoring, mobile POS (Point of Sale) and payment card solution, unlisted share trading platform, payment token, etc. (Bank of Lithuania 2020). This way, by working together with fintech startups, Bank of Lithuania aims to accumulate competence and experience of blockchain technologies. According to the Observatory of Public Sector Innovation, the central goals of LBChain are to "accelerate the development and application of blockchain-based solutions in the financial sector and improve the quality of regulation in the financial

sector" (LBChain 2020). LBChain was created through pre-commercial procurement (PRP), which is a method where public institutions/procurers and product suppliers/ enterprises co-create together (European Comission 2021).

LBCOIN – Digital Collection Coin

Bank of Lithuania was also actively researching the prospect and technicalities of issuing a CBDC (Bank of Lithuania 2019). As part of the European Union monetary system, the Bank cannot issue a full CBDC on its own – this prerogative rests with the European Central Bank. However, on July 23, 2020, they were able to launch LBCOIN in a controlled sandbox experiment. LBCOIN is not a typical CBDC – it is essentially a collection coin for numismatic, rather than trading purposes. The Bank of Lithuania reports that the experiment provided a steep learning curve in terms of various legal, cybersecurity and technological matters relevant to the actual issuance of CBDC (Ledger Insights 2019). The bank dubbed the coin "the world's first blockchain-based digital collector coin" and noted on the website that "their use as a means of payment is not encouraged" (Bank of Lithuania 2021).

In total, the bank issued 24,000 LBCOINs, and set a price for a pack of six at 99 EUR. Each token features a portrait of one of the 20 signatories of Lithuania's declaration of independence of 1918. The tokens are divided into six categories according to the occupation of the signatories. A collector that acquires tokens from each of the six categories can exchange them for a physical silver coin (priced at a symbolic price of 19.18 EUR) (O'Neal 2020). This way Bank of Lithuania was able to gain practical hands-on experience in issuing a type of (in this case – numismatic) CBDC in a real environment. Forbes dubs it a "brilliant idea" that will guarantee Lithuania an active role in the process of creating a digital Euro when European Central Bank decides to do so (Brahathan 2021). These initiatives, the regulatory sandbox, the LBChain and LBCOIN are all efforts towards the strategic goal of the Bank of Lithuania to be innovative and fintech-oriented.

CENTROLink

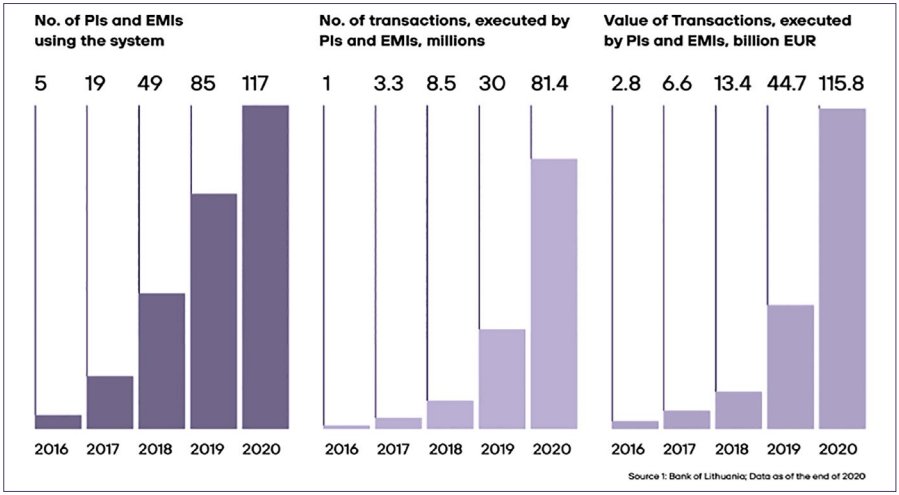
Another initiative that the Bank of Lithuania is applauded for is its unified payment system of CENTROLink. According to the Bank of Lithuania, CENTROLink is a local payment system that provides all types of payment service providers, such as banks, credit unions, e-money and payment institutions, a gateway to the Single Euro Payments Area (SEPA) (Bank of Lithuania 2020). The 2020-2021 report of Invest Lithuania, The Fintech Landscape in Lithuania, reports an impressive year-on-year growth in the number of active participants in the system, the total volume of transactions and the number of payments, as seen in Figure 8 on the next page.

FinTech Success Story: SME Finance (SME Finance n.d.)

SME Finance is a Lithuanian based fintech company that provides alternative financing opportunities to SMEs in the Baltic region. To address the limitations of the traditional banking sector, the company aims to provide fast and easily accessible financing solutions to SMEs in the region. Founded in 2016, SME Finance has already given EUR 750 mln. EUR in business loans, leasing and factoring services. According to them, despite the pandemic, their financing portfolio doubled, and they managed

to close the year 2020 with a 57% revenue increase from the previous year. They are marketing their services as easier, faster, and more flexible than that of banks. During the pandemic, the fintech also teamed up with INVEGA, distributing EUR 60 mln. in loans to Lithuanian businesses (SME Finance 2021).

Figure 8: CENTROLink in Numbers (Invest Lithuania 2021)



Government Support

Government operates a number of programs to increase access to finance to SMEs. The government agency responsible for the development of small and medium enterprises in the country is INVEGA. INVEGA has categorized its instruments into four categories given below (Invega 2021).

1. *Soft Loans*

a. **Alternative Lending for Businesses** – Loans of up to 500,000 EUR, of which 200,000 EUR or 90% of total loan is funded by INVEGA and issued by alternative finance providers that have signed a cooperation agreement with INVEGA.

b. **Crowdfunding Loans Avietė** – Small loans for SMEs granted through crowd funding platforms. Under this instrument, the state funding will cover 40% of the total loan (up to 10,000 EUR), the rest of the funds are to be provided by private investors registered on the crowdfunding platform.

c. **Entrepreneurship Promotion Fund 2014-2020 (EPF2)** – Micro loans financed by the European Social Fund (EPF2) to natural persons or micro and small start-up companies. Maximum loan amount is 25,000 EUR. The program stimulates credit unions because the loans are issued by credit unions. This means that to acquire this loan, the person must become a member of a credit union according to the Law on Credit Unions of the Republic of Lithuania.

d. **Open Credit Fund** - This instrument envisions financing loans of up to EUR 600,000 with favorable interest rates, provided that a credit institution contributes 25% to the total loan amount with own funds. These loans are issued by a few small banks operating in the country.

e. **Risk-shared Loans** - financed by the ERDF, aims at decreasing the financing costs of business entities. Under this instrument, 45% of the loan is granted at 0% interest rate, and the remaining 55% is given at the annual interest rate based on market conditions. These loans are issued by two commercial banks operating in the country.

2. Guarantees

a. **Guaranteed Leasing** – Leasing guarantees provided by INVEGA. The lessee pays a guarantee fee (fixed base + yearly accrued annual charge) to INVEGA for the issuance of the leasing guarantee.

i. **Portfolio Guarantees for Lease Transactions** – Another opportunity to acquire guarantees on lease transactions funded by the European Regional Development Fund (ERDF). The maximum guaranteed amount of a leasing transaction can be €1,875,000, for up to120 months.

b. **Individual Guarantees for Loans** – Individual guarantees provided by INVEGA for startups, SMEs and large companies. A borrower is charged a one-time guarantee fee for the issued guarantee.

i. **Portfolio Guarantees for Loans** – Another opportunity to acquire guarantees on loans funded by ERDF, credit guarantees of up to €1,875,000 per loan for up to 120 months for SMEs.

c. **Portfolio Guarantees for Factoring Transactions** – Guarantees to facilitate the financing of trade transactions for micro, small and medium-sized enterprises. A portfolio guarantee secures the repayment of 80 percent of the principal amount of the loan to a financial institution.

d. **Export Credit Guarantees** - provided by INVEGA, this instrument enables companies to expand their export markets in countries with non-marketable or temporarily non-marketable risks by covering up to 90% of actual losses when the buyer fails to pay. The amount of credit guarantees is capped at EUR 2 mln. per exporter. Exporter is charged a fee for this guarantee as well.

e. **Guarantees to Secure Fulfilment of Obligations of Travel Services Providers** – Guarantees provided by INVEGA to SMEs, large enterprises and entrepreneurs that hold valid travel services provider certificates granting them the right to engage in outbound and/or local tourism.

3. Global Grants

a. **Business Start-up Subsidies** - The recipients of soft loans under the financial instrument Entrepreneurship Promotion Fund 2014–2020 are also eligible for

compensation of labor costs for every employee working at least at the minimum wage. The fixed monthly rate of partial compensation of labor costs is set at EUR 498.48 and the maximum availability period is 12 months.

b. Partial Financing of Loan Interest - Compensation is provided for up to 95% of the paid interest, but no more than 7% of annual interest, for 36 months. But no more than 200,000 EUR per loan.

c. Promotion of Listing of Securities on the Stock Exchange - this measure aims to promote the development of capital markets in Lithuania. The instrument helps micro, small or medium-sized enterprises by offering them compensation for part of the costs of issuing shares/bonds in order to include these securities in the securities market regulated by the market operator AB Nasdaq Vilnius and the alternative securities market First North.

d. Partial Financing of Staff Training – grant of up to 4,500 EUR per enterprise for them to raise the qualifications of their employees. This instrument is to finance 70% of total training costs.

Covid Response

According to the 2021 OECD report ***An in-depth analysis of one year of SME and entrepreneurship policy responses to COVID-19***, the government initiated a EUR 5 bln. Support plan in March 2020 as a response to the Covid-19 pandemic. Some of the measures targeted towards SMEs were:

- Wage subsidies;
- Relief from import duties and VAT exemption on importation granted for goods needed to combat the effects of the COVID-19 outbreak;
- Possibility for business customers to defer or pay in instalments to the public provider of electricity and gas.
- INVEGA added the following loan programs:
    - Direct Covid-19 Loans
    - Loans for Providers of Accommodation and Catering Services
    - Loans for Travel Service Providers
    - Loans for Invoices Payable
    - Loans to Businesses Most Affected by Covid-19
- In addition to the loans, the following two initiatives were introduced through INVEGA's grants division:
    - Compensation of COVID-19 Testing for Employees
    - Partial Compensation of Lease Payments for Businesses Most Affected by Covid-19

CASE 2: POLAND

The second country studied in detail for the purpose of this research is Poland. While Western European countries continue to dominate the global factoring market reporting volumes of more than 15% of GDP in 2020 (EU Federation 2020), data shows that this tool is unexplored and underutilized in most Eastern European countries. In Eastern Europe, Poland leads statistics in terms of the total factoring volumes in the last several years by a large margin. In this section the paper explores how this source of finance gained popularity in Poland, and what other sources of funds SMEs turn to when in need.

SME Landscape

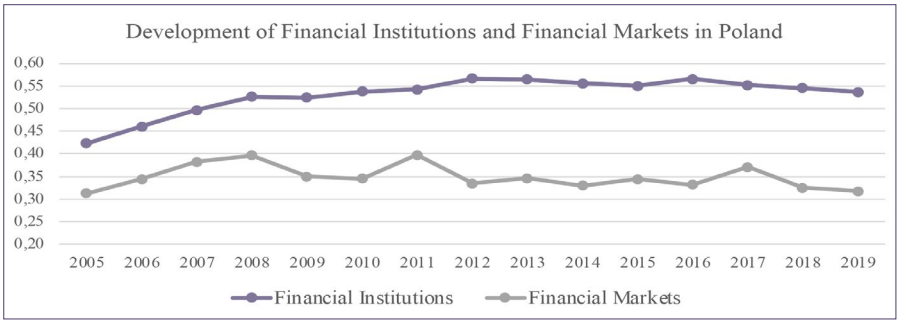
Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard (OECDiLibraly 2020) reports that in 2017, SMEs accounted for 99.8% of all enterprises, 68.3% of national employment and 55.6% of value added in the total economy. Out of 6.7 million people employed by SMEs, 3.99 million, which is almost 60%, are in micro enterprises. The data reported in the Scoreboard shows that the share of SME loans in total loans has been decreasing from 2012 from 60.12% to 53.7% in 2018. This means that, proportionally, more loans have been going to large firms than SMEs during this period. It is also noticeable that SMEs in Poland increasingly turn to alternative sources of finance. The Scoreboard also reports a rejection rate of SME loan applications of 31.78% in 2017.

Traditional Lending

According to the National Bank of Poland, at the end of 2019 (Narodowy Bank Polski 2020), the domestic financial system assets to GDP ratio amounted to 124.5%, with banking sector being the largest part of the system (bank assets were the equivalent of 87% of GDP). The difference between the development of a banking sector and financial markets is also evident from IMF's financial development indicators[18] presented on the figure below. What's more, the gap between these two in widening in the recent years.

[18] These are normalized indicators derived from the assessments of depth, access, and efficiency of both Financial Markets, and Financial Institutions.

Figure 9: Development of financial Institutions and Financial markets in Poland[19]



Banks in Poland vary in terms of ownership and legal form. As of 2019 there were 30 commercial banks, 32 branches of credit institutions and 538 cooperative banks (Small local banks with a limited capabilities). State owns two major banks, controlling about 40% of the market. In recent years the government took steps to reduce the foreign ownership of the banks resulting in reduction of the share of the foreign capital in banking sectors from around 60% in 2018 to 46.3%. the remaining 13.7% of the assets is controlled by polish private capital (Polish Financial Supervision Authority 2020). Loans issues domestic banks to national economy amounted 48.2% of GDP in 2019.

Together with traditional banking services, state owned bank - Bank Gospodarstwa Krajowego (BKG) is also tasked by the government to administer state support programs and manage EU funds granted to Poland. They provide services like supporting homeowners' mortgages, providing guarantees for export companies, issues bonds to finance large infrastructure projects for the government. Being the part of the Polish Development fund the banks plays important role in execution of the Responsible Development Strategy approved by the government in 2016 to support industry innovation and export. They also provide credit guarantees to SMEs (Poland - Country Commercial Guide 2021).

When it comes to the capital markets in 2020 Poland has 782 listed domestic companies with total capitalization of USD 177.5 bln. amounting 14% of GDP (up from 8.5% in 2019) (The World Bank 2021). To further facilitate local capital market development the government has adopted the Capital Market Development Strategy in 2019. The main recommendation were targeted to lift the barriers of development of capital markets and included avoiding gold-plating, implementing single banking licence, develop repo transaction cleared by Central counterparty, introduction of tax incentives for investors and issuers and preparing the Financial Education Strategy.

[19] IMF Financial Development Indicators

Non-Traditional Lending

As mentioned, banks are the major players in the Polish financial system, but in recent years alternative financial institutions are also developing. Insurance companies (6.8% share in assets), Investment funds (10.7% share in assets), open pension funds (5.5% share in assets), leasing companies (5.2% share in assets), factoring entities (1% share in assets)[20] all play increasing role in the country's financial system and provide alternative ways of finance for SMEs. In particular, 39% of SMEs used leasing services in 2019 and only 36% of them think that leasing is not relevant financial method for their business activities. In the same period 35% of SMEs used trade credit, 12% used own fund, 8%-factoring, 1%- equity financing, 0.2%- crowd funding.[21]

Asset-based Finance

Factoring

The phenomenon of payment gridlocks in the Polish economy, which arises when companies delay payments to suppliers, are credited as a precondition for the development of factoring in Poland[22]. According to the Polish Factoring Association, the factoring market in Poland shows on average 18% year-on-year growth. The National Statistics office of Poland reports that in 2020, factoring services were used by 21,331 clients: 26.9% of them from trade industry, 23.7% from transport, 19.7% from manufacturing, and 10.4% from the services sector. The figure below shows data from the EU Federation for Factoring and Commercial Finance and indicates a clear growing trend in annual total factoring volume. In particular, in 2020, factoring volumes reached about USD 62 bln. and 12.1% of GDP. The volume decreased by about 2% compared to 2019 due to reduced economic activities during the pandemic, but the actual number of invoices handled by factoring service providers have gone up from 13.6 million to 14 million. Overall, trend on the graph shows that factoring becomes increasingly popular means of financing in Poland and the share of factoring volume in GDP is increasing rapidly, catching up with the figures recorded by Western European countries.

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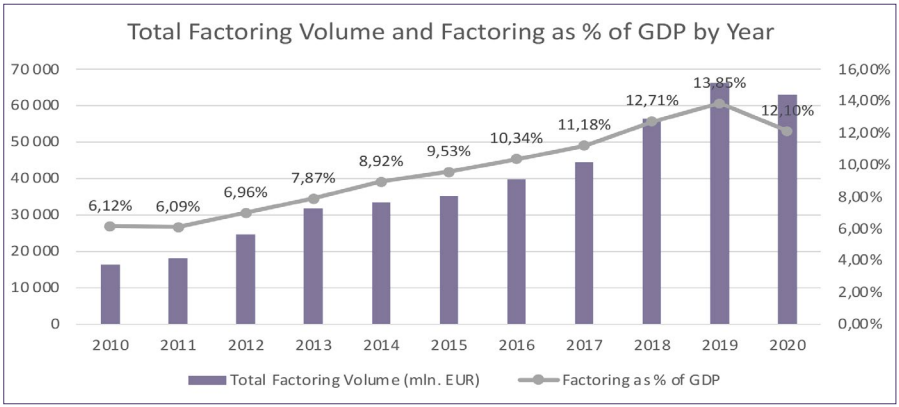
[20] Since the banks are also providing factoring services share of the factoring entities in assets is smaller than the factoring volume share in GDP. Detailed analysis is presented in the following section.

[21] National Bank of Poland.

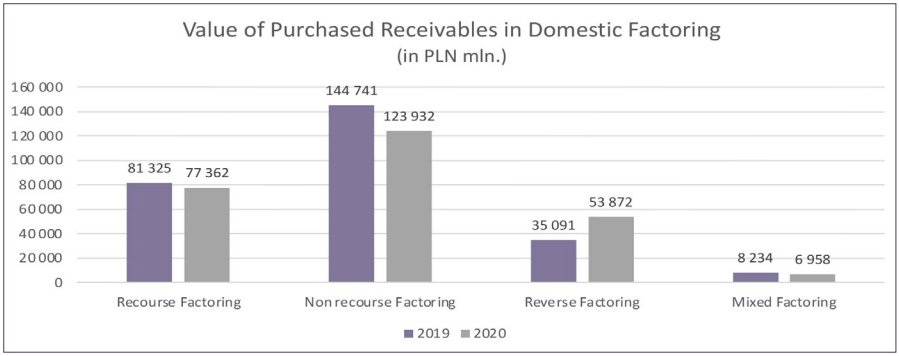
[22] Kreczmańska-Gigol, K., 2015b. Faktoring jako instrument zarządzania płynnością. In: Płynność finansowa przedsiębiorstwa. Istota, pomiar, zarządzanie. Ed. K. Kreczmańska-Gigol. Difin, Warszawa.

Figure 10: Total Factoring Volume by year[23]



As depicted on the graph below, in Poland the most popular type of factoring was non-recourse factoring with the share of 47.3% in total factoring volume, followed by recourse factoring at 29.5%. In recent years reverse factoring has been gaining momentum on the market, reaching 20.6% of market share in 2020. Main source of the growth is that clients increasingly prefer reverse factoring over non-recourse factoring. Other types of factoring (mixed factoring) have a relatively modest market share of 2.7% (Statistics Poland 2021).

Figure 11: Value of purchased receivables in domestic factoring (mln. PLN) (Statistics Poland 2021)



A notable aspect of the Polish factoring market is that its supply side is quite diversified and not dominated by commercial banks. In 2020, out of the 52 financial entities providing factoring services, 43 were non-bank organizations specializing in factoring services. The remaining 9 were trade finance departments of commercial

[23] Total Factoring Volume – data, EU Federation for the Factoring and Commercial Finance.

banks (Polish Factoring Association 2019). As presented in the table (Table 5) below, non-banking institutions are dominating the market by both, the number of clients and the number of invoices purchased with the shares of 86.4% and 85.2%, respectively. The number of clients and number of invoices processed using recourse factoring outperforms the numbers on non-recourse factoring.

Table 5: Number of invoices purchased and number of clients (factoring agents) using factoring during 2020

	Number on invoices			Number of clients		
	Total	Non-banking factoring enterprises	Banks	Total	Non-banking factoring enterprises	Banks
Total	14,021	11,951	2,070	21,331	18,424	2,907
National factoring, of which:	12,825	10,935	1,890	19,433	16,925	2,508
Recourse	6,814	6,214	599	13,703	12,673	1,030
Non-recourse	4,663	3,896	767	4,019	3,362	657
International factoring	1,196	1,016	180	1,898	1,499	399

However, as shown in the table below (Table 6), in terms of the value of invoices, non-recourse factoring is dominating the market. The tendency indicates that small invoice clients are assuming the rink of default of the debtor, while clients with large invoices prefer to levy the risk on the factor and pay a higher price.

Table 6: Value of debts purchased during 2020 (mln. PLN)

	Total	Non-banking factoring enterprises	Banks
Total	311,343	246,288	65,055
National factoring, of which:	262,126	205,928	56,199
Recourse	77,362	64,204	13,159
Non-recourse	123,932	102,244	21,688
International factoring	49,217	40,360	8,857

EU integration was of great importance for the development of the factoring market in Poland. The increase in turnover in foreign trade transactions is often hampered by delays in the repayment of foreign liabilities. Legal and linguistic barriers make domestic entrepreneurs face many obstacles when trying to enter foreign markets. The use of factoring turns out to be helpful in solving such problems. Factoring Institutions have better information resources about foreign recipients. They can be an important link in reducing the risk that accompanies the provision of trade credit in international transactions.

Factoring in Poland is only regulated by the Civil Code of Poland, according to which no licensing is required to provide the service. In other words, factors in Poland do not need a special permission to operate, and there are no minimum capital requirements for companies or natural persons to provide the service (European Bank 2018). To promote the development of the factoring services, Polish Factoring Association was founded in 2001. The mandate of the association is to ensure the cooperation among the members and cooperate/collaborate with the government to promote the factoring services (Polish Factors Association 2021).

One of the biggest obstacles for the factoring market was related to tax deductibles. Until February 2021, there was no uniform approach on how the taxpayer should recognize tax-deductible costs on factoring transactions. The ambiguity was resolved by the ruling of the minister of Finance explicitly stating how tax-deductible costs are calculated in this situation and shows how to calculate those cost (WTS 2021). Another supporting mechanism of the factoring services introduced recently by the government is Guarantees of Factoring Limit Repayment which was approved under a state aid program to support companies affected by the pandemic. EUR 2.6 bln. have been allocated for this program and it will be implemented by Bank Gospodarstwa Krajowego (BGK). (Europian Comission 2021) The scheme covers recourse as well as reverse factoring, up to 80% of the limit (Polish Development Fund Group 2021).

According to Kreczmańska-Gigol, K., 2015b, there are remaining issues which needs to be resolved to further promote the development of the service. One of these is the lack of a legal regulation of the factoring institution. During the implementation of the factoring agreement, the parties may sometimes interpret their rights and obligations differently. In case of conflict, there is high probability of a lengthy lawsuit which causes several problems for the factoring institution. Another barrier is the lack of awareness among enterprises about the actual costs of the factoring service. Giving the price to the customer without showing its components means that he is not aware of what he is paying for. Comparing the price of factoring, which can simultaneously perform a financial, security and administrative function, with the prices of services, which are only one of these functions, is to the disadvantage of factoring. In addition, civil code obliges the seller to notify the debtor about the transfer of the receivable which creates hesitance from the seller. They do not want to be perceived as having the financial issues. Furthermore, Polish law does not allow for a global transfer. Instead, it requires

from the seller and factor that each receivable to be properly identified. The process requires the disclosure of the information for third party which creates data protection issues especially when the debtor is the natural person (Sawicki 2013).

Leasing

According to Statistics Poland, in 2020 there were 82 enterprises in the country conducting leasing activities. In 2020, about 560 thousand new lease agreements with a total volume of PLN 50.2 bln. was processed by these companies. Compared to 2019, total leasing volume shrunk by 18.2% from PLN 61.5 bln. in 2020. It is noteworthy that the total leasing volume was more than 6 times smaller compared to total factoring volume in 2020. Main subject of the lease contracts was road transport amounting 69.4% of the total value. Out of these, 61.4% were passenger cars and 16.2% were trucks and vans. Manufacturing machinery and equipment was the second largest category in leasing contracts with a share of 25.3%, out of which 21.1% were construction equipment, 10.6% - agricultural machinery (Statistics Poland 2021).

Figure 12: General information about enterprises and their leasing activities (Statistics Poland 2021)

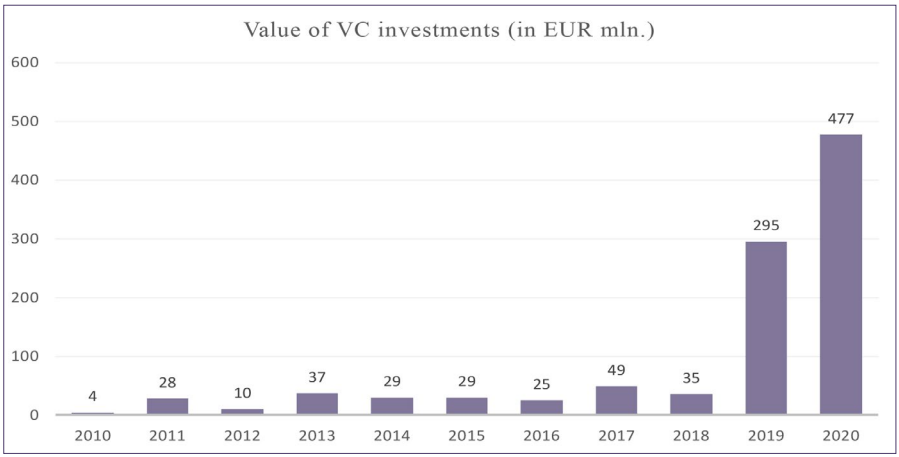
	2019	2020
The number of entities	83	82
leasing activity was the only type/dominant type of activity	57	57
Number of clients	443,952	442,373
Number of new contracts concluded	608,833	559,952
Number of assets/items leased	719,329	654,318
Value of assets/items leased in PLN mln.	61,495	50,191

Equity-based Finance

Venture Capital

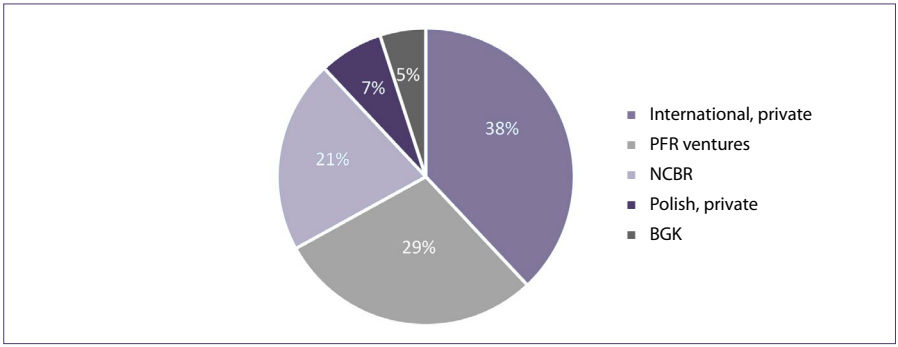
2020 was a record year for Venture Capital funding in Poland. As depicted on the graph below (Figure 13), polish startups managed to attract EUR 477 mln., up by 60% compared to 2019, which was also a record year. More than 50% of the total VC capital was attracted by five largest raisers.

Figure 13: Value of Venture Capital investments (in EUR mln.) (PFR Ventures 2021)



Government plays an important role in the success of VC capital flow. The special agency PRF Ventures was established to support the development and creation of a VC market. The agency manages polish government and EU funds and invests in the projects through 50 funds making decisions about investment. Combined they already have more than 300 projects in the portfolio. From the government side BGK and the National Center for Research and Development (NCBR) are important sources of Venture Capital. As shown on the graph government entities provide 55% of VC funds (NCBR, BGK and PFR Ventures), international private entities provide 38%, and local private entities account for the remaining 7%.

Figure 14: Sources of Capital 2020 (PFR Ventures 2021)



Financial Technologies

Digital payments are quickly gaining popularity in Poland. In 2017 82% of adults used digital payment compared to 63% in 2014. In addition, there is internet connectivity with 84% of the households connected to the internet. Also, number of smartphone

users is increasing. This is the group which are more likely to use an internet service. Number of cashless transactions is also on the rise. All this creates good conditions for the development of fintech services. As a result, Poland is the biggest fintech market in Central and Eastern Europe, with an estimated value of EUR 856 mln. (Microfinance Centre 2019). There are around 190 financial innovation businesses operating in Poland.[24] Domain of electronic payments and financial platforms, financing, and financial management (personal and business finance) are two most dominant directions for fintech companies. The strength of the Polish market is the size of the economy which is 8th in EU and the experience with software solutions.

Experts fear that the digital maturity of Polish banks and their own innovations could limit the development of non-bank fintech services. However, several banks already cooperate with fintech's in various ways, and with the current status in Poland banks see fintech companies as supplements and not competitors since these companies concentrate more on non bankable segment and also create new services to existing bank clients.

One of Poland's weaknesses is the regulations which mainly takes into consideration large financial institutions and do not focus on small service providers. To address these issues the supervisory authority has initiated several steps including creation of Fintech Working Group, regulatory sandbox project, and innovation hub at the national bank of Poland.

Government Policy Response

The Polish Development Fund Group (PFR) comprises financial and advisory institutions through which the government is providing different services and support program to entrepreneurs. The group members are **The Polish Agency for Enterprise Development (PARP)** (Polish Agency for Enterprise Developmen 2021), **Polish investment and Trade Agency, KUKE finance** (providing factoring services in all available form) **Polish state development Banks and so on**. These agencies are responsible for the effective implementation of state policies that promote entrepreneurship innovation and human capital development. Below are programs listed to help SMEs access financial resources:

Anti-crisis measures

1. **Working Capital Loan** – To help companies finance working capital deficit government introduces the mechanism with preferential loan terms. The loan amount under the project can be from PLN 0.8 mln. to PLN 5 mln. for up to 6 years with a grace period of up to 15 months. Companies also had the opportunity to use the same conditions for the Loan to Fund a Payment of Remunerations in the SME Sector.
2. **Operational Lease** – Extended grace period in repayment for the leasing.

[24] Polish Fintech Map

3. **Guarantee of Factoring Limit Repayment** (Polish Development Fund Group 2021) – Launched in 2020 as a response to the pandemic, this guarantee serves as a security for the repayment of the factoring limit granted by the factor. The guarantee covers 80% of the limit for up to 24 months, for a maximum amount of PLN 200 mln. The commission fee for this instrument is ranges from 0.25% to 1.15% of the limit amount.

4. **Liquidity Guarantee Programs** (Gryniuk 2021) – also launched by the BGK in response of Covid-19. Liquidity Guarantee Program is funded by the Liquidity Guarantee Fund.

5. **Emended De Minimis Guarantee Scheme for SME**s – This program was launched in 2013 by the state-owned development bank Bank Gospodarstwa Krajowego (BGK). Under this program, SMEs could apply for guarantees of around 80% of the total credit amount (increased form 60%), capped at PLN 3.5 mln., at a cost 0% (decreased from 0.5%) per year (was terminated in 2021).

Other supporting measures

1. **Cosme Scheme** – Funded by an EU Cohesion Fund, this instrument gives SMEs an opportunity to apply for guarantees covering up to 80% of the loan, capped at PLN 600,000, at a cost of 1% per year.

2. **Acceleration Programs** – Maximum amount of funds available per entrepreneur is PLN 250,000 (approx. EUR 55,500) with 0% own contribution. The project value is PLN 130 mln. (approx. EUR 28.8 mln.) and is aimed at micro and small enterprises. Currently the market counts 10 program operators.

3. **Poland Prize** – This program invites foreign startups to launch their business activities in Poland. The package includes a grant of PLN 300,000 (approx. EUR 66,000) and assistance in all moving-related administrative procedures. The participants in the program are chosen through an application process run by several selected operators.

4. **Scale Up – Start in Poland** – Run by 10 program operators (accelerators), this program connects large businesses with SMEs so that SMEs can gain business contacts and access technical resources of large enterprises. This program aims to speed up the development of startups.

5. **Start-Up Platforms** – This instrument is for people under 35 with ideas for innovative products/services. Experts of one of three implementing start-up platforms develop incubation plan for the business idea. After its implementation, if successful, entrepreneurs can apply for a grant of up to PLN 1 mln. (approx. EUR 221,000). Amount of applicable grant is determined individually.

6. **Pro-Innovative Services for Business Support Organizations for SME**s – gives entrepreneurs a chance to apply for co-financing through Business

Support Organizations, for example, innovation and technology transfer centers, technology incubators and technology and science parks. The maximum amount of co-financing is PLN 700,000 (around EUR 155,200), with a contribution of at least 30% of the entrepreneur.

7. **Innovation Vouchers for SME**s – With a maximum financing of PLN 340,000 (approx. EUR 75,400) and a contribution of the entrepreneur of at least 15%, the entrepreneur can purchase R&D services developed by research and scientific units for their company. This instrument aims to foster the development of cooperation between companies and research units.
8. **Support for SMEs in Accessing the Capital Markets – 4 Stock** – This instrument is meant to finance the costly preparations of entering the stock market. Maximum financing amount is capped at PLN 800,000 (approx. EUR 177,400) with own contribution of 50%. Funds can be used to prepare necessary documentation, purchase professional advisory assistance, and to obtain a professional risk assessment (rating) to increase the credibility of the company.
9. **Database of Development Services** - available at uslugirozwojowe.parp.gov.pl, the portal contains a wide and comprehensive catalogue of training courses, postgraduate studies, and counselling (coaching, mentoring) to help employees and employers develop skills and retrain.
10. **The Innovative Economy Scheme** – replaced by Smart Growth Scheme in 2017 and also funded by an EU Cohesion Fund, this instrument also offers free guarantees of up to 80% of the credit amount, capped at EUR 2.5 mln.
11. **Wsparcie w starcie** – Launched in 2013 by the Ministry of Family, Labor and Social Policy and the government-owned Bank Gospodarstwa Krajowego, this scheme offers low-interest rate (25% of the discount rate of the National Bank of Poland) loans to unemployed recent graduates or final year students starting up new businesses, with a maximum amount of 20 times the national average salary.
12. **Social Insurance Exemption/Reduction** – persons that are the sole owners of a business and have a monthly income that does not exceed 2.5 times the minimum wage are eligible to apply for a reduction of social insurance payment. For the first 6 months of economic activity, they are exempted from these payments altogether.

CASE 3: ISRAEL

Israel has seen some remarkable developments in the past few decades and was given the nickname "start-up nation" for its unique entrepreneurial ecosystem. Before Covid, the country was characterized with low unemployment level and rising standards of living, approaching OECD averages (OECD, OECD Economic Surveys: Israel 2020 2020). However, although Covid has been a major shock to the Israeli economy, it also acted as an added momentum to the high-tech companies and further fueled already well-performing high-tech start-ups by increasing the demand for tech solutions.

SME landscape

According to the Small and Medium Business Agency (SMBA) of Israel, the majority of companies in Israel are SMEs that constituted 99.5% of all businesses in the country in 2017.

The table below summarizes the number of businesses by size and by their share in employment. It is evident that SMEs play a key role in the economy and contribute 60.8% in total business employment (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020).

Table 7: Firms in Israel, 2017

Sector	# of businesses	% of businesses	# of employees	% of employees
Self-employed	286,805	51.3%	286,805	9.2%
Micro (1-4 employees)	186,550	33.4%	349,761	11.3%
Small (5-19 employees)	65,544	11.7%	578,157	18.6%
Medium (22-99 employees)	17,309	3.1%	670,642	21.6%
Large (100+ employees)	3,032	0.5%	1,216,162	39.2%
Total	559,240	100%	3,101,527	100%

Source: (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020)

However, a key feature of the Israeli business landscape is that the country has a relatively high share of young enterprises. Israel has a strong entrepreneurial culture and boasts the highest business birth rate among the OECD countries. Young enterprises (up to two years old) make up around 30% of all businesses. Moreover, young enterprises contribute around 12.2% of total employment – the highest in OECD countries (Bianchini and Kwon 2020).

Traditional lending

More than 96% of credit in Israel comes from 5 major Israeli banking groups that in general account for almost 99% of all banking activities in the country. Five major banks are Bank Leumi, Bank Hapoalim, Israel Discount Bank, Bank Mizrahi-Tefahot and First International Bank. They are commonly referred to as the five major banking groups and own more than 96.7% of the system assets. The table below shows the breakdown of shares owned by each of the banks.

Table 8: Structure of the banking system in Israel, June 2020, Balance sheet data

Bank	Assets, %	Credit, %
Bank Leumi	28.7	25.8
Bank Hapoalim	27.7	26.8
Israeli Discount Bank	15.6	16.7
Bank Mizrahi-Tefahot	16.2	19.4
First International Bank of Israel	8.5	8.0
Total of the five banking groups	**96.7**	**96.7**
Other banks	3.3	3.3
Total	**100**	**100**

Source: Banking Supervision Department of Bank of Israel (BoI 2021).

In addition to domestic banks, there are 5 foreign banks operating in the country (BARCLAYS BANK PLC, Citibank, HSBC Bank, STATE BANK OF INDIA), however, their effect on the Israeli banking system is minimal.[25]

Banks in Israel offer a wide range of services to SMEs. 80% of funds for SMEs comes from bank credit, making it the primary source of funding in Israel. Until 2016, each bank in Israel had its own definitions of business types and sizes. In 2016, the Central Bank of Israel adopted a universal definition that all banks adopted and solved data aggregation related issues.

The estimated[26] interest rate for SMEs stands at around 4.06%. It is the highest for small business at around 4.37%.

[25] A complete list of Supervised Banking Corporations and Credit Card Companies in Israel can be found at: https://www.boi.org.il/en/BankingSupervision/Data/Pages/tbanks.aspx

[26] Interest rates are not officially published but can be estimated from the financial statements.

Non-Traditional Lending

Asset-based finance

Leasing

Leasing in Israel mainly supports the automobile sector. Around 24.4% of new cars and 7.6% of all cars were owned by leasing companies in 2018, and 23.1% and 7.4% in 2017 respectively, indicating a growing trend (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020).

Factoring

According to OECD, there are 6 companies that offer factoring services to SMEs in Israel. Estimated total funds provided by non-banking companies to SMEs is around NIS 6 bln. (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020).

Equity-based finance

Venture Capital

The venture capital market in Israel is in its 4th decade of development. From 1990s Israel managed to grow the market to over 300 VC firms.

In general, Israeli VC companies can be divided into 4 categories:

1. Earlier VCs – first comers on Israeli VC space
2. Newer VCs
3. Crowdfunding – a new model for VCs
4. International VCs[27]

The largest VC firms in Israel include Pitango, that manages assets worth USD 2.3 bln., and 83 North, with managed assets of USD 1.8 bln. (see the table below). However, in addition to the Israeli VC firms, some of the top international VCs are also active on the market, such as Battery Ventures Israel, Blumberg Capital Israel, Canaan Partners Israel, etc. (secrettelaviv 2020).

Table 9: Israeli Venture Capital

Name	Founded	Managed Assets	Investment Range	Stages
Pitango	1/1993	$2.3B	$500K-$10M	Seed, A, B, C, Late Stage
Vertex Ventures Israel	1997	$1.2B	$1M-$8M	Seed, A, B
83 North	7/2006	$1.8B	n/a	Seed, A, B, C, Late Stage

[27] High resolution map of the Israel funding ecosystem as of 2020 can be found at: https://www.cardumencapital.com/israel-funding-ecosystem

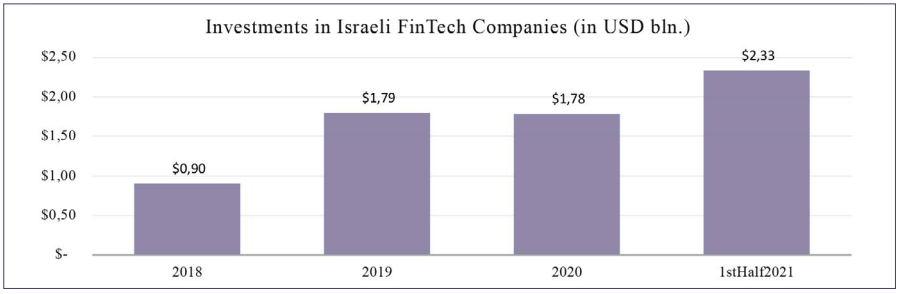
Jerusalem Venture Partners	1993	$1.4B	n/a	Pre-Seed, Seed, A, B, C
Viola Ventures	2000	$1.3B	$2M-$10M	Pre-Seed, Seed, A, B
Magma Venture Partners	1/1999	$450M	$500K-$6M	Pre-Seed, Seed, A

Source: Start-up Nation Central Finder. (Start-up Nation Finder 2021)

VC market in Israel started growing in the 1990s. Some of the early companies are still on the market today. The early success of VCs is associated with a rare example of a successful government intervention. In the early 90s, the government of Israel established Yozma Group with a starting capital of USD 100 mln. Today, Yozma Group is recognized as the 'founder of Israel's VC industry' (Yozma Group 2021). Yozma Group was also involved in the creation of other successful VCs in the 90s, and contributed significantly to increasing the access to equity-based finance for SMEs (Wyler 2021).

Solid foundation laid down in 90s led to the success of Israel's VC industry in the past decade. High-tech industry attracts most of the VC investment. In 2020, venture capital firms contributed to 88% of source of capital to the Israeli tech sector (Wyler 2021). According to the Start-up Nation Central, VC funding reached USD 2.3 bln. in the first half of 2021, exceeding the 2020 full year total by 28% (StartUp Nation Central 2021). VC investments in fintech reached 19% of the USD 12.2 bln. invested in technology companies in the first six months of 2021.

Figure 15: Investments in Israeli Fintech companies, billion USD



Source: Start-up Nation Central

It can be argued that the remarkable success of the industry was due to an increased demand for tech solutions brought about by the Covid pandemic. Notably, demand has been sharply rising for payments solutions as well. Accounting for 35% of FinTech funding, payments solutions became the largest subsector of the high-tech industry.

Other popular sub-sectors of FinTech for VC firms are cybersecurity and InsurTech (Start Up Nation Central 2021). Together with payments solutions, these three account for around 70% of FinTech funding in the last two years. The same is true for

2021, when companies like Rapyd (facilitates multi-currency payments) raised USD 300 mln.; Forter (fraud prevention) raised USD 300 mln.; and Melio (payment platform) raised USD 110 mln. (Tress 2021).

Equity Crowdfunding

Crowdfunding landscape in Israel is mainly dominated by equity Crowd Funding Platforms (CFP), because of a limited scalability potential of the country of 9.3 million people.[28]

The first CFP was established in 2013 by OurCrowd. Since then, it has managed to raise over USD 120 mln. for more than 60 companies in a wide range of sectors: agriculture, consumer goods and services, cybersecurity, energy, enterprise, FinTech, healthcare, mobility, and more. OurCrowd raises funds from qualified investors only and operates as a venture capital fund as well.

There are other types of CFPs too in Israel, like ExitValley - founded in 2014. They have managed to raise more than USD 20 mln. for about 50 companies. ExitValley charges startups an administration fee of approximately USD 4,300) + VAT upfront and 10% + VAT of the total fundraising amount. ExitValley reveals the offer to only 35 investors, so it isn't fully publicized (Efrat, Gilboa and Berliner 2020).

Another type of equity CFP was introduced in 2017, where shares of equity can be offered publicly. This was enabled by the Israel Securities Authority that added amendment to mass financing regulations, providing SMEs an additional channel to raise funds through mass financing platforms (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020).

Following the model, PipelBiz has successfully managed to raise USD 17 mln. for more than 42 companies from 7,766 individual investors. Thus, this model enables all the Israelis to finance SMEs through crowdfunding platforms (Efrat, Gilboa and Berliner 2020).

Other notable CFPs are iAngels (founded in 2013, Angel/VC firm for early-stage, Round A and B startups) and InvestiNation (founded in November of 2020, the newest CFP on the market is interested in just about any kind of tech) (Perception Box 2021).

Financial Technologies

The financial ecosystem of Israel has all the building blocks for adopting financial technologies, improving the existing financial services, and offering new products at more competitive rates to customers (Ben-David 2021).

The coalition of the Prime Minister Naftali Bennett has proposed reforms related to open banking to Knesset as part of the Economic Arrangements Bill (Ministry of Finance of Israel 2020). If it is passed as a law at the end of 2021, Arrangements Bill will support the increase of competition in the financial sector and ease existing tight regulations. This will allow non-bank organizations to enter the competition and offer financial services at competitive rates (Ben-David 2021).

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[28] Although, there are non-equity crowdfunding sites, most notably Headstart.

Two proposals have been approved in 2021. The first one is 'a unique regulatory sandbox' that will allow regulators to monitor activities of FinTech companies. The second proposal allows for the exchange of information about the customer based on the customer consent (Ben-David 2021). The latter practice, enabling the exchange of information, is commonly referred to as open banking.

Open Banking

Bank of Israel has published the guidelines on the 'Implementation of Open Banking' in 2019 (Bank of Israel 2019). At the same time banks are building the infrastructure to enable the sharing of information through Application Programming Interfaces (APIs).

The guidelines state that third-party access to data will occur in stages. From April 2021, data about account balances and transactions will be shared. Next stage grants access to card transactions, enabling initiating payments from the customer's bank account. At the final stage, which will take effect in 2022, data about credit and loans, deposits, and securities becomes accessible (Ben-David 2021).

Digital Bank

Israeli traditional banking landscape had been unchanged from 1978 until 2019 when the Bank of Israel has granted the license to the new bank – the First Digital Bank. The bank operates online, without any branches or physical establishments (Shai and Shiri 2020).

The aim of the First Digital Bank (FDB) is to 'serve as an alternative to traditional banks' and do it 100% online. The owner of the FDB is Professor Amnon Shashua who famously sold Mobileye to Intel for USD 15 bln.

According to the FDB, they offer all the traditional services banks offer, but what makes them different is that they do not have to fund all the branches, outdated computational systems and operational models through interests and fees. The main advantage of the digital bank is their cost effective and high-tech process. The bank envisions to deploy artificial intelligence in their service to offer clients the best experience, help them find best solutions to their problems, and better save money. The key is that the system will learn the needs of the customers based on their financial behavior and will forecast their future needs (First Digital Bank 2021).

Central Credit Database

In April 2019, Central Credit Database was launched in Israel. The database works for households as well as SMEs. The primary goal of the Database is to improve competition and data accessibility (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020).

Blockchain

Israel provides a fertile ground for the growth and development of the blockchain industry. The country offers financial opportunities through a combination of VCs, private funds, personal funds, public bodies, and traditional financial institutions (Bianchini and Kwon 2020).

The rapid growth in the blockchain industry was backed by the Initial Coin Offerings (ICOs). ICOs enable SMEs to get funding from nontraditional sources and can be viewed as one of the most renowned applications of blockchain technology in finance.

ICOs where especially popular in 2017-18. Since then, they saw a steady decline worldwide, as well as in Israel, and gave way to the rise of STOs and SAFTs.

STOs can be viewed as ICOs that fall under the regulations and taxation, thus making the issue of tokens a security event, similarly to the issue of the traditional securities.

SAFTs ensures the conversion of the assets of the investor into the tokens once the company issues them.

Thus, it is evident that blockchain industry is going to the more traditional pattern of raising funds as ICOs give way to STOs and SAFTs. However, these instruments still have underlying blockchain based technology, which makes blockchain important and increasingly significant in accessing finance for SMEs (Bianchini and Kwon 2020).

Government support

There are a few government bodies and non-governmental organizations that are laying the legislative and financial foundation for SMEs in Israel.

SME policies are designed by the Ministry of Economy and Industry. It is implemented through Israel Innovation Authority (IIA) and the Small and Medium Business Agency (SMBA). IAA focuses on the tech-based start-ups, while SMBA aims to support all SMEs by providing programs such as business trainings and subsidies (OECD, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard 2020).

IIA is an independent, publicly funded agency that is helping early-stage entrepreneurs and is headed by chief scientists. IIA offers a wide range of programs through 6 divisions (The Israel Innovation Authority 2021):

- Startup Division
- Growth Division
- Technological Infrastructure
- International Collaboration
- Advanced Manufacturing
- Societal Challenges

It can be argued that behind the success of VC in Israel is the fact that the country facilitates the access to data on innovative enterprises. It happens through the Start-up Nation Central (SNC) (Start Up National Central 2021). The SNC provides information through the Start-Up Nation Finder (Start-up Nation Finder 2021). The independent non-profit SNC collects data directly from entrepreneurs that have a clear incentive to join the platform where they can find investors.

As for the getting funds from public, any offer of securities must be approved by the Israeli Securities Authority (ISA) (Israel Security Authority 2021). However, there are 3 exemptions to the rule. The offering does not fall under the regulations if no more than 35 individual investors are included, if the securities are offered to sophisticated investors, such as banks, mutual funds and so on, and if the offering is made to high-net-worth individuals.[29]

Covid response

Although COVID is threatening some of the progress Israel has made, the government and other authorities have introduced some of the measures to ease the shock for households and firms. SMEs received grants and reimbursement of property tax until June 2021. The country also has established loan funds with space guarantees. For small businesses some payments such as VAT, social security and government fees were deferred. For every person SMEs rehired, they received grant (OECD, OECD Economic Surveys: Israel 2020 2020).

The government took several SME-targeted measures to soften the blow of the pandemic on the economy. Some of these measures are listed below (OECD, An in-depth analysis of one year of SME and entrepreneurship policy responses to COVID-19: Lessons learned for the path to recovery 2021):

- State Guarantee Fund for Small Businesses has been supporting SMEs with liquidity issues and provided working capital loans with a possible deferral of up to six months;
    - Increased the fund to NIS 14 bln.;
    - State guarantees increased to 85%;
    - Collateral reduced to 10% ;
    - Repayment periods extended to 5 years;
    - Loans were provided for up to NIS 500,000 or 8% of the annual revenue;
- Government provided NIS 5.5 bln. to rehire employees;
- Government advanced payments to SME suppliers;
- Extended payment deadlines for taxes such as VAT, national insurance, council tax, etc.;
- Decreased levels of collateral from 25% to 10% in the Small and Medium Business Fund and increased the fund volume to NIS 4 bln.;
- Israeli Innovation Authority has announced NIS 650 mln. stimulus plan for the tech sector.

[29] Characterized as having USD 2.2 mln. liquid assets, or having an annual income of $330K in the past two consecutive years, or holding liquid assets valued $1.4M and an annual income of $166K in the past two consecutive years.


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