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Foraus policy paper

Swiss FinTechs & Sustainability: the Current Landscape and Four Policy Recommendations

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Executive Summary

English The search for effective solutions to global challenges has required multi-sector efforts, new institutional arrangements, and innovative thinking. The finance industry has a key-role to play in achieving the UN 2030¹ Agenda and the Paris Agreement². In particular, digital finance innovations have shown their potential to facilitate the finance industry's much-needed transition to more sustainable business models.

The authors of this paper argue that Swiss FinTech companies are key to fostering the integration of sustainability criteria into the Swiss financial sector. Recent developments, such as the Federal Council's support of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD)³, the publication of the Sustainable Finance Guidelines⁴, as well as the launch of the Green Fintech Action Plan⁵, call on the industry to include sustainability issues in its financial decision-making. It is critical to create momentum to strengthen the Swiss sustainable digital finance ecosystem. Hence, this seems to be the right time to ask: *how is the Swiss sustainable digital finance landscape shaped? What is the current contribution of Swiss FinTechs to the country's sustainability goals? Where are the untapped opportunities in the field of sustainable FinTechs? To what extent has the country created the conditions to realize these opportunities?*

A mapping of the current landscape of sustainable digital finance in Switzerland shows that 26 FinTechs were focused on sustainability by the end of 2020. This represents about 7% of all Swiss FinTechs and indicates that there may be a lot of room for a more prominent role by Swiss FinTechs in achieving the Sustainable Development Agenda. The mapping exercise firstly shows a very specialized pool of companies with sustainability at the core of their value proposition. This observation indicates that sustainability is a territory still underexplored by (mainstream) Swiss FinTech companies. Secondly, and aligned with Switzerland's leading role in international wealth management, most Swiss sustainable FinTechs offer products and services related to investment management. The authors note, however, that banking infrastructure, the second most explored business area by (mainstream) Swiss FinTechs, seems to be an untapped market when the goal is to develop innovative sustainable banking solutions. Thirdly, the analysis of the range of products and services shows a

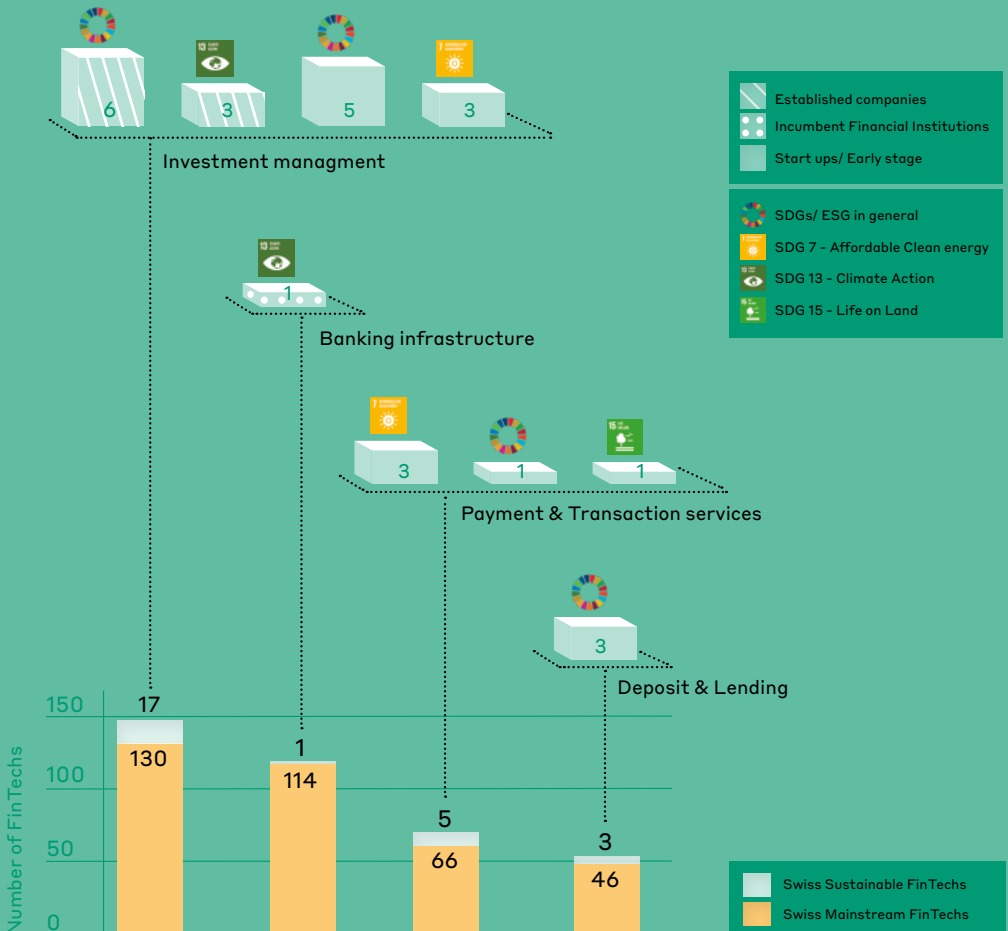
strong alignment between the Swiss sustainable digital finance landscape and Switzerland's sustainability priorities. Different emerging applications also offer opportunities for the country to expand its contribution to the Agenda 2030. Such avenues may include: greater engagement of retail customers, especially the younger generations, in sustainable digital finance; expanding the range of sustainable banking products and services; broadening the set of approaches to address environmental issues, especially those related to biodiversity; advancing the social and economic integration of vulnerable populations; advancing impact investing and blended finance targeted to emerging markets.

Based on the main findings and policy directions discussed in this study, the authors propose four practical recommendations to advance the Swiss sustainable digital finance landscape:

<p>RECOMMENDATION 1:</p> <p>Integrate policies and strategies Establish an inter-agency mandate to promote greater alignment of policies and strategies in the areas of finance, digitalization, and sustainability.</p>	<p>Means: Inter-agency working group focusing on designing policies and strategies which cut across the topics of finance, digitalization, and sustainability.</p> <p>Leads: State Secretariat for International Finance (SIF), Federal Department of Foreign Affairs (FDFA), Federal Office of Communications (OFCOM).</p>
<p>RECOMMENDATION 2:</p> <p>Foster collaborations Advance collaborations between Swiss financial institutions and FinTech companies with the aim of developing innovative, sustainable products and services.</p>	<p>Means: Platform to engage Swiss FinTech companies with traditional financial institutions in the development of sustainable products and services.</p> <p>Lead: Swiss Bankers Association - SBA</p>
<p>RECOMMENDATION 3:</p> <p>Provide guidance and advice Establish a working group with the mandate to identify demands and help FinTech companies regarding sustainability issues.</p>	<p>Means: Advice unit, established in partnership with the industry, to offer sustainability guidance to FinTechs.</p> <p>Leads: State Secretariat for International Finance (SIF) and Federal Office for the Environment (FOEN)</p>
<p>RECOMMENDATION 4:</p> <p>Promote international exchanges Support the collaboration of Swiss sustainable FinTech companies and financial regulators with international players.</p>	<p>Means: (Sustainable) FinTech bridges with industry representatives and financial regulators on other markets.</p> <p>Lead: Swissnex (on behalf of the State Secretariat for Education, Research and Innovation). ●</p>

The Swiss Landscape of Sustainable Digital Finance

Swiss Sustainable Fintechs are mostly start-ups and early stage companies. They contribute to the SDGs mainly by offering solutions for Investment Management.



The Swiss sustainable Digital Finance landscape represents about 7% percent of the broader national FinTech ecosystem.

Figure 1: The Swiss Sustainable Digital Finance Landscape

Deutsch Effektive Antworten auf globale Herausforderungen erfordern sektorübergreifende Bemühungen, neue Organisationsformen und innovatives Denken. Der Finanzbranche kommt bei der Umsetzung der «UN Agenda 2030 für nachhaltige Entwicklung»⁶ und des Pariser Klimaabkommens⁷ eine Schlüsselrolle zu. Insbesondere digitale Finanzinnovationen bergen das Potenzial, die Transition zu nachhaltigen Geschäftsmodellen zu vereinfachen.

Die AutorInnen dieses Berichts argumentieren, dass Schweizer FinTech-Unternehmen eine zentrale Rolle bei der Integration von Nachhaltigkeitskriterien in den Schweizer Finanzsektor übernehmen können. Jüngste Entwicklungen – wie beispielsweise die Unterstützung des Bundesrats für die vom Financial Stability Board (FBS) gegründete Arbeitsgruppe zur Klimaberichterstattung (Task Force on Climate-related Financial Disclosures, TCFD)⁸, die Publikation der Leitlinien zur Nachhaltigkeit im Finanzsektor⁹ sowie die Einführung des Green Fintech Aktionsplans¹⁰ – appellieren an die Finanzbranche, Nachhaltigkeitsaspekte in ihre Geschäftsentscheidungen einfließen zu lassen. Nun gilt es, das digitale, nachhaltige Finanz-Ökosystem der Schweiz mit Nachdruck zu stärken. Dementsprechend scheint die Zeit reif für die folgenden Fragen: *Wie sieht eine digitale, nachhaltige Finanzlandschaft aus? Was tragen momentan die Schweizer FinTechs zu den Nachhaltigkeitszielen des Landes bei? Wo liegen die ungenutzten Chancen im Hinblick auf nachhaltige FinTechs? In welchem Ausmass erfüllt das Land bereits die Bedingungen, um diese Chancen zu nutzen?*

Ein Mapping der aktuellen digitalen, nachhaltigen Finanzlandschaft der Schweiz zeigt, dass per Ende 2020 die Geschäftsmodelle von 26 FinTechs auf Nachhaltigkeit ausgerichtet waren. Das sind lediglich 7% aller Schweizer FinTechs und zeigt, dass die heimischen FinTechs bei der Erreichung der Ziele für nachhaltige Entwicklung eine viel bedeutendere Rolle einnehmen könnten. Erstens zeigt das Mapping einen sehr spezifischen Pool von Unternehmen, bei denen Nachhaltigkeit im Mittelpunkt ihres Geschäftsmodells steht. Diese Beobachtung weist darauf hin, dass die Nachhaltigkeit bei (Mainstream-)Fintech-Unternehmen in der Schweiz noch immer (zu) wenig Beachtung findet. Zweitens bieten die meisten nachhaltigen Schweizer FinTechs Produkte und Dienstleistungen im Bereich der

Vermögensverwaltung an, was auch die führende Rolle der Schweiz in diesem Bereich reflektiert. Die AutorInnen heben jedoch hervor, dass die Banking-Infrastruktur – der zweitgrösste Geschäftsbereich von (Mainstream-)Fintech-Unternehmen der Schweiz – ein noch wenig erschlossener Markt zu sein scheint, wenn es um die Entwicklung von innovativen, nachhaltigen Banking-Lösungen geht.

Drittens zeigt die Analyse der Produkt- und Dienstleistungspalette eine hohe Übereinstimmung zwischen der digitalen, nachhaltigen Finanzlandschaft und den Nachhaltigkeitsprioritäten der Schweiz auf. Neue Anwendungen bieten hingegen die Möglichkeit, einen grösseren Beitrag zur Agenda 2030 zu leisten. Mögliche Wege dafür sind: Verstärkte Einbindung von Retailkunden – insbesondere der jüngeren Generationen – in eine nachhaltige, digitale Finanzbranche, Vergrösserung des Angebots nachhaltiger Bankingprodukte und -dienstleistungen, Ausweitung der Ansätze, um Umweltthemen anzugehen – insbesondere bezüglich Biodiversität –, vorantreiben der sozialen und wirtschaftlichen Integration von schutzbedürftigen Bevölkerungsgruppen, sowie die Förderung von Impact Investing und Blended Finance für Schwellenmärkte.

Basierend auf den Erkenntnissen aus dieser Studie schlagen die AutorInnen vier konkrete Empfehlungen zur Förderung der digitalen, nachhaltigen Finanzlandschaft der Schweiz vor:

1. EMPFEHLUNG:

Politik und Strategien einbeziehen

Schaffung eines übergeordneten Mandats zur besseren Abstimmung der Richtlinien und Strategien in den Bereichen Finanzen, Digitalisierung und Nachhaltigkeit.

Mittel: Interdepartementale Arbeitsgruppe, die sich auf die Ausarbeitung von Strategien und der Politik in den Bereichen Finanzen, Digitalisierung und Nachhaltigkeit konzentriert.

Federführung: Staatssekretariat für internationale Finanzfragen (SIF), Eidg. Departement für auswärtige Angelegenheiten (EDA) und Bundesamt für Kommunikation (BAKOM)

2. EMPFEHLUNG:

Zusammenarbeit stärken

Zusammenarbeit zwischen Schweizer Finanzinstituten und FinTech-Unternehmen vorantreiben, um innovative, nachhaltige Produkte und Dienstleistungen zu entwickeln.

Mittel: Plattform, um Schweizer FinTech-Unternehmen mit den bestehenden Finanzinstituten zusammenzubringen.

Federführung: Schweizerische Bankiervereinigung (SBVg)

<p>3. EMPFEHLUNG:</p> <p>Betreuung und Beratung anbieten Eine Arbeitsgruppe aufbauen, welche Bedürfnisse identifiziert und FinTech-Unternehmen in Nachhaltigkeitsfragen unterstützt.</p>	<p>Mittel: Beratungsstelle, die in Partnerschaft mit der Branche eingeführt wird, um FinTechs im Bereich Nachhaltigkeit zu beraten.</p> <p>Federführung: Staatssekretariat für internationale Finanzfragen (SIF) und Bundesamt für Umwelt (BAFU)</p>
<p>4. EMPFEHLUNG:</p> <p>Weltweiten Austausch fördern Die Zusammenarbeit von nachhaltigen Schweizer FinTech-Unternehmen und Finanzbehörden mit internationalen Akteuren unterstützen.</p>	<p>Mittel: (Nachhaltige) "FinTech-Brücken" mit VertreterInnen der Branche und Finanzbehörden anderer Finanzmärkte.</p> <p>Federführung: Swissnex (im Auftrag des Staatssekretariats für Bildung, Forschung und Innovation SBFJ).</p>

Français La recherche de solutions efficaces aux défis mondiaux nécessite d'engager des efforts multisectoriels, la mise en œuvre de nouveaux arrangements institutionnels et de penser de manière innovante. Le secteur financier a un rôle clé à jouer dans l'accomplissement des objectifs fixés dans l'Agenda 2030 des Nations Unies¹¹ et par l'Accord de Paris¹². Les innovations numériques dans le secteur financier ont notamment la capacité à faciliter la transition indispensable vers des modèles économiques plus durables.

Les auteurs du présent papier soutiennent que les entreprises FinTech suisses peuvent assumer une fonction centrale dans l'intégration des questions de durabilité dans le secteur financier suisse. Des développements récents, tels que le soutien du Conseil fédéral apporté au groupe de travail sur l'information financière relative aux changements climatiques¹³ du Conseil de stabilité financière, la publication des Lignes directrices en matière de finance durable¹⁴, ainsi que le lancement du Green Fintech Action Plan¹⁵ appellent ledit secteur à inclure des critères de durabilité dans leurs décisions. Pour cela, il est essentiel de renforcer l'écosystème suisse de la finance numérique durable. Ainsi, il est opportun de poser les questions suivantes : *comment se dessine le paysage suisse de la finance numérique durable ? Quelle est la contribution actuelle des FinTech suisses aux objectifs de durabilité du pays ? Où se trouvent les opportunités inexploitées dans le domaine des FinTech durables ? Dans quelle mesure le pays a-t-il créé les conditions idéales pour concrétiser ces opportunités ?*

L'étude du paysage actuel de la finance numérique durable en Suisse effectuée par les auteurs ("mapping") permet de constater que, fin 2020, seules 26 FinTech étaient axées sur la durabilité. Elles ne représentent que 7 % de l'ensemble des FinTech suisses ; ainsi, il existe une marge d'amélioration manifeste pour que ces FinTech suisses jouent un rôle plus important dans la mise en oeuvre de l'Agenda de développement durable. Cet exercice de mapping permet tout d'abord d'observer qu'il n'existe qu'un petit groupe très spécialisé d'entreprises dont la durabilité est au cœur de la proposition de valeur. Cette observation permet de conclure que la durabilité est un territoire encore peu exploré par les entreprises FinTech suisses (traditionnelles). Deuxièmement, et conformément au rôle important joué par la Suisse dans la gestion de fortune internationale, la plupart des FinTech suisses durables offrent des produits et des services liés à cette activité. Les auteurs notent toutefois que l'infrastructure bancaire, deuxième secteur d'activité le plus grand des FinTech suisses (traditionnelles), semble être un marché inexploité lorsque l'objectif se rapporte au développement de solutions bancaires durables innovantes.

Troisièmement, l'analyse des produits et des services offerts par les FinTech suisses concernées montre une forte convergence entre le paysage de la finance numérique durable suisse et les priorités du pays en matière de durabilité. Différentes applications émergentes offrent également à la Suisse des nouvelles opportunités quant à l'accomplissement des objectifs fixés par l'Agenda 2030. Ces pistes peuvent inclure : une plus grande mobilisation des clients de détail, en particulier des jeunes générations, dans la finance numérique durable ; l'élargissement de la gamme de produits et de services bancaires durables ; l'élargissement de l'éventail d'approches pour traiter les questions environnementales, en particulier celles liées à la biodiversité ; l'avancement de l'intégration sociale et économique des populations vulnérables ; la progression de l'investissement à impact social et de la finance mixte ciblée sur les marchés émergents.

Sur la base des principaux résultats de la présente étude, les auteurs proposent quatre recommandations pratiques pour la promotion du paysage de la finance numérique durable en Suisse :

<p>RECOMMANDATION 1 :</p> <p>Intégrer les politiques et les stratégies Établir un mandat inter-agences pour promouvoir une meilleure convergence des politiques et des stratégies dans les domaines de la finance, de la numérisation et de la durabilité.</p>	<p>Moyens : Groupe de travail inter-agences axé sur la conception de politiques et de stratégies qui recourent les thèmes de la finance, de la numérisation et de la durabilité.</p> <p>Responsables : Secrétariat d'État aux questions financières internationales (SFI); Département fédéral des affaires étrangères (DFAE); Office fédéral de la communication (OFCOM).</p>
<p>RECOMMANDATION 2 :</p> <p>Encourager les collaborations Faire progresser les collaborations entre les établissements financiers suisses et les entreprises FinTech dans le but de développer des produits et services innovants et durables.</p>	<p>Moyens : Unité de soutien, établi en partenariat avec le secteur, pour offrir un certain soutien/encadrement, voire des conseils en matière de durabilité aux FinTech.</p> <p>Responsables : Secrétariat d'État aux questions financières internationales (SFI) et Office fédéral de l'environnement (OFEV)</p>
<p>RECOMMANDATION 3 :</p> <p>Fournir des orientations et des conseils Créer un groupe de travail ayant pour mandat d'identifier les demandes et de soutenir les entreprises FinTech concernant les questions de durabilité.</p>	<p>Means: Advice unit, established in partnership with the industry, to offer sustainability guidance to FinTechs.</p> <p>Leads: State Secretariat for International Finance (SIF) and Federal Office for the Environment (FOEN)</p>
<p>RECOMMANDATION 4 :</p> <p>Promouvoir les échanges internationaux Soutenir la collaboration des entreprises FinTech durables et des régulateurs financiers suisses avec les acteurs internationaux.</p>	<p>Moyens : Des FinTech "bridges" (durables) avec des représentants du secteur et des régulateurs financiers (d'autres juridictions).</p> <p>Responsable : Swissnex (pour le compte du Secrétariat d'État à la formation, à la recherche et à l'innovation SEFRI) ●</p>

1. Introduction

Sustainability and climate change dominate the global policy agenda. The finance sector is increasingly recognized as a key player in addressing sustainability objectives. The challenge is twofold: firstly, financing the initiatives that aim to meet the Sustainable Development Goals¹⁶ (SDGs) and implementation of the Paris Agreement¹⁷. It is estimated that \$2.5 trillion need to be mobilized annually to achieve the 2030 Agenda¹⁸. Secondly, the private sector and investors are called to “deploy capital in ways that make a positive contribution to sustainable development, using the SDGs as a basis for measurement”¹⁹.

The last couple of years have seen many developments, both on the market as well as on the political and regulatory front. For example, at the European Union level, the Commission initiated a long wave of actions in March 2018 by proposing its Action Plan on Sustainable Finance which aims to “further connect finance with sustainability”. In other words, the Action Plan intends to mobilize the potential of the financial sector to promote sustainable growth²⁰.

At the same time, the finance industry is undergoing an important technological transformation. Digital finance, or the application of technology to finance (see box 1 for definitions), has benefited the financial sector through innovations which create novel means of providing financial services. For instance, mobile payments and robo-advisors have reshaped the relationship with customers, improved the efficiency of service delivery, and diversified investment opportunities.

Technological developments in finance have also provided opportunities to boost the integration of sustainability into financial decision-making. Applications of technology have supported the sustainable finance sector in addressing challenges such as access to retail customers, the costs and accuracy of ESG data, as well the reliability of ESG disclosures and ratings²¹. FinTech companies and FinTech-powered innovations have helped financial players reallocate capital or unlock new sources of finance to sustainable enterprises (i.e., via innovative sustainable finance instruments), screen investments (e.g. via improved access to sustainability data), and improve accountability in public and private finance.

Box 1

Digital Finance, FinTechs and Sustainable Finance

The term digital finance or financial technologies encompasses a broad range of technologies (such as big data, machine learning, AI, mobile technologies, distributed ledger technologies, and the Internet of Things) applied to financial products and services, financial business models, and finance-related software²².

FinTech companies or FinTechs are firms whose core activities include the development of digital solutions which have the potential to improve, complete or disrupt products, services, and processes in the finance industry. According to their main product areas, FinTech companies might be classified as²³:

- **Payment services:** solutions concerning online and/or mobile payments and money transfers
- **Deposit and lending:** products and services related to crowdlending and crowd-investing, among others.
- **Investment management:** solutions typically focused on enabling digital investment management, such as robo-advisory and risk management services
- **Banking infrastructure:** solutions including personal finance management tools, regulatory technology (RegTech), and trading infrastructures, as well as challenger banks

Box 1

In this paper, the authors refer to FinTech companies or FinTechs without distinction as to the firm's stage of maturity (i.e., start-up, in the process of scaling-up, or established company).

Sustainable finance refers to long-term, financial decision-making that considers environmental, social, and governance (**ESG criteria**). ESG criteria are a set of factors, still not standardized, which summarize the issues most relevant for sustainable finance such as: climate change, biodiversity, energy efficiency, human rights, financial inclusion, gender diversity, board composition, and bribery and corruption²⁴.

Sustainable digital finance²⁵ is the application of technology in finance intended to accelerate the achievement of socio-environmental goals, such as the ones described in the 2030 Agenda and the Paris Agreement. Likewise, **sustainable FinTechs** are those companies which are continuously engaged with the development of finance-related technological innovations aimed at supporting the achievement of socio-environmental goals. Such continuous engagement with sustainability may be witnessed, for instance, in the definition of a specific branch or brand, a new company, or even a new product or service linked to a long-term commitment to socio-environmental goals²⁶.

The sustainable digital finance issue has gained strategic importance in the global sustainable finance debate. Private, public and multilateral players have analyzed the potential of digital finance to make the financial market greener and more inclusive. For instance, in 2016, the UN Environment Programme (UNEP) and a private partner established the Green Digital Finance Alliance (GDFA) to explore the potential in the nexus of FinTech-powered innovations and sustainability²⁷. In fact, GDFA's analyses of the German, Dutch, and Spanish landscapes²⁸ show how the growing attention paid to sustainable finance, together with the FinTech boom, open up avenues to accelerate capital reallocation towards sustainability goals.

Switzerland, in particular, is known for offering excellent conditions for the development of digital finance-powered innovations and FinTech companies. Besides a stable economic environment and a well-developed technological ecosystem²⁹, Switzerland's legal framework has advanced to the FinTech industry's benefit. Regulatory innovations, such as the DLT bill, the FinTech license, and the Sandbox

exemption³⁰, as well as the attractive economic environment, might explain the steady growth in the Swiss digital finance sector: the number of FinTechs in Switzerland has grown year by year, from 162 legally incorporated FinTech companies in 2015 to a total of 382 FinTech companies by the end of 2019³¹. The Swiss FinTech landscape is internationally recognized, and the country is often cited as hosting important hubs that boost innovation in financial technology. In particular, the country is home to Zug's Crypto Valley, Zurich is highlighted as a leading FinTech hub in Europe, and Geneva is seen as an emerging FinTech hub³².

When it comes to sustainable digital finance, Switzerland was one of the first countries to engage in discussions and initiatives to develop the ecosystem³³. One of the country's first landmarks in the field was support of the UNEP inquiry study 'FinTech and Sustainable Development – Assessing the implications'³⁴, published in 2016. In recent years, the national sustainable digital finance landscape has been taking shape and involving a greater number of public and private players. One can observe a vibrant agenda of workshops, conferences, and spaces to disseminate ideas across initiatives from the industry and multilateral organizations. In 2020, the Federal Council also took important practical measures such as the establishment of the Green FinTech Network (GFN)³⁵. Launched by the State Secretariat for International Finance (SIF), the GFN connects key industry players, associations, and universities to propose measures to improve the operating conditions for Swiss start-ups involved with technological, financial, and environmental issues³⁶. In 2021, the GFN published an action plan aimed at positioning Switzerland as a global leader in digital and sustainable financial services.

This seems to be the right time for the country to ask: *how is the Swiss sustainable digital finance landscape shaped? What is the current contribution of Swiss FinTechs to the country's sustainability goals? Where are the untapped opportunities in the field of sustainable FinTechs? To what extent has the country created the conditions to realize these opportunities?*

To explore these questions, the authors analyze the Swiss sustainable digital finance landscape, using as a reference the Framework for Measuring Sustainable Digital Finance Progress, developed by the UN Task Force on the Digital Financing of the Sustainable Development Goals³⁷.

The rest of the paper is organized as follows:

Section 2 characterizes the Swiss sustainable digital finance landscape, based on a mapping exercise. Section 3 analyzes the current contributions and further opportunities for Swiss FinTechs to expand their contribution to the country's Sustainable Development Strategy. Section 4 analyzes the integration of Swiss national policies and strategies in the areas of sustainability, digitalization, and finance. Section 5 highlights the main findings of this work and points out directions for policy responses to support the development of Swiss FinTechs. Finally, Section 6 presents four practical recommendations to create the ideal framework for the development of the Swiss sustainable digital finance landscape. ●

2. The Swiss Sustainable Digital Finance Landscape

This section analyzes the current sustainable digital finance landscape in Switzerland. Through a mapping exercise, the authors gain insight into the current situation and point out preliminary directions for regulatory responses to advance Switzerland's sustainable finance field.

The mapping exercise³⁸, carried out between May and November 2020, aims to identify Swiss FinTechs *continuously engaged with the development of finance-related technological innovations aiming to support the achievement of socio-environmental goals (see Box 1 for definitions)*. Figure 1 summarizes the findings of the mapping exercise.

The 26³⁹ sustainable FinTech companies identified represent about 7% of the total number of FinTechs legally incorporated in the country at the end of 2019⁴⁰. This fraction is similar, for example, to Germany⁴¹ and Spain⁴² where sustainable FinTech companies represent 4-7% of the FinTech market⁴³.

The Swiss sustainable digital finance landscape is predominantly composed of start-ups and companies in the early stages of market penetration. Of the 26 companies identified in the mapping exercise, 18 were created after 2012 when the SDGs were first discussed, with a sharper increase in the number of new companies after 2015, when the Paris Agreement was signed. Despite the predominance of relatively

young companies, Switzerland can still be considered a long-runner in the field of sustainable digital finance: the first Swiss movers into this niche market were founded in the 1990s and early 2000s. For instance, SAM and Covalence, companies focused on sustainability data, were founded, respectively, in 1999 and 2001.

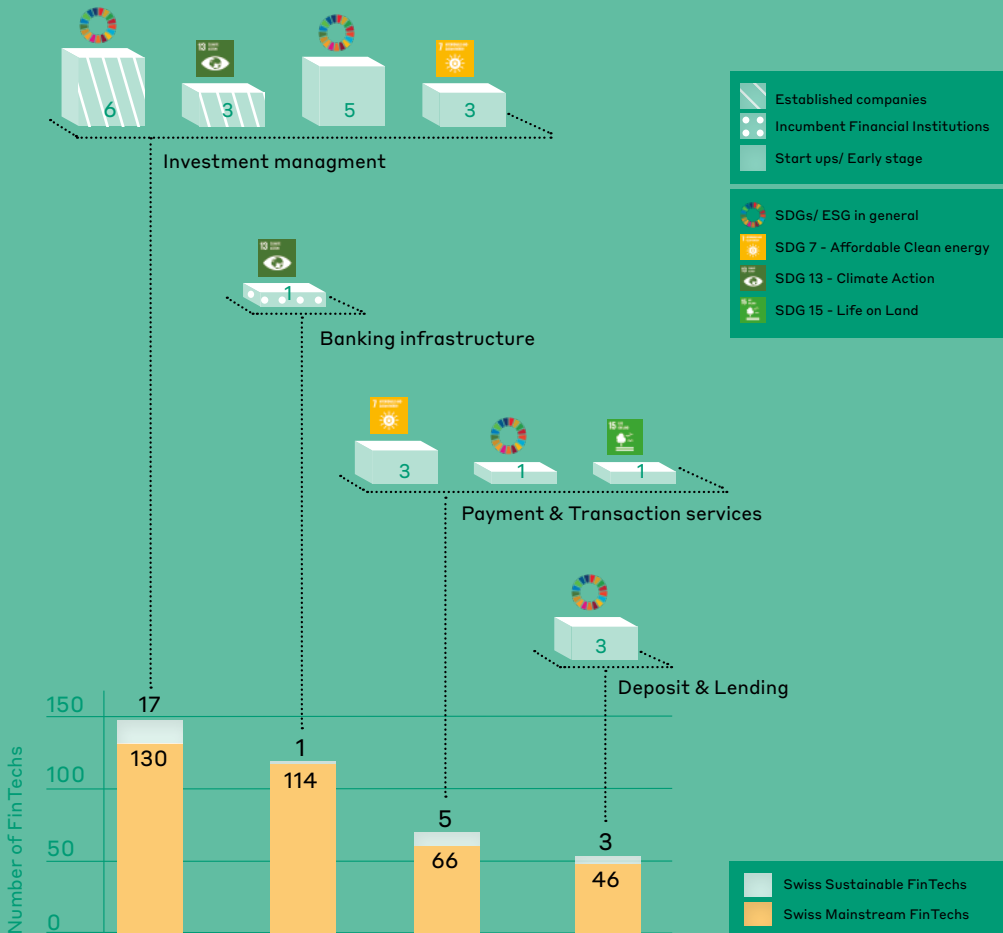
What also characterizes the Swiss sustainable digital finance landscape is its built-in approach to sustainability. In fact, the mapping shows a very specialized pool of companies which have sustainability at the core of their value proposition. Thus, in the Swiss FinTech scenario, there seems to be a clear division between companies specialized in sustainability and other (mainstream) FinTechs. This observed built-in approach to sustainability also indicates that sustainability topics, or the sustainable finance market, is a territory still underexplored by (mainstream) Swiss FinTech companies.

The mapping exercise shows that, from a product area perspective (see Box 1 for definitions), the **Swiss sustainable digital finance landscape contributes to the SDGs mainly by offering solutions for investment management**, which is the case for 17 of the companies identified. This specialization is aligned with Switzerland's leading role in international wealth management, as well as with the country's broader (mainstream) digital finance scenario, where the majority of companies are active in the field of investment management⁴⁴. In particular, Swiss sustainable FinTech companies typically focus on solutions concerning risk management and ESG ratings (e.g. Carbon Delta, Celsius Pro, and RepRisk) and investment advisory (e.g. 3rd Eyes, BlueYellow and Yova).

In addition to investment management, other product areas explored by Swiss sustainable FinTechs are payments & transaction services (5 companies) and deposit & lending (3 companies). Examples of payment solutions are blockchain-based payment systems for initiatives focused on renewable energy (e.g. Bitlumens and Energy Web) and electric vehicles (e.g. Share&Charge). In the case of deposit & lending, solutions are mainly focused on sourcing donations and humanitarian aid through automated solutions (e.g. Raisenow) and blockchain systems (e.g. Aidonic).

The Swiss Landscape of Sustainable Digital Finance

Swiss Sustainable Fintechs are mostly start-ups and early stage companies. They contribute to the SDGs mainly by offering solutions for Investment Management.



The Swiss sustainable Digital Finance landscape represents about 7% percent of the broader national FinTech ecosystem.

Figure 1: The Swiss Sustainable Digital Finance Landscape

Few of the companies identified offer solutions related to banking infrastructure. This finding differs from what is observed in the broader (mainstream) Swiss FinTech landscape where banking infrastructure is the second most explored business area by companies. In fact, the mapping exercise reveals only one sustainability-related solution in the context of (FinTech) banking products and services. This is the case of the challenger bank Neon which recently launched a credit account (and has announced an upcoming debit account) combining payments with automatic CO2 offsetting.

The Swiss sustainable digital finance landscape is well-positioned to make a holistic contribution to the Sustainable Development Goals (SDGs). For instance, 15 of the 26 sustainable FinTech companies identified offer solutions to manage social, environmental, and governance risks or to facilitate the access of investors to sustainable investments. Thus, **most companies address general social and environmental topics, as opposed to specific SDGs.** On the other hand, companies which focus on specific sustainability objectives **tend to prioritize environmental issues and especially those related to climate change, energy transition, and nature conservation.** For instance, South Pole provides digital solutions for managing climate and environmental risks and Pexapark provides operating systems for renewable energy trading.

The findings of this mapping exercise raise questions about the current contributions of Swiss FinTechs to the country's 2030 Agenda. The next section analyzes Swiss FinTechs' products and services range in light of the Swiss Sustainable Development Strategy 2030. Based on the country's sustainability priorities, the authors derive insights about the potential of Swiss FinTechs to expand their contribution to the country's sustainability strategy. ●

The Swiss sustainable digital finance landscape represents about 7% percent of the broader national FinTech ecosystem. Swiss sustainable Fintechs are mostly start-ups and early-stage companies. They contribute to the SDGs mainly by offering solutions for Investment Management.

3. Alignment of the Swiss Sustainable Digital Finance Landscape with the Agenda 2030

Switzerland has been setting political priorities related to sustainability since 1997 and, in 2003, the country implemented a comprehensive system (MONET) to monitor social, economic, and ecological indicators of sustainable development⁴⁵. Since 2008, Switzerland has published triennial guides and action plans for the implementation of its sustainability strategy. For the period of 2021-2023, the Swiss Federal Council proposes three sustainability priorities for implementing the 2030 Agenda: *Sustainable consumption and production; Climate, energy, biodiversity; and Equal opportunities*⁴⁶. These priorities encompass various sustainability topics, such as:

- *Sustainable consumption and production*: promoting sustainable consumption patterns; securing prosperity and well-being with sustainable use of natural resources; driving transformations towards more sustainable food systems; strengthening corporate responsibility at home and abroad.
- *Climate, energy, and biodiversity*: reducing greenhouse gas emissions and coping with climate-related effects; reducing energy consumption and expanding renewable energies; conserving, promoting, and restoring biological diversity.

- *Equal opportunities*: promoting the self-determination of each and every individual; ensuring social cohesion; ensuring equality for women and men.

Along with these priorities, the Federal Council has also established three driving forces for the full implementation of the country's 2030 Agenda: 1) *Economy*: By highlighting the role of the private sector in promoting employment, innovation, income generation, and corporate responsibility values; 2) *Financial system*: By advocating for the power of the financial sector in promoting sustainable development through responsible investments; 3) *Education, research and innovation*: By recognizing its importance not only for understanding the current state of socio-environmental issues but also forecasting new risks and developing innovative solutions for socio-environmental challenges.

Based on the insights from the mapping exercise, the authors argue that the Swiss sustainable digital finance sector is well-positioned to contribute to the country's sustainability priorities. As shown in Figure 2, different emerging applications have the potential to support Switzerland in implementing its Sustainable Development Strategy 2030⁴⁷, while offering opportunities for the country to expand its contribution to financing the SDGs.

Swiss FinTech companies addressing sustainability topics expand the range and facilitate access to sustainable (financial) solutions, thus incentivizing customers to seek **more sustainable consumption patterns when it comes to financial products and services**. One of the most tangible contributions Swiss FinTechs make in this regard is the provision of information on the potential socio-environmental risks and impacts of investment and financial transactions. At scale, this transparency educates customers on the consequences of their financial choices and contributes to a greater engagement with Sustainable Finance.

Priorities of the Swiss Sustainable Development Strategy 2030	Current contributions of the Swiss sustainable digital finance sector	Opportunities in the Swiss sustainable digital finance sector
Sustainable consumption and production	- Educate and empower consumers to make more sustainable (financial) choices	- Greater engagement of retail customers, especially younger generations, in sustainable finance. - Expand range of sustainable banking products and services (e.g. sustainable saving products, green credit cards, green lending to SMEs and sustainable mortgages)
Climate, energy, and biodiversity	- Expand the range of and facilitate the access to Green Finance services	- Broaden the set of approaches to address environmental issues, especially those related to biodiversity (e.g. unlock funding for biodiversity initiatives, innovation in biodiversity-linked financial products, leverage biodiversity data for compliance purposes).
Equal opportunities	- Support social fundraising	- Advance social and economic integration of vulnerable populations - Advance impact investing and blended finance targeted at the emerging markets

Figure 2: Swiss Sustainable Digital Finance landscape and the country's sustainability priorities

In fact, there is a growing interest from retail customers, and especially the young generations, in sustainability-oriented banking and investment solutions⁴⁸. At the same time, as discussed in Section 2, some markets are still underexplored by sustainable FinTechs, such as banking infrastructure and deposit & lending. The range of sustainable banking products (e.g. sustainable saving, green credit cards, green lending to SMEs and green mortgages) is a two-fold opportunity for Swiss FinTechs: in addition to helping companies to address the pressing challenge of finding customers⁴⁹, it expands FinTechs' contributions to the country's sustainability agenda. Green mortgages⁵⁰, in particular, could play a key role in developing the Swiss real estate market and renovating the country's real

estate park infrastructure in a sustainable way (thus, contributing to SDG 11 - Sustainable cities and communities). Recent evidence even suggests that energy-efficient properties, in addition to the inherent environmental and social benefits (e.g. lower greenhouse gas emissions, increase in borrower's savings), also present less of a credit risk⁵¹.

As identified in Section 2, among the various sustainability topics encompassed by the SDGs, environmental issues seem to be more material than social issues for Swiss FinTechs. This greater interest occurs, perhaps, because environmental topics are more in line with the country's sustainable finance debates⁵² and the EU's advances in Green Finance⁵³. Among sustainability specialists, there is also an understanding that some environmental challenges (e.g. CO2 emissions) are more easily quantifiable than social issues which, given their complexity, can present a challenge for automated analysis and data standardization⁵⁴. In particular, Swiss sustainable FinTechs are especially interested in **climate change and renewable energy**. These so-called Swiss green FinTechs offer solutions ranging from data analytics for ESG risk assessment to blockchain-based payment systems for renewable energy projects.

Still, the authors see opportunities for Swiss FinTechs to make a stronger contribution to environmental goals. For instance, by broadening the set of approaches to address biodiversity issues, such as those related to life below water (SDG 14) and life on land (SDG 15). In this direction, solutions may, for example, unlock funding for biodiversity initiatives, offer innovation in terms of biodiversity-linked finance products or even leverage biodiversity data for compliance purposes.

Besides the issue of biodiversity, there is also scope for Swiss FinTechs to make a more substantial contribution to social issues and, more specifically, to support the country in addressing the priority of **equal opportunities**. Current contributions by Swiss FinTechs to social issues are mainly related to fundraising for social purposes. Further opportunities may rely on digital finance breakthroughs, such as online banking, mobile money, and insurance technologies, focused

on promoting the financial inclusion of underserved populations and facilitating access to financing to small and medium-sized enterprises (SMEs). Financial exclusion may seem a less tangible issue for Switzerland, which is a highly banked society, but it still affects more vulnerable groups, such as refugees and foreigners. Tailor-made, FinTech-powered solutions related to digital identification are key to guaranteeing adequate social and economic integration of these populations in Switzerland⁵⁵.

Digital finance also advances opportunities for impact investing⁵⁶ and blended finance⁵⁷. In particular, blended finance provides strategies to de-risk investment opportunities and has been seen as key to scaling up SDG-aligned investing on the emerging markets⁵⁸. Digital finance applications (e.g. blockchain and data analytics) can address challenges and gaps in blended finance, such as the complexity of deals, stakeholder alignment, lack of data, and evidence transparency.

The authors see a strong alignment between the Swiss sustainable digital finance landscape and the country's sustainability priorities. This finding raises questions about how the country has integrated policy and strategies in the areas of sustainability, digitalization, and finance, and created conditions to advance the Swiss sustainable digital finance landscape. The next section explores this issue. ●

The Swiss sustainable digital finance landscape is well-positioned to contribute to the country's sustainability priorities. Different emerging applications have the potential to support Switzerland in implementing its Sustainable Development Strategy 2030, while offering opportunities for the country to expand its contribution to financing the SDGs.

4. Sustainability, Digitalization and Finance: integration of policies and strategies

While gaining strategic importance in the global sustainable finance debate, the issue of sustainable digital finance is taking its place in the policy arena. Policymakers have analyzed the potential in the nexus of sustainability, digitalization, and finance, and acknowledged the contributions of digital finance to the achievement of sustainability goals by countries. These analyses also highlight the importance of the alignment between policies which regulate finance, digital markets, and initiatives to foster sustainability practices. The alignment of policies in these three areas is seen as a territory in which policymakers could create the ideal regulatory and institutional conditions to advance sustainable digital finance.

Given this, *to what extent has Switzerland created conditions to advance its sustainable digital finance landscape?* To explore this question, the authors analyze⁵⁹ the integration of policy and strategies in the areas of sustainability, digitalization, and finance, namely: the proposal for a Swiss Sustainable Development Strategy 2030⁶⁰, the Digital Switzerland Strategy⁶¹, and the country's Sustainable Finance Guidelines⁶².

The Swiss Federal Council established sustainable development as a key for all areas of federal government⁶³ and the country has created institutional set-ups to support sustainability in various

policy domains⁶⁴. The proposal for a Swiss Sustainable Development Strategy 2030, however, approaches environmental-friendly technologies in a broader sense, without articulating innovation within the financial sector and, more specifically, with no consideration of financial technologies as enablers of sustainability.

In the same direction, the Digital Switzerland Strategy, published in 2020, recognizes that digital transformation is the key to sustainable development. The document sheds light on technology as a tool to inform sustainability and, more specifically, to enable equal participation, social cohesion, and transparency. The Digital Switzerland Strategy also acknowledges FinTech solutions as a source of innovation and competitiveness, with special reference to blockchain technologies applied to finance, as well as modernization of the payment process via QR invoice. Nevertheless, the document does not link FinTechs to the opportunity to accelerate the achievement of sustainability goals.

The Federal Council's ongoing discussions on sustainable finance highlight sustainability as the key to the domestic and international financial market policy. The country's Sustainable Finance Guidelines, announced in 2020, explicitly recommend taking advantage of FinTechs as market opportunities for sustainable finance. Since 2020, an integrated agenda on sustainable finance and the FinTech sectors has been taking shape. In particular, the State Secretariat for International Finance (SIF) established the Green FinTech Network⁶⁵ to engage private and public players in the design of an action plan to support the Swiss green FinTech ecosystem. With the vision of positioning Switzerland as a global leader in digital and sustainable financial services, the action plan, published in 2021⁶⁶, proposes measures in five directions: 1. Foster access to sustainability data; 2. Cultivate new start-ups in the green fintech sector; 3. Promote green fintech solutions; 4. Ease access to capital; 5. Boost ecosystem and innovation. However, despite these important recent developments, the specific plan to accelerate moving mainstream FinTechs into sustainability or the creation of direct incentives for FinTechs to deliver solutions for sustainable finance still remains unclear.

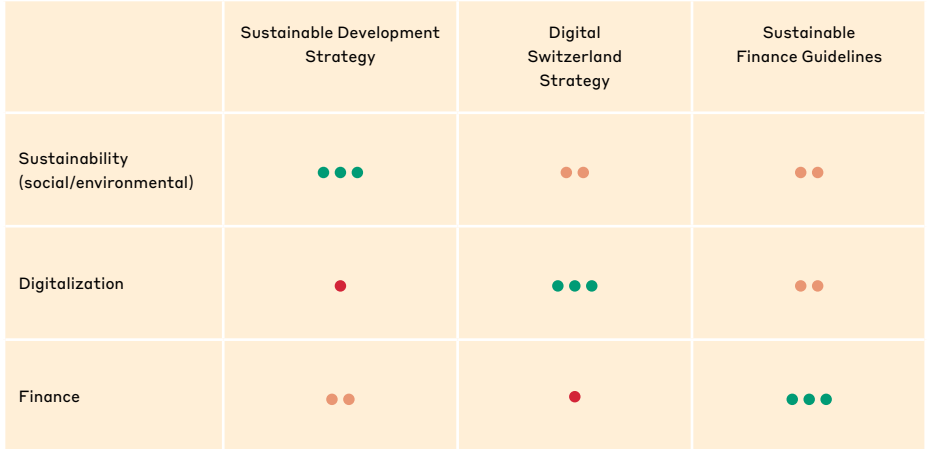


Figure 3: Illustration of how much different strategies (columns) integrate policies on sustainability, digitalization, and finance (rows) [● low integration, ●● medium integration, ●●● high integration].

Figure 3 illustrates the degree of integration of policies and strategies in the areas of sustainability, digitalization and finance in Switzerland. The authors argue that greater policy integration could enable a sharper and more proactive support to develop sustainable digital finance in Switzerland.

The authors’ main observation is that there is room for improvement when the goal is to integrate even more policies on sustainability, digitalization and finance. The nexus between technology and finance can be further leveraged to complement the country’s sustainability strategy, recognizing the potential of digital finance and FinTech companies to contribute to the country’s sustainability goals. Similarly, Switzerland’s digitalization strategy could better explore the nexus between finance and sustainability as drivers of a more sustainable and innovative economy.

As discussed in the next section, the Federal Administration’s previous experiences with interdepartmental efforts can help to achieve this alignment of policies on sustainability, digitalization and finance. ●

The alignment of policies in the areas of sustainability, digitalization, and finance is seen as a territory in which policymakers could create the ideal regulatory and institutional conditions to advance sustainable digital finance. A greater policy integration could enable a sharper and more proactive support to develop the country's sustainable digital finance landscape.

5. Taking Stock: the main findings and directions for policy responses

This section highlights the main findings of this work and points out directions for policy responses to support the development of the Swiss sustainable digital finance landscape.

Finding #1: The current Swiss sustainable digital finance landscape is predominantly composed of companies in the early stages of market penetration. Despite the predominance of relatively young companies, Switzerland can still be considered a long-runner in the field of sustainable digital finance: the first Swiss movers into this niche market were founded already in the 1990s and early 2000s. It is critical to create momentum to mature and strengthen the ecosystem.

Finding #2: The Swiss sustainable digital finance landscape is characterized by a built-in approach to sustainability. The mapping shows a very specialized pool of companies with sustainability at the core of their value proposition. This observation also indicates that sustainability is a territory still underexplored by Swiss (mainstream) FinTech companies. Stimulating and supporting mainstream FinTechs to include sustainability-related solutions among other traditional products and services is an opportunity to accelerate the field of sustainable digital finance in Switzerland.

Finding #3: Swiss sustainable FinTechs contribute to the SDGs mainly by offering solutions in investment management. Few of the companies identified offer solutions related to the banking infrastructure. This finding differs from what is observed in the broader (mainstream) Swiss FinTech landscape where the banking infrastructure is the second-most explored business area by companies. There are thus opportunities to support partnerships between financial institutions and FinTech companies with the aim of developing innovative, sustainable finance solutions.

Finding #4: There is a strong alignment between the Swiss' sustainability priorities (Agenda 2030) and the Swiss sustainable digital finance landscape. Opportunities to broaden sustainable FinTechs' contributions to Swiss sustainability priorities include: greater engagement of retail customers, expanding the range of sustainable banking products and services (e.g. sustainable saving products, green credit cards, green lending to SMEs and sustainable mortgages), broadening the set of approaches to address environmental issues, especially those related to biodiversity; advancing social and economic integration of vulnerable populations, as well as developing impact investing and blended finance targeted at the emerging markets.

Finding #5: Integration of policies and strategies that address finance, digitalization, and sustainability can be further developed. Sustainability, digital and financial strategies are already fairly well connected in policy strategies. Furthermore, institutional set-ups have been created to advance this integration (e.g. Green FinTech Network). Yet, the links are rather loose and lack concrete fields of action. A greater policy integration could enable a sharper and more proactive support to develop sustainable digital finance in Switzerland.

The findings of this work point out directions for policy responses to advance the Swiss sustainable digital finance landscape. The authors understand that such policies should go in at least three directions:

Policy response #1: Promote a greater integration of policies and strategies which address finance, digitalization, and sustainability

While the integration of policy across multiple regulatory and institutional fields is seen as the key to developing sustainable digital finance, Switzerland's strategies on finance, digitalization, and sustainability are not sufficiently coordinated. The authors understand that it is critical to promote the alignment of the aforementioned policies.

The Federal Administration has previous experience with interdepartmental efforts regarding sustainable development. Between 2012 and 2017, the Interdepartmental Sustainable Development Committee (ISDC), a mandate led by the Federal Office for Spatial Development (ARE), was responsible for coordinating and harmonizing sustainability-related policies and activities throughout 30 federal agencies. The Committee was also responsible for leading the Swiss participation in the relevant United Nations bodies and processes regarding sustainable development. The ISDC was chaired by ARE with different agencies holding a vice-chairmanship of the Committee on a rotating basis. The offices involved were the Federal Office of Public Health, Federal Office for Agriculture, Federal Office for the Environment and the Swiss Agency for Development and Cooperation⁶⁷.

In the context of sustainable digital finance, the establishment of a long-term institutional arrangement, for instance, to complement the work undertaken by the Green FinTech Network, is the key to coordinating efforts between agencies working with finance, digitalization, and sustainability, as well as players in the sustainable digital finance ecosystem.

Policy response #2: Drive partnerships between mainstream FinTechs and financial institutions with the aim of developing innovative, sustainable finance solutions.

While digitalization is seen as the key to fostering the development and modernization of the financial sector, studies show that the implementation of innovative FinTech solutions is not a priority for Swiss banks⁶⁸. In the context of sustainable digital finance, accessing customers from traditional financial institutions is still a barrier for Swiss Green FinTech companies⁶⁹. In fact, as observed by the authors in this study, banking infrastructure and banking services are fields barely explored by Swiss sustainable FinTechs. Promoting collaborations between financial institutions and FinTech companies is the key to advancing the development of innovative, sustainable finance solutions.

An international benchmark on this matter is the Singaporean APIX⁷⁰, a digital platform for sales engagement of FinTechs with financial institutions. APIX was launched in 2018 by the ASEAN⁷¹ Financial Innovation Network (AFIN), a non-profit organization established by the ASEAN Bankers Association, the International Finance Corporation, and the Monetary Authority of Singapore. The aim of AFIN is “bridging together finance industry participants to discover, design and deploy innovative digital solutions within a collaborative ecosystem”. To this end, in 2018, AFIN launched the APIX platform which supports the collaboration between FinTechs and financial institutions on two main fronts: the marketplace, where players can discover and connect with one another; sandboxes, where participants can collaboratively design, test and validate solutions.

The issues of open banking and open finance⁷² bring to light the ample opportunities for collaboration between banks and financial technology companies. While open finance is not yet well established, other mechanisms to promote such collaborations should be designed.

Policy response #3: Support FinTech-powered business models to include sustainability-related solutions among other traditional products and services.

Sustainability is a topic mired in complexities, and policies in the field of sustainable finance are evolving at a fast pace. It is critical that current and new players in the field of sustainable digital

finance receive appropriate guidance and advice on issues such as sustainability assessment, non-financial reporting, regulations, and taxonomies.

In fact, the Administration has experience in providing support to businesses on how to venture on new markets and explore new technologies. For instance, in 2018, the Geneva's General Directorate for Economic Development, Research, and Innovation, following up on debates about alternative methods of business finance, presented a directory to support and qualify projects as Initial Coin Offering (ICOs)⁷³. The initiative published a guide which describes the steps for issuing and accelerating the deployment of ICOs, including information regarding tax ruling, regulatory treatment, and the prerequisites for enrollment in the trade registry. In addition, an interactive Map of the Geneva ICO ecosystem was set up to make it easier for project owners to navigate and liaise with specialists. Finally, a consultative committee was constituted. This committee was seated by private and public sector specialists in the fields of law, tax, banking and compliance, among others. Project owners could apply to get their project assessed and receive guidance.

Back in 2017, the Federal Office for the Environment (FOEN) and the State Secretariat for International Finance (SIF) offered voluntary and free climate compatibility tests to Swiss pension funds and insurance companies. In 2020, using the PACTA methodology (Paris Agreement Capital Transition Assessment), these tests were repeated and expanded to include banks and asset managers⁷⁴. Given the potential of digital finance to support the country's sustainability strategy, it is essential that policies focused on promoting better understanding and transparency of sustainability issues also reach sustainable FinTech companies.

Another avenue for supporting current players and new entrants in the field of sustainable digital finance is the promotion of cross-border exchanges. More specifically, the establishment of concrete mechanisms for Switzerland to learn from international best practices in the context of sustainable digital finance, as well as contributing to sustainability at scale.

To support FinTechs' international collaborations, several regions are exploring the concept of FinTech bridges. These are bilateral agreements which outline cooperation between regulatory bodies across countries and encourage connectivity between FinTech ecosystems. The first FinTech bridge agreement was signed in 2016 between the UK and Singapore and, since then, similar arrangements have been established by countries such as Australia, China, Hong Kong, and South Korea. In the case of the UK, for instance, FinTech bridges offer access as diverse as networking opportunities, referrals to streamline regulatory approval, and introductions to buyers, investors, trade associations, and institutions⁷⁵.

Switzerland is also experienced in promoting international exchanges, especially in the areas of science, education, art, and innovation. For instance, the Swissnex Network⁷⁶, an initiative of the State Secretariat for Education, Research and Innovation, supports Swiss education institutions, start-ups and other innovation-driven organizations to outreach and engage with international partners with the aim of exchanging knowledge, ideas and talents.

In the context of Sustainable Digital Finance, initiatives to promote international collaborations allow collaboration between innovation ecosystems worldwide and knowledge-sharing – for instance, among countries with stronger traditions of sustainable digital finance targeted at social issues (e.g. African and Latin American countries).

In the next section, based on the findings and policy directions discussed above, the authors propose four practical recommendations aimed at developing the Swiss sustainable digital finance landscape. ●

6. Recommendations to advance the Swiss sustainable digital finance landscape

This section presents four practical recommendations to advance the Swiss sustainable digital finance landscape. Based on the findings of this study, the authors argue that the creation of ideal framework conditions for the development of the Swiss sustainable digital finance landscape include: establishing institutional arrangements which guarantee a full alignment of policies in the areas of sustainability, finance and digitalization; promoting collaborations between FinTechs and other players in the financial sector, especially banks; offering guidance and advice for new and current players on issues related to sustainability; and supporting international exchanges. The recommendations presented below go in this direction:

RECOMMENDATION 1: Integrate policies and strategies. Establish an inter-agency mandate to promote greater alignment of Swiss policies and strategies in the areas of finance, digitalization, and sustainability.

- **Means:** *Inter-agency working group focused on designing policies and strategies which cut across the topics of finance, digitalization, and sustainability.*

- **Leads:** *State Secretariat for International Finance (SIF), Federal Department of Foreign Affairs (FDFA), Federal Office of Communications (OFCOM).*

This mandate is responsible for streamlining and aligning the government's sustainability-related policies, in particular, those in the nexus of finance, digitalization, and sustainability (e.g. Sustainable Development Strategy, Digital Switzerland Strategy and the Sustainable Finance Guidelines). The authors understand that this inter-agency mandate is the key to ensuring coherence and efficient coordination of policies and strategies that cut across the topic of sustainable digital finance. This mandate may also track, analyze, and recommend agreements and benchmarks with international standards and regulations (e.g. SDG metrics or ESG taxonomies), thus allowing policymakers from different agencies to identify potential (institutional and regulatory) roadblocks to the advancement of the Swiss sustainable digital finance landscape.

Since this mandate may be complementary to or an extension of the work currently undertaken by the Green FinTech Network, the recommendation is that this working group should adopt a rotating leadership process, on a 1-year basis, with the SIF having the lead in the first year. The rotating process will institutionalize the dialogue and coordination, as well as ensuring the integration of sustainability priorities for sectoral policies.

RECOMMENDATION 2: Foster collaborations. Advance collaborations between Swiss financial institutions and FinTech companies with the aim of developing innovative sustainable products and services.

- **Means:** *Platform to engage Swiss FinTech companies and financial institutions in the development of sustainable products and services.*
- **Lead:** *Swiss Bankers Association - SBA*

The platform, designed along the lines of the Singaporean APIX⁷⁷, will allow FinTechs and financial institutions to connect, collaborate on the experimentation of products and services, and deploy sustainable digital finance solutions. Such platforms may also include tailor-made sandboxes to allow incumbent financial institutions and FinTechs to experiment with sustainable business models and products. Challenges, grants, and onboarding guidelines may also stimulate sustainable FinTechs and incumbent financial institutions in establishing such collaborations.

The authors see opportunities for the Swiss Bankers Association (SBA) to attempt and lead such an initiative in the context of sustainable digital finance. In fact, both sustainable finance and digitalization are listed among the SBA's priorities for 2021⁷⁸. With this platform, the SBA will strengthen its relationship with newer, smaller financial players, help to promote innovation and digitalization in the banking sector, while also addressing the sustainable finance agenda.

RECOMMENDATION 3: Provide guidance and advice. Establish a working group in Switzerland with the mandate of identifying specific demands and helping FinTech companies regarding sustainability topics.

- **Means:** *Advice unit, established in partnership with the industry, to offer sustainability guidance to FinTechs.*
- **Lead:** *State Secretariat for International Finance (SIF) and Federal Office for the Environment (FOEN)*

This Advice unit is responsible for examining the digital finance landscape in Switzerland, identifying demand for advice regarding sustainability issues, as well as finding tools to assist FinTech entrepreneurs. For instance, based on consultation and research, the supporting services might include: anonymous self-assessment questionnaires to help entrepreneurs classify their contributions to the SDGs; guidance to design their 'sustainability thesis' and define impact indicators; clarification on existing standards for non-financial reporting. Finally, the Advice unit may also serve as a point of contact for

sustainable FinTech companies seeking regulatory feedback. For instance, guidance regarding the conformity of their tech-based financial instruments, services, and business models with regulations (e.g. Green Finance regulation, EU Taxonomy) and supervisory expectations.

RECOMMENDATION 4: Promote international exchanges. Support collaborations of Swiss sustainable FinTech companies and financial regulators with international players.

- **Means:** *(Sustainable) FinTech bridges with industry representatives and financial regulators on other markets.*
- **Leads:** *Swissnex (on behalf of the State Secretariat for Education, Research and Innovation)*

This mandate is responsible for promoting cross-border learning and fostering knowledge exchange between Swiss sustainable FinTechs, Swiss financial regulators, and international players. The authors' assessment is that building upon the concept of Fintech bridges, Switzerland will benefit from formalized, bi-lateral agreements in the context of sustainable digital finance. For instance, (sustainable) FinTech bridges would aid Swiss policymakers and industry players in building networks, sharing expertise, benchmarking regulations, as well as prospecting investment opportunities.

Given its experience with “international exchange of knowledge, ideas and talent”, Swissnex is well equipped to lead this mandate, define geographical priorities (e.g. emerging markets and/or leading sustainable (digital) finance markets), and select sustainable FinTech companies which could best represent the Swiss ecosystem. Such (sustainable) FinTech bridges could, for instance, provide tailored, structured support for FinTech companies and regulators to develop high-quality connections and network with local regulatory agencies as well as industry and academic representatives on selected markets.●

Annex

Mapping methodology

To list and classify companies within the scope of this paper, the authors performed the following steps:

- *Data collection.* Data were harvested through desk research between May and November 2020.
- *Data sources.* Data were mainly collected in available databases of Swiss FinTechs, such as the Swiss FinTech Map⁷⁹, the F10 Incubator, and Accelerator⁸⁰, the IFZ FinTech Study⁸¹, and the Green Fintech Survey⁸². Additional data were collected from interviews with experts, discussion forums at events, social media, and the sustainable FinTech project's network.
- *Data processing and classification procedure.* The initial dataset included 38 FinTechs. The examination of the companies' websites and social networks sought to understand their relationship with sustainability-related issues. To classify companies as Swiss sustainable FinTechs, the authors adopted a three-step evaluation procedure⁸³ as follows:

1. Does the FinTech company have a built-in approach to sustainability?

Yes, sustainability-related topics (e.g. SDGs, ESG criteria) are at the core of their value proposition.	No, the predominant part of its business seems indifferent towards sustainability, but the company offers sustainability-related solutions among other traditional products and services.
✓ Included	➔ Step 2

2. Does the business obviously harm specific SDG criteria or human rights?

No, there is no obvious harm of SDGs or ESG criteria visible on this level of evaluation.	Yes, on closer inspection, the business obviously harms specific SDG or ESG criteria.
➔ Step 3	✗ Excluded

3. Is the company's engagement with sustainability structured for continuation?

Yes, the company has laid the structural basis for a continuous engagement with sustainability (e.g. by defining a specific branch or brand, through the formation of a new company, co-venturing or equity investment).	No, the engagement is confined to an isolated intervention, or a single product or service, without any long-term commitment.
✓ Included	✗ Excluded

Finally, to be included in the list, the companies must be headquartered or based in Switzerland or Liechtenstein.

The final list of 26 Swiss sustainable FinTechs was then classified by founding year, main product area, and sustainability-related topic. The complete list of companies can be found in the Annex, 'List of mapped companies'.

Policy integration analysis methodology

To analyze the integration of policy and strategies in the areas of sustainability, digitalization, and finance, the authors performed a qualitative content analysis⁸⁴. The list below briefly describes the methodology:

- *Content*. Three written texts were selected for analysis: the proposal for a Swiss Sustainable Development Strategy 2030⁸⁵; the Digital Switzerland Strategy⁸⁶; and the country's Sustainable Finance Guidelines⁸⁷. The texts, published in 2020, are official national policies and strategies in the areas of sustainability, digitalization and sustainable finance, respectively.
- *Data processing*. The qualitative, manual analysis aimed to interpret and understand if and how digital finance is mentioned in the policies and strategies under scrutiny. To this end, the authors read the texts looking for explicit references to digital finance or related terms (e.g. FinTechs, financial technologies).
- *Data analysis*. Upon finding occurrences of the term digital finance and related terms, the authors analyzed: a) the context in which the terms are mentioned; b) words and phrases related to the terms; c) the relationship between the terms and the full text. Next, the authors derived insight into whether and how the policies and strategies under analysis connect the issues of sustainability, digitalization and finance.

List of mapped companies

Swiss Sustainable FinTechs:

3rd-eyes analytics AG

Aidonic

Beedoo

Bitlumens

BlueYellow

Carbon Delta

CelciusPro

CountryRisk

Covalence ESG Ratings

Descartes Finance

Energy Web

Greenmatch AG

Ground Up Project SA

Impaakt SA

My Drop in the Oceans

Neon Green

Pexapark AG

Porini Foundation

Raisenow

Reprisk

SAM | SP Global

Share & Charge

South Pole

Susfinteq

YourSRI

Yova ●

Endnotes

Executive Summary

¹ [United Nations' 2030 Agenda and the 17 Sustainable Development Goals](#)

² [Paris Agreement on Climate Change](#)

³ On [12 January 2021](#), Switzerland officially became a supporter of the Task Force on Climate-related Financial Disclosures (TCFD)

⁴ On [24 June 2020](#), the Federal Council adopted a report and guidelines on sustainability in the financial sector.

⁵ On [8 April 2021](#), the Green Fintech Network, set up in 2020 with the assistance of the State Secretariat for International Finance SIF, presented an action plan for a green and innovative Swiss financial centre.

⁶ [Agenda 2030 der Vereinten Nationen und die 17 Ziele für nachhaltige Entwicklung](#)

⁷ [Übereinkommen von Paris zum Klimawandel](#)

⁸ Am [12. Januar 2021](#) sagte die Arbeitsgruppe zur Klimaberichterstattung (Task Force on Climate-related Financial Disclosures, TCFD) ihre offizielle Unterstützung zu.

⁹ Am [24. Juni 2020](#) verabschiedete der Bundesrat einen Bericht und Leitlinien zur Nachhaltigkeit im Finanzsektor.

¹⁰ Am [8. April 2021](#) stellte das Green Fintech Network, das 2020 unter Mithilfe des Staatssekretariats für internationale Finanzfragen SIF gegründet wurde, einen Aktionsplan für einen grünen und innovativen Finanzplatz Schweiz vor.

¹¹ [Agenda 2030 des Nations Unies et les 17 objectifs de développement durable](#)

¹² [Accord de Paris sur le Climat](#)

¹³ Le [12 janvier 2021](#), la Suisse a apporté son soutien officiel au groupe de travail sur l'information financière relative aux changements climatiques (Task Force on Climate-related Financial Disclosures, TCFD).

¹⁴ Le [24 juin 2020](#), le Conseil fédéral a adopté un rapport et des lignes directrices concernant la durabilité dans le secteur financier.

¹⁵ Le [8 avril 2021](#), le réseau des

FinTech vertes, créé en 2020 avec l'aide du Secrétariat d'État aux questions financières internationales (SFI), a présenté un plan d'action pour une place financière suisse verte et innovante.

1. Introduction

¹⁶ United Nations: 2030 Agenda and the 17 Sustainable Development Goals [\(2020\)](#)

¹⁷ UN Paris Convention on Climate Change [\(2015\)](#)

¹⁸ World Economic Forum: Charting the course for SDG financing in the decade of delivery [\(2020\)](#)

¹⁹ OECD, UNDP: Framework for SDG Aligned Finance [\(2020\)](#)

²⁰ EU Commission: Action plan on financing sustainable growth [\(2018\)](#)

²¹ Macchiavello & Siri - Sustainable finance and FinTech: can technology contribute to achieving environmental goals? A preliminary assessment of 'Green FinTech' [\(2020\)](#)

²² G20 Sustainable Finance Study Group [\(2018\)](#)

²³ IFZ FinTech Study - An Overview of Swiss FinTech [\(2020\)](#)

²⁴ Krauss, Krüger & Meyer - Sustainable Finance in Switzerland: Where Do We Stand? [\(2016\)](#)

²⁵ Task Force on the Digital Financing of the Sustainable Development Goals [\(2020\)](#)

²⁶ Green Digital Finance Alliance - Country-level landscape analysis: [Germany](#)

²⁷ Green Digital Finance Alliance [\(2020\)](#)

²⁸ Green Digital Finance Alliance - Country-level landscape analysis: [Germany \(2020\)](#), [Spain \(2020\)](#) and [Netherlands \(2019\)](#)

²⁹ Global Innovation Index [\(2020\)](#)

³⁰ Recent regulatory developments related to FinTechs are: the Distributed Ledger Technology - DLT bill [\(2020\)](#); FinTech license, FinTech Sandboxes and the Settlement Account Exemption [\(2019\)](#).

³¹ IFZ FinTech Study - An Overview of Swiss FinTech [\(2020\)](#)

³² Global FinTech Hub Report [\(2018\)](#)

³³ UN Environment Inquiry and Swiss Federal Office for Environment [\(2018\)](#)

³⁴ UN Environment Inquiry [\(2016\)](#)

³⁵ State Secretariat for International Finance - SIF [\(2020\)](#)

³⁶ foraus, as the Sustainable FinTech project, is a member of the Green FinTech Network, established by the State Secretariat of International Finance in November 2020.

³⁷ People's Money: Harnessing digitalization to finance a sustainable future, p. 62 [\(2020\)](#)

2. The Swiss Sustainable Digital Finance Landscape

³⁸ The detailed methodology and criteria to classify companies as Swiss sustainable FinTechs can be found in Annex 'Mapping methodology'

³⁹ List of mapped companies in the Annex

⁴⁰ IFZ FinTech Study - An Overview of Swiss FinTech [\(2020\)](#)

⁴¹ Focus note series on FinTech for Sustainability: Country report Germany [\(2020\)](#)

⁴² Focus note series on FinTech for Sustainability: Country report Spain [\(2020\)](#)

⁴³ Although the Swiss financial landscape is not usually compared to Spain and Germany's landscapes, to the best of the authors' knowledge these are, to date, the only countries that have attempted to measure and analyze their sustainable FinTech landscapes (see referenced studies). One of the reasons could be that sustainable Fintech is still a niche, with few country-level studies performed to date.

⁴⁴ IFZ FinTech Study - An Overview of Swiss FinTech [\(2020\)](#)

3. Alignment of the Swiss Sustainable Digital Finance Landscape with the Agenda 2030

⁴⁵ Switzerland implements the 2030 Agenda for Sustainable Development

- Baseline assessment (2018)

⁴⁶ Ibid.

⁴⁷ Swiss Federal Council - Sustainable Development Strategy - Consultation draft (2030)

⁴⁸ Krauss, Krüger & Meyer - Sustainable Finance in Switzerland: Where Do We Stand? (2016)

⁴⁹ IFZ FinTech Study - An Overview of Swiss FinTech (2020)

⁵⁰ Green mortgages are mortgages specifically targeted at buildings and renovations which meet certain environmental standards, such as: efficient use of energy, pollution and waste reduction measures, use of materials that are non-toxic, ethical and sustainable (World Green Building Council)

⁵¹ Benjamin Guin and Perttu Korhonen: Does energy efficiency predict mortgage performance? (2020)

⁵² Sustainability in Switzerland's financial sector (2020)

⁵³ European Union taxonomy for sustainable economic activities (2020)

⁵⁴ UN Environment Inquiry and Swiss Federal Office for Environment (2018)

⁵⁵ Hungerbühler: Financial Inclusion of Refugees in Switzerland (2019)

⁵⁶ "Impact investments are investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return" (GillN, 2020)

⁵⁷ "Blended finance is a strategy that combines capital with different levels of risk in order to catalyze risk-adjusted, market-rate-seeking financing into impact investments" (GillN, 2020)

⁵⁸ OECD - Making Blended Finance Work for the Sustainable Development Goals (2018)

4. Sustainability, Digitalization and Finance: integration of policies and strategies

⁵⁷ The methodology to analyze the mentioned policy and strategies can be found in Annex 'Policy integration analysis methodology'

⁶⁰ Federal Department of Foreign Affairs FDFA: Sustainable Development Strategy Consultation draft (2020)

⁶¹ Federal Office of Communications OFCOM: Digital Switzerland Strategy (2020)

⁶² State Secretariat for International Finance (SIF) - Sustainable Finance Guidelines (2020)

⁶³ Federal Department of Foreign Affairs FDFA: Sustainable Development Strategy (2020)

⁶⁴ Ibid.

⁶⁵ State Secretariat for International Finance (SIF) - Green FinTech Network (2020)

⁶⁶ State Secretariat for International Finance (SIF) - Green FinTech Network Action Plan (2021)

5. Taking Stock: the main findings and directions for policy responses

⁶⁷ Interdepartmental Sustainable Development Committee (ISDC): Sustainable Development in Switzerland (2012)

⁶⁸ IFZ FinTech Study - An Overview of Swiss FinTech (2020)

⁶⁹ State Secretariat for International Finance (SIF): Green FinTech Survey (2020)

⁷⁰ APIX Platform

⁷¹ ASEAN stands for Association of Southeast Asian Nations. ASEAN is a regional group aiming to promote economic, political, and security cooperation among its ten members: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. Council of Foreign Relations (2020)

⁷² According to the State Secretariat of International Finance (2020), "Open banking refers to the practice of sharing banking data via standardised and secure interfaces at the request of clients. Open finance is an expansion of open banking to the entire financial sector and includes not only banking data, but also data on insurance, securities investments, mortgages

and pension funds".

⁷³ World premiere: Geneva publishes a specific guide for ICOs (2018)

⁷⁴ 2°Investing Initiative, Wüest Partner: Bridging the Gap: Measuring progress on the climate goal alignment and climate actions of Swiss Financial Institutions (2020)

⁷⁵ UK Department for International Trade: Building FinTech bridges (2020)

⁷⁶ Swissnex: Who we are (2020)

6. Recommendations to advance the Swiss sustainable digital finance landscape

⁷⁷ APIX Platform

⁷⁸ Swiss Bankers Association - SBA: The priorities of the SBA (2021)

Annex

⁷⁹ See: [Swiss Fintech Map](#)

⁸⁰ See: [F10 Portfolio](#)

⁸¹ IFZ FinTech Study - An Overview of Swiss FinTech: Factsheets of Swiss FinTech Companies, p.94-171 (2020)

⁸² State Secretariat of International Finance - Green FinTech Survey (2020)

⁸³ The authors adapted the three-step evaluation procedure from Green Digital Finance Alliance - Current landscape and key opportunities: Country report #2: Germany (2020)

⁸⁴ The Columbia University Mailman School of Public Health (2020) defines content analysis as a method to determine and interpret "the presence of certain words, themes, or concepts within some given qualitative data" (e.g.; books, speeches, media, historical documents).

⁸⁵ Federal Department of Foreign Affairs (FDFA): Sustainable Development Strategy Consultation draft (2020)

⁸⁶ Federal Office of Communications (OFCOM): Digital Switzerland Strategy (2020)

⁸⁷ State Secretariat for International Finance (SIF) - Sustainable Finance Guidelines (2020)

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Sustainable FinTech project

The Sustainable FinTech project aims to raise awareness and build an ecosystem for sustainable FinTechs. While promoting a forward-thinking vision for the finance industry, the project advocates for a leading future for the Swiss financial centers based on two interlinked pillars: sustainability and technology. The Sustainable Fintech project was formally adopted by foraus in 2017 and, since 2020, has been made possible thanks to the generous support of the Sunflower Foundation.

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